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# Evaluation of Relationship Between Accounting Information Quality, Corporate Governance Efficiency and Investment of Tehran Stock Exchange

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***Abstract:*** *Financial reports are considered as one of the most important accounting system products. One of their major goals is providing the information required for evaluating the performance and profitability of the economic firms. In addition, the investment does not occur spontaneously, but they should be identified or created. Various types of investment opportunities may derive from different levels of the company. Some investment opportunities might be provided by senior management of the organization or by members of the board. The senior management involvement in providing investment opportunities is often limited to management measurement such as developing the company activity through financial policies and entering into new markets, given that investment opportunities cause allocation of financial resources to earn income or reduce the costs. Hence, regular and principal financial policies can be implemented for investment opportunities by company. The goal of this research is to evaluate the relationship between the quality of accounting information, corporate governance efficiency and selection of investment in the manufacturing listed companies in Tehran Stock Exchange since 2012 to 2016. This research is applied in terms of objective and post hoc in terms of reasoning and inferring. A total of 106 companies were selected as the research sample and the relationship between the variables was evaluated using the regression. The results suggest that companies with higher quality accounting information would likely invest in longer term. The impact of increasing the quality of accounting information on selection of long-term investment with the external governance environment is not strong.*

***Key words:*** *Accounting Information Quality, Corporate Governance Efficiency, Investment Selection*

## INTRODUCTION

The goal of accounting information disclosure is providing useful information to external stakeholders. The quantity and quality of accounting information will affect the investor's view on the inherent value. If the stock price or the earnings of company decreases, the investors will try to avoid the risk by taking measures such as "using their right in making decision" or "disagreeing". Thus, accounting information is one of the important information resources, which determine if the stock price is too high or too low. Hence, it can be stated that high-quality accounting information improves the investors' monitoring of managers, since it optimizes the investment decisions. In addition, high-quality accounting information can inform investors at right time on the firm investment orientation and they can help in monitoring the activities of managers (Ball and Shiva Kumar, 2005).
Economic development requires accumulation of capital. Capital market, as one of the components of financial market, plays a crucial role in mobilizing financial and capital facilities for the economic development of the countries. At current time, business firms are responsible for financing the credits in many countries of the world (Sanubar, 2007). One of the ways for recognizing the capital market is rules and regulations governing on capital market, including corporate governance. The reason for paying

much attention to corporate governance is that corporate governance can guarantee the quality of accounting information. Several studies have been carried out on the effect of corporate governance on improving the performance of its valuation by investors, indicating high importance of corporate governance and its mechanisms. Thus, high-quality accounting information prevents managers to build empire, prevent irrational investments, and increases the ability of investors in monitoring the efficiency of investment decisions made by managers (Bidel et al., 2009).

Biver (1989) believes that the main goal of accounting information is to help users of this information make rational decisions. The accounting information quality can be evaluated by two methods. The method is the utility evaluation, that is, the utility of information for investors seeking for making valuation decisions. This utility indicates the role of accounting information pricing. The second method is the contract validity, that is, to what extent the accounting information is for the benefit of contracts (especially the contracts between investors and managers). This benefit represents the governance role of this information. Thus, accounting information plays two main roles of pricing and governance. First, accounting information applies its pricing role by affecting the capital costs and stock price. High-quality information reduces information asymmetry, leading to reduced cost of external financing capital (Myers and Majlov, 1984; Easley-O'Hara (2004), Zeng and Lo, 2006). High-quality information can apply its pricing role by affecting the stock prices. Stock prices of listed companies in Stock Exchange partly reflect the specific information about that company. High-quality and transparent accounting information makes the stock price growth possible and thus helps in attracting new investors.

**Review of litrature**

Zhai et al. (2016) evaluated the quality of accounting information, governance efficiency, and investment decisions. Results revealed that improving the quality of accounting information of public firms would strengthen this correlation, especially when the company is weak in terms of corporate governance. Results showed that quality of accounting information improves the decision on investment in fixed assets, and it completes and strengthens the corporate governance.

Based on the data of A-class companies in the Shanghai-Shenzhen Stock Exchange between 1999 and 2004, Zhu and Chen (2008) examined the effect of the transparency of industry accounting information on the allocation of industry-level capital. They evaluated the efficiency of the allocation of capital based on the ratio of stocks and the amount of recently-collected funds. They also examined whether foreign capital has entered superior industries. Zhu and Chen (2008) concluded that the transparency of the accounting industry information had a significant impact on resource allocation, so that as the transparency of the information is higher, the efficiency of allocation of resources will be greater.

Based on observing 3600 firm-year cases with regard to A-class listed companies in the Shanghai and Shenzhen stock exchange since 2004 to 2006, Lee (2009) examined the impact of the quality of accounting information on those listed companies in stock exchange with overinvestment and underinvestment. The research results showed that increasing the quality of accounting information reduces the risk of moral risks, and it prevents overinvestment or underinvestment by improving contracts and monitoring, and thus, it increases the efficiency of the allocation of capital at the company level.

Edelkhani (2015) evaluated the role of short-term debts on the relationship between financial reporting quality and overinvestment and underinvestment of listed companies in Tehran Stock Exchange. The results suggest that high reporting quality has a positive and significant impact on investment efficiency. It seems that managers are forced to use their resources effectively in line with value creation to maintain their position in companies with higher financial reporting quality. Moreover, results suggest that high ratio of short-term debts has a positive and significant impact on investment efficiency.

Shamshiri (2014) evaluated the impact of ownership structure and investment behavior of listed companies in Tehran Stock Exchange. The research results revealed that the impact of ownership focus and individual ownership as aspects of the ownership structure was not significant, but institutional, corporate, and public ownership had positive and significant effect on stock returns. In addition, the effect of investment behavior as a second independent variable on stock returns is not significant. The structural equation model results also revealed that the investment behavior cannot have a mediating role in the relationship between the ownership structure and the stocks returns and corporate and institutional ownership variables measure the variable of ownership structure well, but ownership focus, public ownership, and corporate ownership are not good indicator of the ownership structure. In addition, the long-term investment to total assets is not an appropriate indicator for measuring the investment behavior.

## Methodology

This research is correlational in terms of nature and content. This research analyzes the correlational relationship using the secondary data extracted from financial statements of listed companies in Tehran Stock Exchange. This research would be conducted within the deductive-inductive reasoning framework. The reason to use correlational method is to discover the correlational relationships between the variables. Correlational research is one type of descriptive studies.
In addition, this research is post hoc type of study. It means that it is performed based on analyzing the past data (financial statements of companies). In this research, the correlation between the variables is tested first, and if there is correlation between the variables of the research, the regression model would be tested. A sample of listed companies in Tehran Stock Exchange during the years 2012 to 2016 would be used in order to conduct the research, given the following criteria:

1. All information needed for companies should be available since 2012 to 2016.
2. The end of the financial year of the companies should be the last month of year and should not change during the period of 2012 to 2016.
3. The stocks of the companies should be traded in stock exchange during each of the studied years and the price of end of the period should be available.

- By applying the mentioned limitations, 106 listed in Tehran Stock Exchange were selected as sample of study.

- **Hypotheses**
  1. Companies with higher quality accounting information have more potential for longer-term investment.
  2. The effect of improving the quality of accounting information on the selection of long-term investment with external governance environment is strong.

## Research model

$$\text{growth\_corr}_{it} = \alpha_0 + \alpha_1 Rank\ of\ AQ_{it} + \alpha_2 SHr_{it} + \alpha_3 Hfr\_5_{it} + \alpha_4 Mktscore_{it} + \alpha_5 Size_{it} + \alpha_6 MTB_{it} + \alpha_7 ROA_{it} + \alpha_8 \sigma(Sales)_{it} + \alpha_9 Leverage_{it} + \alpha_{10} OperatingCycle_{it} + \varepsilon_{it}$$

$$\text{growth\_corr}_{it} = \alpha_0 + \alpha_1 Rank\ of\ AQ_{it} + \alpha_2 GOVER_{it} + \alpha_3 Rank\ of\ AQ * GOVER + \alpha_4 Size_{it} + \alpha_5 MTB_{it} + \alpha_6 ROA_{it} + \alpha_7 \sigma(Sales)_{it} + \alpha_8 Leverage_{it} + \alpha_9 OperatingCycle_{it} + \varepsilon_{it}$$

Operational definition of the research variables
Dependent variable
growth_corr: Selecting long-term investment through a correlation between operating earnings growth and level of industry.
The explanatory variables
Accrual quality: Accruals Quality:

$$\Delta Total\ Current\ Accrual = b_0 + b_1 CFO_{t-1} + b_2 CFO_t + b_1 CFO_{t+1} + \varepsilon_t,$$

Smoothness: smoothing of the earnings is calculated through standard deviation of net earnings to operational cash flow.
Persistence: earnings persistence

$$ROA_t = \alpha_0 + \alpha_1 ROA_{t-1} + \varepsilon,$$

Predictability: earnings predictability, representing the ability of using the past earnings for predicting the future earnings (Liep, 1990).
TAQ: quality of accounting information: it is measured through sum of four high variables, including accruals quality, earnings smoothing, earnings persistence, and earnings prediction.

**Control variables**

Shr1: ownership concentration by share percentage of major shareholder
Hfd_5: The degree of ownership limitation through a percentage of 5 members of major owners
Mktscore: degree of product market through market share percentage
Size: The size of the company through the total assets logarithm
MTB: The ratio of book value to market value
ROA: Return on assets (Net earnings / total assets)
r (sales): sales fluctuations
Leverage: Financial leverage (by dividing the total debt by total assets)
Operating Cycle: Operational ability through the logarithm of the circulation of operating mean of the company

**Descriptive statistics**

**Table 1:** Descriptive statistics (A)

| | GROWTH_CO | RANK_AQ_2 | SHR1 | HFD_5 | MKTSCORE | SIZE |
|---|---|---|---|---|---|---|
| median | 0.286792 | 10.39597 | 70.14061 | 3.507030 | 0.207547 | 14.11068 |
| mean | 1.000000 | 10.26909 | 78.79500 | 3.939750 | 0.074590 | 13.96480 |
| max | 1.000000 | 15.64306 | 98.36000 | 4.918000 | 1.000000 | 18.87263 |
| min | -1.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000389 | 10.16654 |
| SD | 0.958898 | 1.796964 | 25.64413 | 1.282207 | 0.277032 | 1.415336 |
| skewness | -0.598736 | -0.657453 | -1.333164 | -1.333164 | 1.674625 | 0.614851 |
| kurtosis | 1.358485 | 7.363701 | 3.807926 | 3.807926 | 4.855777 | 3.817980 |
| Number of observations | 530 | 530 | 530 | 530 | 530 | 530 |

**Table 2:** Descriptive statistics (B)

| | MTB_2 | ROA | R_SALE_2 | LEVERAGE | OPER_CYC_2 |
|---|---|---|---|---|---|
| median | -0.810392 | 0.113785 | 1.387546 | 0.616130 | 5.576233 |
| mean | -0.818278 | 0.097901 | 1.578637 | 0.620947 | 5.574362 |
| max | 1.619478 | 0.631343 | 5.066138 | 1.409093 | 7.926527 |
| min | -3.269391 | -0.789647 | -2.750742 | 0.089250 | 3.692288 |
| SD | 0.725231 | 0.141032 | 1.463154 | 0.202981 | 0.686385 |
| skewness | 0.047013 | -0.021926 | -0.440703 | 0.176505 | -0.000942 |
| kurtosis | 3.312409 | 7.401772 | 3.034502 | 3.415228 | 3.033914 |
| Number of observations | 530 | 530 | 530 | 530 | 530 |

As seen in the table above, after making the variables homogeneous, the mean efficiency of accounting information quality is 10.62%. In addition, the mean corporate governance efficiency is as follows: ownership concentration: 78.79, degree of ownership limitation: 3.93 and company market value ranking: 0.07. The mean of control variables are as follows: company size: 13.96, book value to market value: 81.8, return on assets: 9.7, sales fluctuations: 1.57, financial leverage: 62.09, and operating cycle: 5.57.

Based on the research conducted by Hair (2006), the degree of normality of the data is in the (3, -3) in the skewness and (5 and -5) in the kurtosis coefficients. As the coefficients of skewness and kurtosis for the research variables are in this range, it can be stated that these variables are distributed normally.

**Testing the research hypothesis**

**Testing the first hypothesis**

**Table 3:** Analyzing the combined model of the first hypothesis

| variable | Coefficient | Statistic t | P-Value | relationship |
|---|---|---|---|---|
| Accounting information quality | 0.009176 | 0.634710 | 0.5260 | Non-significant |
| Ownership concentration | -0.210356 | -1.632367 | 0.1034 | Non-significant |
| Degree of ownership limitation | 0.476364 | 4.412605 | 0.0000 | positive |
| Company market value ranking | 0.037929 | 0.373335 | 0.7091 | Non-significant |
| Company size | 0.090328 | 1.051695 | 0.2936 | Non-significant |
| Ratio of book value to market value | 0.017905 | 0.564944 | 0.5724 | Non-significant |
| Return on assets | -0.010450 | -0.495024 | 0.6208 | Non-significant |
| Financial leverage | -0.049001 | -0.583205 | 0.5601 | Non-significant |
| Sales fluctuations | 0.159685 | 2.317600 | 0.0210 | positive |
| Operational cycle | -0.034603 | -0.473609 | 0.6360 | Non-significant |
| Fixed component | -0.729412 | -0.477779 | 0.6331 | Non-significant |
| Adjusted coefficient of determination of model | | | | 0.348514 |
| Durbin-Watson statistic | | | | 2.479610 |
| Statistic F<br>(P-Value) | | | | 3.460779<br>(0/0000) |

As seen in table above, the Durbin-Watson test value is between 1.5 and 2.5, which is suitable. It indicates that the hypothesis of lack of auto-correlation is accepted. The results of testing the hypothesis show companies with higher quality accounting information would not more likely invest in longer term. The corrected coefficient of determination shows that about 34.8% of the variations are explained by the independent variables stated in the table above.

**Testing the second hypothesis**

**Table 4:** Analyzing the combined Model of the second hypothesis

| variable | Coefficient | statistict | P-Value | relationship |
|---|---|---|---|---|
| Accounting information quality | 0.013151 | 0.903073 | 0.3670 | Non-significant |
| Corporate governance efficiency | 0.021648 | 0.432402 | 0.6657 | Non-significant |
| Efficiency of high quality governance of information | -3.54E-09 | -1.650983 | 0.0995 | Non-significant |
| Company size | 0.065819 | 0.717217 | 0.4736 | Non-significant |
| Ratio of book value to market value | 0.010783 | 0.304683 | 0.7608 | Non-significant |
| Return on assets | -0.007295 | -0.336907 | 0.7364 | Non-significant |
| Financial leverage | -0.050016 | -0.616063 | 0.5382 | Non-significant |
| Sales fluctuations | 0.165880 | 2.305262 | 0.0216 | positive |
| Operational cycle | -0.050669 | -0.712880 | 0.4763 | Non-significant |
| Fixed component | -0.825562 | -0.515949 | 0.6062 | Non-significant |
| Adjusted coefficient of determination of model | | | | 0.327572 |
| Durbin-Watson statistic | | | | 2.496392 |
| Statistic F<br>(P-Value) | | | | 3.260536<br>(0/0000) |

As seen in table above, the Durbin-Watson test value is between 1.5 and 2.5, which is suitable. It indicates that the hypothesis of lack of auto-correlation is accepted. The results of testing the hypothesis show that the effect of increasing the quality of accounting information on the selection of long-term investment with external governance environment is not strong. The corrected coefficient of determination shows that about 32.7% of the variations are explained by the independent variables stated in the table above.

## Results

The capital market as deriving force of economy is based on information. The correct flow of information in this market would be helpful in adopting correct and rational decisions. Finally, it would lead into economic development and social welfare improvement. Financial reports are one of the most important information resources, which their goal is providing information required for economic decision-making, and they supply major part of information required by capital market. By reducing the asymmetry of future information between interest groups of a contract, accounting information can reduce the defects of the contract, restricts the opportunistic behavior of managers, and monitor them. Accordingly, accounting information applies its governance role. In the case of acquiring external capital, this governance role of accounting information helps stock exchange companies make rational decisions to focus on their core activities and allocate more efficient capital (Zhai et al., 2016). The research results suggest show that companies with higher quality accounting information would not likely to have a longer-term investment. The impact of increasing the quality of accounting information on selection of long-term investment with the external governance environment is not strong.

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