Indian Journal of Science and Technology, Vol 8(11), DOI: 10.17485/ijst/2015/v8i11/71800, June 2015
ISSN (Print) : 0974-6846
ISSN (Online) : 0974-5645

Unsystematic Risk and Internal Control Quality Impact on the Earning Quality by using Volatility Profits Index in Tehran Stock Exchange

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Abstract

Background/Objectives: Determination of the accounting information quality and its results is interest of investors, managers, legislators and standards drafters. The objective of the study was to evaluate the effectiveness of internal control quality and unsystematic risk on the earning quality by use of the index volatility profits of the firms, listed on the Tehran Stock Exchange. **Methods/Statistical Analysis:** In this study, the quality of internal control and non-systematic risks are considered as independent variables to examine their impact on the index of volatility profits of earning quality in the firms. **Results:** In this study, using panel data with fixed effects, the results of the data analysis using multiple regression at 95%, indicate that there is a significant direct relationship between the quality of internal controls and non-systematic risks with the index of volatility profits of quality in the firm earning. **Conclusion/Application:** It is recommended to the managers of the companies to provide an increase in earnings quality through the establishment of a strong internal control system and internal audit unit.

Keywords: Earning Quality, Internal Control Quality, Unsystematic Risk

1. Introduction

In the wake of the recent financial scandals, investors' confidence in financial reporting system is weakened and profit quality emerges as an important factor in determining the validity and reliability of the reported figures. Consequently, the determination of the accounting information quality and its results is interest of investors, managers, legislators and standards drafters. Stakeholders as the most important group of financial information users are seeking their interests in information of profit. Accounting profit is a sign that cause to change the beliefs and behavior of investors. The quality of profit in financial reporting could affect on investor confidence in financial markets. Some of the important factors influencing on the quality of earnings could be noted as multiple methods of accounting, lack of estimates and forecast process, operational authority of managers and earning affectability from reporting principles and discretion of the directors. Term of earning quality refers to ability of managers to use optional items in earnings measuring and reporting. Optional items may include the choice of accounting principles or standards and the use of estimates and transactions timing to identify unusual items in the profit[1].

The concept of the earning quality is pointing to both the characteristics of the usefulness in decision-making and the characteristics of the relationship between earnings quality and economic profit[2].

In the present study, the effect of non-systematic risk and internal quality control on the index for volatility profits of earning quality in the firms listed on the Tehran Stock Exchange is evaluated.

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2. Description and Explaining the Problem

A risk in the ordinary language is defined as the risk occurs due to uncertainty about future events and higher the uncertainty, will be higher the risk. Generally two approaches are arising to define risk in economic resources. The first view defined risk as any possible fluctuations in economic performance in the future. The second view defined risk as negative possible fluctuations in economic performance in the future. In addition, today the first view is more acceptable. Since all investors aim is achieving maximum efficiency, the concept of risk is also expressed. In fact, risk and efficiency are two key factors of investment decision-making, so that, constantly, the maximum efficiency due to the minimal risk is a sufficient criterion for an investment (ibid). In other words any investor will demand greater efficiency by accepting a higher risk level. Similarly, reducing the acceptable risk reduces the expected efficiency.

From another perspective, the investment risk can be divided into two parts systematic risk and non-systematic risk. Systematic risk is the part of the efficiency changes that is related to the market. This risk does not disappear by diversification and-systematic risk is against the company's own risk. Internal control is important from the viewpoint of the independent auditors. Since the range, type and implementation of internal controls in the determination of auditing procedures and audit proceedings volume are effective more than any other issue, independent auditor after reviewing the internal control, can adopt the required decision to the extent of investigation, commenting on the financial reports. Internal control cannot guarantee a single economic success or even survival it. Even the most effective internal control system, can only the business units to achieve fundamental business objectives. Effective internal control can equip the management with the information on the progress or lack of progress in order to achieve the objectives, but cannot change uncontrollable events or phenomena, such as government policies or programs, competitors or economic conditions. But to achieve the most important goals, the implementation of internal control is inevitable. Therefore, the demand for better internal control systems and their performance report are constantly rising. Consider more carefully, we can realize that internal control is a useful tool for solving potential problems.

Internal control is not limited only to accounting and finance, but also are including all the business units and its activities. Perceptions of the phrase of internal control are different.

This would followed by confusion of legislators, rule drafters and others. These heterogeneous perception sand different expectations bring difficulties for business units. If the phrase of internal control used in the laws, regulations or guidelines without any explicit definition of it, then the scope of the problem will increase. Internal control is defined as follows: Internal control is a process that in order to obtain reasonable assurance (relative) of realization of five classified groups of goals as follows, is established by the board of directors, Manager and other employees of a business unit:

- The effectiveness and efficiency of operations.
- The reliability of financial reporting.
- Observing the laws and relevant provisions.
- Encourage employees to observe business unit procedures and to measure the extent of compliance with procedures.
- Protection of assets against loss, misuse and fraud.

Tehran Stock Exchange, in order to protect the rights of investors, preventing fraud, and also organizing and developing fair and transparent securities market, approved internal control instructions for publishers listed in Tehran Stock Exchange and OTC, in 18 articles and 2 clauses, by the Securities and Exchange Board. Observance the provisions of the instructions, from the date of notification, are mandatory for the publishers listed in Tehran Stock Exchange and OTC.

Given the above, this research is trying to investigate analytically the influence of risk management and the quality of internal control mechanisms Impact on the Earning Quality by use of Index for Volatility Profits in corporates. Therefore the main problem of this study is to analyze the effect of non-systematic risk and the quality of internal controls over the earning quality by use of Index for Volatility Profits of the firms listed in Tehran Stock Exchange?

3. Literature Review

Their study examined the impact of the quality of internal control and systematic risk on the quality of earnings. In this study, Panel data with fixed effects were used, the results of the data analysis, using multiple regressions at

95% show that the quality of internal control and risk management has a direct influence on the quality of corporate profits. Ghosh et al[3] investigated the quality of earnings and earnings response coefficient, while stable increment of earnings and sales. Their results showed that firms with earning growth and increased sales possess higher earning quality earnings response coefficient, than companies with earning growth associated with reduced costs. Kim and Qi[4] examined earning quality and stock returns with macroeconomic variables. They used the quality of accruals as a measure for evaluating earnings quality and concluded that the quality of accruals change with macroeconomic variables. Actually, companies with low accruals quality are much more vulnerable to macroeconomic developments and shocks. Honlon[5] examined the relation between taxes and earnings quality and concluded that the stability of accruals and cash flows are lower for firms with large differences between the books and tax returns. Aloke[6] in a study investigate the quality of earnings and earnings response coefficient, in conditions of increasing with the stability in earning associated with stable stability in income. The results showed that firms with the profit growth associated with increased income had higher earning quality than firms with growth associated with cost reduction. Also firms with income increment have higher operating profit in the future. Well as results showed that the firms with growth together with income have higher earnings response coefficient.

Sajjadi et al[1] have investigated the relationship between institutional investors with earning quality in predict value framework by the Velary and Jenkeines model[7] in terms of fairness, timeliness and honest expression. The results indicate a significant positive correlation in the predict value, the timeliness of financial statements and institutional investors, this is while a significant negative relationship between institutional investors and discretionary accruals has been observed. Ebrahimi, Kordlar and Arabi[8] in a study titled "ownership concentration and earnings quality in the companies listed in Tehran Stock Exchange", examined the relationship between ownership concentration and earnings quality. The results showed that outside ownership concentration leads to improve earnings quality (confirming the hypotheses of active monitoring), while they didn't find any compelling evidence concerning the effectiveness of the inter-institutional block holders on earnings quality.

4. Research Hypothesis

In this study, according to the study of earnings fluctuate ability is being used to assess the earnings quality, therefore hypothesis of this research can be formulated as follows:

Hypothesis: Non-systematic risk and quality of internal control affects on the earnings fluctuating ability.

5. The Research Model and Operational Definition of its Variables

In the research, in order to test the hypothesis, the following regression model is being used:

-The hypothesis test model:

$$EARN\_VAR_{it} = \beta_0 + \beta_1 \text{ UNSYSTEMATIC RISK}_{it} + \beta_2 \text{ INTERNAL CONTROL QUALITY}_{it} + \beta_3 \text{ SIZE}_{it} + \beta_4 \text{ LEVERAGE}_{it} + \beta_5 \text{ GROWTH}_{it} + \beta_6 \text{ BIGN}_{it} + \beta_7 \text{ BM}_{it} + \beta_8 \text{ LIFECYCLE}_{it} + \varepsilon_{it}$$

Where:

β_0 is as a constant factor, constant value

β_i shows the amount of each variable's affecting the dependent variable, in other words, represents the slope of the equation.

i represents companies in the sample, and t represents the year.

ε_{it} represents the random error of firm i at the end of year t.

5.1 Operational Definition of Variables

5.1.1 Dependent Variables: Earnings Quality Indicators

In this study, according to Desai et al[2] research research, the following indicator is used:

EARN_VAR: In the research, the fluctuating ability of earnings is calculated as follows:

$$EARN\_VAR = \frac{\text{Earnings before unexpected Items deducted}}{\text{Book value of total assets}}$$

Above (below) Standard deviations indicate low (high) earnings quality[2].

5.1.2 Independent Variables

5.1.2.1 Unsystematic Risk

Unsystematic risk through price of market model (Sharp) is calculated:

$$R_{it} = \alpha_i + b_i R_{mt} + e_{it}$$

Where:

R_{it}: Share Random Efficiency i in period t

R_{mt}: Market Index Random Efficiency in period t

α_i: constant Efficiency exclusive to share i

b_i: amount of share efficiency sensitivity i to market index efficiency

e_{it}: residual random error in period t, which represents the non-systematic risk

5.1.2.2 Internal Control Quality

Internal quality control system. In order to calculate the quality of the internal control system, check list of requirements observation of internal controls governing on financial reporting approved by the Stock Exchange will be used. Mentioned check list includes 72 questions on topics of integrity and ethics values, audit committee, the competence of personnel and human resource management, organizational structure, risk assessment, information system environment, operational controls, internal auditing and other control activities. In mentioned check list, "No" indicates weaknesses in the internal control system so that the quality score of internal control system of any company is number of "Yes" answers to the above 72 questions.

5.1.3 Control Variables

5.1.3.1 Size

The size of the company, which calculates through the natural logarithm of the book value of total assets.

5.1.3.2 Leverage

Financial leverage of the company obtained as the ratio of the book value of total debt to the book value of total assets. It is calculated as follows:

$$LEV_{it} = \frac{\text{the book value of total debt}}{\text{to the book value of total assets}}$$

5.1.3.3 Growth

Percentage of company's net sales changes over the previous year.

5.1.3.4 Big

A permanent variable, if the company's auditor is auditing organization should be one, otherwise zero.

5.1.3.5 BM

The ratio of book value of equity to market value at the beginning of the period.

5.1.3.6 Lifecycle

The ratio of retained earnings to book value of equity.

6. Research Method

The present study in terms of classification based on the objective is applied researches. Also this study, in terms of methodology and the nature is a solidarity research. The study aimed to determine the relationship between variables. The type of this study reasoning is deductive - inductive.

7. The Population and Sample

This study sample includes all firms listed in Tehran Stock Exchange during the years 2008 to 2012. The sample size is choosing by systematic elimination method (screening) and based on the following criteria:

- In order to homogenize the sample during the studied years, they should be listed in Tehran Stock Exchange prior to 2008;
- Concerning to increase comparability, financial period should be ended in March, and did not alter during the financial period;
- Corporate financial information required to be available for the studied period;
- Trading stocks have not stopped more than 3 months.

8. Data Descriptive Statistics

Table 2, shows the descriptive statistics of the variables during the study period. Descriptive statistics of variables has been measured using firms data during the test (2008-2012) were evaluated, including mean, median, standard deviation, minimum and maximum.

Table 1. Number of sample firms based on screening method

Description	Count
Number of firms listed in Tehran Stock Exchange by the end of 2012	474
Number of companies that are out of stock during the period of study	86
Number of companies came In the stock during the studied period	42
Number of companies their financial year did not end to 29/12 during the studied period	47
Number of companies changed financial year during the studied period	26
Number of companies engaged in financial intermediation and investment during the period of study	35
Number of companies with more than 3 months trading halt during the studied period	75
Number of surveyed companies	163

9. Determination of the Appropriate Model to Estimate the Regression Model

Based on the research literature and the nature of the research hypothesis in this study, combined data is used. Chow and Hausman test is used to determine the appropriate model (combination or panel of fixed or random effects) to test hypothesis.

9.1 The Chow Test

The results of the F study for the present regression model are shown in Table 3.

The according to the significant level of Chow test results indicate assumption (integrated model) cannot be verified. In other words, there is individual or group effects

9.2 Hausman Test

After clarifying that the intercept is not the same for different years, the methods used to estimate the model (fixed or random effects) should be determined; the Hausman test is used for this purpose. The Hausman test tests the hypothesis H_0 based on the compatibility of random effects estimates against the hypothesis H_1 based on the incompatibility of the random effects estimates test.

Table 2. Descriptive statistics of variables

Variables Description		Mean	Median	Standard Deviation	Min	Max
Earnings Volatility	EARN_VAR	0.14356	0.24768	2.4536	0.8567	0.4598
Quality of internal control	INTERNAL CONTROL QUALITY	0.85345	0.0000	1.6463	0.0000	1.0000
Unsystematic risk	UNSYSTEMATIC RISK	1.8233	1.8027	2.7091	-2.0064	3.3087
Company Size	Size	17.6514	19.4761	15.1389	15.3567	22.9559
Financial Leverage	LEVERAGE	0.5797	0.5739	0.1784	0.1564	1.6812
Sales growth	GROWTH	0.3303	0.0308	2.3531	-0.3068	0.6545
CPA firm Size	BIG	0.3385	0.0000	0.1264	0.0000	1.0000
Growth opportunities	BM	0.3385	0.3454	0.1264	0.1169	0.8095
The ratio of retained earnings to book value of equity	LIFECYCLE	1.0838	0.7770	1.8921	0.3102	3.1800

The results showed that the χ^2 statistic of Hausman obtained equal to 164/332 which are 99% significant; suggests confirming the H_1 hypothesis, therefore, according to Hausman test, fitting the regression would be appropriate using panel data models with fixed effects.

9.3 The Result of Fitting the Regression Model

The hypothesis test
"Unsystematic risk and quality of internal control will affect the earnings volatility".
After testing the assumptions of regression and ensuring them, the results of fitting the above regression equation is presented in Table 5. Value of F statistics (13.843) also suggests that the regression model is significant. As shown at the bottom of Table 4, the determination coefficient and adjusted determination coefficient of the above model are respectively 52.8% and 48.1%. Thus, we can conclude that in the regression equation, only about 48.1% of variable changes associated with surveyed companies are explained by the independent variables and control them. In the table positive (negative) numbers in coefficient value column represents the direct (reverse) effect of each variable on the volatility of earnings.

10. Conclusion

According to Table 5, the level of significance (sig) of internal quality control variables (0.046) and unsystematic risk (0.021) is lower than the level of significance considered in this study (5%); also absolute values of t-statistics for these variables is greater than the t-statistic obtained from table with the same degree of freedom. Therefore, the hypothesis H_0 is rejected at the 95% and hypothesis H_1 that the quality of internal control and unsystematic risk affect on the volatility of corporate profits is confirmed. According to the result of research hypotheses based on the direct impact of the internal control quality on the Index for Volatility Profits quality of corporate profits, it is recommended to the managers of the companies to provide an increase in earnings quality through the establishment of a strong internal control system and internal audit unit. In order to do further studies in relation to this research, we suggest investigating the influence of the quality of corporate governance mechanisms on the earnings quality.

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