

Investigate the Relationship between Information Risk and Accounting Quality at the Time of Declaration of Profit

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ABSTRACT

Accounting standards are used to reduce the asymmetry of information between investors and companies admitted to the stock market, which can help investors understand the risks of companies and help them make the right decisions for investment. This research examines the relationship between accounting quality and information risk at the time of earnings announcement. The statistical population of the study consisted of companies listed in the Tehran Stock Exchange between 2011 and 2016. Calculations and mathematical operations of this study will be done using EXCEL and Eviews software. The results of the research showed that there is a significant relationship between accounting quality and stock price. Our second hypothesis, based on the high quality of accounting, reduces the risk of information, and consequently increases the promised gain, was not approved.

KEYWORDS

Accounting Quality, Stock Price, Information Risk, Profit

INTRODUCTION

The purpose of financial reporting is to provide information that helps investors, creditors and other users to make economic decisions. Based on the theoretical foundations of Iran's financial reporting, the information provided by the accounting system can only be used in the economic decision-making process of users, which has the minimum standards. These standards of the "qualitative features" of accounting information can be added to the usefulness of the information. Accepted principles and accrual accounting principles allow managers to apply financial reporting in order to transfer information, recognize and judge themselves. The actions of judges by their managers and their authority in the financial reporting process are known as "profit management". For many years,

accounting research has paid special attention to managing profits and its consequences. Some past studies in the field of earnings management have generally ignored the effect of corporate governance factors that may limit managers' ability to conduct profit management. For example, in research such as Raj Kopal, Miello, Balsam, Kang and Caplan (1994), the role of corporate governance and ownership structure has been briefly investigated, which is an incentive for this study. However, it has always been the question of whether profit management improves the quality of accounting information or reduces its information content. The literature on earnings management research does not help to judge the desirable impact of bad profit management on the usefulness of accounting information and does not give a clear answer to this question. This research examines the relationship between accounting quality and information risk at the time of earnings announcement.

PROBLEM STATEMENT

Accounting standards are used to reduce the asymmetry of information between investors and companies admitted to the stock market, which can help investors understand the risks of companies and help them make the right decisions for investment.

The purpose of these standards is to provide a series of useful accounting information to investors, in which investors can make appropriate investment decisions. Accounting standards are used to reduce the asymmetry of information between investors and companies admitted to the stock market, which can help investors better understand the risks of companies and help them make the right decisions for investment.

Industrial investors (investors investing in manufacturing companies) also play a very important role in accounting information trading. Also, industrial investors can respond more quickly to accounting information and thus improve market efficiency. We believe that in the long run, high-quality accounting information can help these investors to

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identify the efficiency of investments. Also, other forces of the market, such as individual investors and the media, pay much attention to the interpretation of accounting information. Hence, accounting information is of considerable importance to the extent to which firm fixed investment (the amount of capitalization that the company makes in any situation) is improved. This study examines the quality of accounting information in choosing a corporate investment based on the performance of governance in accounting information. This issue is of great importance for the sovereignty, stock market, current and potential investors and companies admitted to the stock exchange. Examining this problem can provide a better understanding of the functioning of governance in the accounting system and thus help investors make good decisions.

BACKGROUND RESEARCH

Yu Ang (2016) reviewed the earnings management, corporate governance, and relevance in China. They stated that there was significant cost-stickingness in non-profit management samples compared to those that managed profit. In addition, they surveyed the relevance of interactive effects, corporate governance on their earnings management, that companies with good corporate governance can reduce earnings management more. Although this effect is not very strong.

Kin Lo et al (2016) concluded in the research that companies audited by large auditing firms showed fewer accruals than other companies, due to the recognition and credibility of its brand.

Becker (2014) investigated the relationship between audit quality and earnings management in a study entitled "The Effect of Audit Quality on Auditor's Opinion." This hypothesis was proved by the evidence obtained from the selected samples. Specifically, clients from the 6 largest accounting firms reported their probable commitments, which averaged 1.5 to 1.2 percent of the assets above the potential liabilities reported by the clients of the 6 largest audit firms.

Kin Lo et al (2014) explored the key features of the corporate organizational structure-the difficulty of classifying transaction-related and complementary-which contributes to profit management. In the research, based on hypotheses, it was found that earnings management has a positive relationship with organizational communication. We also found that for companies with high organizational relationships, they have announced a low level of management profits with a high degree of external management and stockholders. In conclusion, it is concluded that there is a significant relationship between the corporate governance structure and the organizational relationship in terms of the quality of profit.

RESEARCH HYPOTHESES

1. There is a significant relationship between bookkeeping quality and stock prices.

2. The high quality of accounting reduces the risk of information and consequently increases the reported gain.

SOCIETY AND STATISTICAL SAMPLE

The statistical population of the study consisted of companies listed in the Tehran Stock Exchange between 2011 and 2016.

The sample includes companies listed in Tehran Stock Exchange which have the following characteristics:

1. Companies that have been admitted to Tehran Stock Exchange before 2011.
2. Companies that have been present in Tehran Stock Exchange from 2011 to 2016.
3. Companies with the end of their fiscal year are March 29th.
4. Companies that do not change the fiscal year.
5. The companies whose data they are looking for are available.

RESEARCH MODEL

$$\Delta WC_{i,t} = a_0 + a_1 CFO_{i,t-1} + a_2 CFO_{i,t} + a_3 CFO_{i,t+1} + a_4 \Delta Sales_{i,t} + a_5 GPPE_{i,t} + \varepsilon_{i,t}$$

$$\beta_{i,t} \Delta \beta_{i[x,y],t} = \gamma_0 + \gamma_1 AQ_{i,t} + \gamma_2 \text{Log}(Sales_{i,t}) + \gamma_3 Lev_t + \gamma_4 (JBEI_{i,t} / TA_{i,t}) + \gamma_5 SAdj(CFO_{i,t} / TA_{i,t}) + \gamma_6 (BV_{i,t} / MV_{i,t}) + \gamma_7 Vol[SAdj(CFO_{i,t} / TA_{i,t})] + \gamma_8 BHStock Ret_{i,t} + \gamma_9 SAdj(SGR_{i,t}) + \sum_q \sum_r \gamma_{q,r} D_{q,r} + \varepsilon_{i,t}$$

• Dependent Variable:

Δwc : changes in working capital of a company that is obtained through changes in current assets, minus changes in current debt, minus cash changeovers.

• Independent Variables:

CFO: Cash Flow during the fiscal year t.

$\Delta sales$: Sales changes during fiscal year t.

GPPE: Property, equipment and equipment for gross fiscal year t.

• Control variables:

Log (sales): The natural logarithm of sales in the financial year t.

LEV: The company's leverage equal to the sum of debt divided by the total assets of the company at the end of the fiscal year t.

IBEI: Net profit before unexpected items.

Sadj (CFO / TA): Seasonal changes in cash flows divided by total assets (as the benchmark in this research is annual, as a result of annual changes is a criterion).

BV: book value of equity.

MV: Equity Market Value.

Vol: Volatility is a criterion, and wherever in a model that uses a volatility symbol, the four-year standard deviation of that specific variable is valid.

BH-StockRet: Company's stock holding return for fiscal year t, plus dividends paid on the last day of the calculation of this variable.

SGR: Sales growth over the fiscal year t, calculated as follows: Sales volumes (sales of fiscal year t, minus the sale of the fiscal year t-1) divided by sales of fiscal year t-1.

STATISTICAL METHODS USED IN RESEARCH

In cases where the study between an associate variable with one or more independent variables is considered and the researcher wants to estimate the parameters for the independent variable based on this relation and using historical data, and presenting the model with a prediction, three types of data can be used as follows:

A. Time series data

B. Cross-sectional data

C. Combined data

Time series data measures the values of a variable in consecutive time points. This sequence can be annual, seasonally, monthly, weekly or even continuous. Cross-sectional data measures the values of a variable at a given time and over several units. Combined data is a method for

combining cross-sectional and time series data. In general, it is necessary to say that combined data employs empirical analysis in a rich form that can not be used when using time series or cross-sectional data (Abrishami, 1999). For this reason, the researcher will use the combined data to estimate the models.

DESCRIPTIVE STATISTICS

In this section, information is provided on the calculated variables of the research. It is necessary to describe this data before analyzing the statistical data. It also describes the statistical data in order to identify the dominant model and the basis for explaining the relationships between the variables used in the research.

The first step in data analysis, description and knowledge of the characteristics and characteristics of the studied units is research and familiarity with their changes in the sample. Knowledge of frequency distribution and central criteria and the distribution of key variables can serve as complementary information to play an effective role in determining the findings of the research. Therefore, before examining research hypotheses, the research variables are briefly summarized in Table 1. These variables include dependent and independent variables, the mean, mean, sloping, and elongation of these variables during the research period are presented in the table below.

Tab.1.Descriptive statistics of the research variables

Variables	Number	Minimum	Maximum	Average	Middle	Standard deviation	Skidding	Elongation
Changes in working capital	550	3.25	10.47	6.88	7.05	2.02	-0.03	1.89
Operational Critical Currents	550	0.17	7.17	3.74	3.77	2.01	-0.008	1.81
Sales changes	550	0.01	1.58	0.81	0.81	0.46	-0.03	1.77
Property, machinery and equipment	550	8.41	18.64	13.55	13.46	2.92	0.02	1.78
Profit line slope	550	0.20	0.87	0.53	0.53	0.19	-0.01	1.81
Quality of benefit	550	-0.19	0.50	0.15	0.16	0.21	-0.007	1.69
Sales log	550	0.45	1.15	0.79	0.78	0.20	0.02	1.77
Financial Leverage	550	0.67	0.92	0.79	0.78	0.07	0.12	1.79
Net profit before unrealized items	550	0.23	0.81	0.52	0.53	0.16	-0.05	1.86
Seasonal changes in cash flows	550	0.11	0.52	0.31	0.30	0.11	0.03	1.81
Book value of equity	550	4.90	12.58	8.54	8.60	2.28	0.04	1.75
Equity equity value	550	9.34	43.13	26.26	26.35	9.66	0.02	1.85
Volatility	550	0.83	3.35	2.08	2.09	0.72	0.05	1.82
Stock return efficiency	550	-0.38	0.78	0.18	0.17	0.34	0.10	1.78
Sales growth	550	0.12	1.32	0.72	0.72	0.34	0.01	1.79

- **Checking Normality:**

One of the things that is usually considered in the data review is the normalization of the data. When the study is based on real data and there are limitations to sample selection, this may result in data not being normalized. Of course, when the number of observations is high, the normalization of data through the central limit theorem can be justified. The Jarque-Bera (JB) test has been used to check the normality of the data. The statistical hypothesis of this test is presented below:

$$\begin{cases} H_0: \text{The distribution of the variable is normal} \\ H_1: \text{The distribution of the variable is not normal} \end{cases}$$

If the significance level of the test statistic is more than 0.05 (significance level ≥ 0.05), the hypothesis is based on the normal distribution of the dependent variable and vice versa. Table 2 shows the results of this test for the capital expenditure variable.

Tab.2.Results of the Jarque-Bera Statistic

Variables	Test statistic	The significance level
Changes in working capital	14.5	0.0000
Operational Critical Currents	41.6	0.0000
Sales changes	17.11	0.0000
Property, machinery and equipment	19.52	0.0000
Profit line slope	18.38	0.0000
Quality of benefit	26.28	0.0000
Sales log	24.94	0.0000
Financial Leverage	22.84	0.0000
Net profit before unrealized items	7.22	0.0000
Seasonal changes in cash flows	5.46	0.0000
Book value of equity	1.77	0.0000
Equity equity value	23.17	0.0000
Volatility	13.88	0.0000
Stock return efficiency	4.43	0.0000
Sales growth	27.52	0.0000

As shown in the table above, the data is not normal, which is resolved through the central limit theorem, because in this case the data assumes that the number of observations in it is higher than 30 is normal.

- **F Limer Statistics:**

Considering that observations in this research have been exploited at different levels, the question most often used in applied studies is are there any indications that data integration is possible, or that the model varies across all cross-sectional units. Therefore, it should first be examined whether there are any differences between levels, heterogeneity, or individual differences. In case of heterogeneity of the panel data method, otherwise, the least

square method is used to estimate the model. For this purpose, the F Limer statistic is used. In this test, the assumption H_0 of the same width of origin (combined data) against the opposite hypothesis H_1 is used, the inaccuracy of the width from the origin (panel data method) is used. The results of F Limer statistics are as follows:

Tab.3.F-Limer statistics

	Description	Amount	Possibility
First model	Period F	1.4009	0.1392
	Period Chi-square	4.0161	0.1219
Second model	Period F	1.5791	0.1211
	Period Chi-square	5.0068	0.1183
Third model	Period F	1.3895	0.1384
	Period Chi-square	4.5553	0.1201

As shown in Table 3, the results of the Chavo test show that the probability obtained for the F statistic is more than 5%, so the zero hypothesis that the model data is compilation is accepted.

- **Autocorrelation Test (Durbin-Watson):**

One of the assumptions that are considered in the regression is the independence of the errors (the difference between the actual values and the predicted values by the regression model) of each other. If the independence hypothesis of errors is rejected and the errors are correlated, regression is not possible. In order to be independent of each other, the camera-Watson statistics are used. If the value is in the range of 2.5 to 1.5, a lack of correlation between the errors is accepted, otherwise the correlation between the errors is present. According to the values obtained for the first, second, and third models, the Durbin-Watson statistics are 1.63, 1.69, and 1.82, thus the lack of correlation between the errors is acceptable.

TEST OF RESEARCH HYPOTHESES

Tab.4.Results of regression analysis of the research model

Variable	Coefficient	Standard deviation	T Statistics	The significance level
Width from source	26.0496	4.8408	5.3813	0.0000
B	7.0992	1.4238	4.9863	0.0056
AQ	49.8816	3.9670	12.5743	0.0000
Log(Sales)	12.7584	4.9275	2.5893	0.0238
IBEI/TA	46.5444	30.7666	1.5128	0.0694
BV/MV	570.0972	59.5833	9.5681	0.0000
D	96.3792	8.4176	11.4498	0.0000
The coefficient of determination	0.3512	Significant level of F statistics		0.0000

Adjusted coefficient of determination	0.2973	F statistics	18.3249
Durbin-Watson Statistics	1.8234		

- **Test the First Hypothesis:**

As you can see in the table above, the significance level of the earnings quality coefficient is 0.0000, and since this number is less than 0.05, it can be concluded that the assumption zero is rejected and the assumption is verified. According to the coefficient of this variable (49.8816), it can be stated that the quality of profit with stock prices in the companies selected as the sample of this research has a positive meaningful relationship, and shows that 1% change in the independent variable causes 49.88% of the direct change in the dependent variable. According to the above, the first hypothesis is confirmed.

- **Test the Second Hypothesis:**

As you can see in the table above, the significance level of the coefficient B is 0.0056 and since this number is less than 0.05, it can be concluded that the assumption zero is rejected and the assumption is verified, and according to the coefficient of this variable (7.0992), it can be stated that B with a stock price in companies that have been selected as a sample of this research has a positive meaningful relationship, and shows that 1% change in the independent variable causes 7.09% of the direct change in the dependent variable. According to the above, the second hypothesis is rejected. Because this will increase the slope of the line and thus the risk of information.

DISCUSSION AND CONCLUSION

Quality accounting information is a prerequisite for the healthy functioning of the capital market and, generally speaking, of the economy, and is of great importance to corporate investors and accounting standards formulators. In general, the information process will affect not only the individual investors' assessments of the return on the securities but also the overall market valuation (for example, stock prices, risk-free returns, and risk-free returns). Investors, using a set of available information, are predicting future cash flows; thus, they arrive at an estimated price. When new and marketable information is transmitted, past estimates are updated and the new price is determined. If the information reflected in the market is of low quality, investors will have to re-evaluate stock prices.

The initial estimation mechanism based on the new information obtained, the improvement of recognition and training through the evaluation of estimates by other investors gradually leads to the convergence of the estimated price with the inherent value of the contribution. Estimating past cash flows using low-quality financial statements will probably be longer due to ambiguity and uncertainty. The results of previous research indicate that there is a significant relationship between audit quality and

earnings management. The purpose of this study was to determine the relationship between accounting quality, information risk and the structure of price fluctuations at the time of announcement of profit. In fact, the research method of the present research is surveying and field research. It should be noted that in this type of research method, data collection methods (questionnaires, interviews, and documents) were collected from the statistical sample. The statistical population of the listed companies is Tehran Stock Exchange.

Samples will be selected using simple random sampling. SPSS software was used to analyze the data. Data were analyzed in two sections: descriptive statistics and inferential statistics. Kolmogorov-Smirnov test was used for data distribution. Therefore, a number of tests were used to determine the relationship between accounting quality and information risk at the time of earnings announcement. In this research, the relationship between the accounting quality and information on the date of announcing the earnings was investigated. The results of the tests showed that there was a significant relationship between earnings management and stock prices.

Based on the results, we can conclude that companies with poor quality accounting information suffer from more delays in adjusting their stock prices. In such a way, companies with poor quality accruals, losses, and low level of smoothing will have a higher delay in adjusting stock prices. Thus, the coordinates of the quality of corporate accounting information can be considered as a useful guide in identifying the status of latency in the stock price adjustment.

- **Suggestions for Future Research:**

Whatever the research, though comprehensively, in terms of some material and material constraints, both temporally and temporally, can not cover all aspects of the subject and deal with it in various ways. This research has not been an exception to this, so to do some research in line with this topic as well as its development, the following suggestions are presented for further research and future researchers:

1. For future research, it is suggested that different, and possibly more reliable, results from other definitions of information risk and information asymmetry and market intelligence risk be used to achieve a comprehensive benchmark. It is also suggested that the present research model be implemented with other definitions of growth and management variables and quality of profit to achieve the best definition for the above variables.
2. It is also suggested that research be carried out in the areas referred to below:
 - The relationship between market data risk and cash flow volatility should be investigated.
 - The relationship between risk of market information and the community dimension of corporate sustainability.
 - The relationship between the risk information of the market, or the slope of the company's stock price line, with the coefficient of earnings response.

- Future researchers are suggested to compare the results of the above research with the research done in the private sector.
- Due to the inadequacy of information from some questionnaires, future researchers are recommended to collect information in other ways (interview or observation) and compare the results in order to increase the level of confidence.
- Future researchers are encouraged to do this research among customers of other companies as well.
- Researchers can do this research at other shipping companies, such as airline or road transport. Even doing this research in other organizations and service centers will not be amiss.
- The implementation of planned activities resulting from the results of this research, and measuring its effectiveness in subsequent research, can be considered as an important step for the applicability of the research.

• **Research Limitations:**

Researchers are always confronted with limited research. Access to statistics and information is one of the main pillars of research and research.

- There are problems in this area that could have caused research services, such as access to books, magazines, statistics, databases, etc., in this research. False culture, on the other hand, makes them privately considered, and as a result, individuals and institutions refrain from transmitting their findings to others. What is certain is that it is impossible to control or eliminate these factors, but the researcher tries to identify these factors as predictors and take all necessary precautions to reduce them. Below are some of the limitations of this research:
- Leaving the field of research by the test subjects with this attitude that their response affects the performance of the manager, deputy and even the family.
- The serious limitation of this research was the lack of time-consuming and co-operation of some of the respondents. Even though all people had already received telephone answering or even face-to-face responses, the investigator or questioners referred to each of them according to the scheduled schedule. However, some of them are aware of the reasons for the immediate and emergency meeting, the lack of readiness to complete the questionnaire, and ... of responding to withdrawal, which is a waste of time and, finally, a lack of time in the research process.
- The lack of familiarity of some respondents with the concepts contained in the questionnaire and the time spent exploring and interpreting the concepts and words in person and by phone has prolonged the time of data collection.

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