

CHAPTER VI

Summary of Findings, Suggestions and Conclusion

Contents

6.1	Summary of findings	178
6.1.1	Introduction.....	178
6.1.2	Financial Reporting Quality	179
6.1.3	Investment Efficiency	182
6.1.4	Findings Based on Hypothesis.....	185
6.2	Suggestions	187
6.3	Conclusion.....	190
6.4	Scope for Further Research.....	194

6.1 Summary of findings

6.1.1 Introduction

The first chapter is introductory in nature and it gives an introduction to the research work as backdrop for further analysis. It also includes the statement of the problem, need for the study, objectives of the study and hypotheses for the study.

Recent study (e.g., Bushman and Smith, 2001; Lambert, Leuz, and Verrecchia, 2005) suggested that enhanced financial reporting quality may have important economic implications like investment efficiency.

Despite the importance of financial reporting quality in determining investment efficiency, limited empirical evidence has been compiled particularly in bank-centered systems.

Previous studies raise the further question of whether higher financial reporting quality is associated with a reduction of overinvestment or with a reduction of underinvestment.

The second chapter presents origin, development and working of the Tehran Stock Exchange (TSE) and theoretical perspectives relating to the financial reporting quality and investment efficiency. It also includes the history of the Tehran Stock Exchange, goal of the Tehran exchange, objectives of financial statements, methods of measurement of financial reporting quality.

The primary objective of financial reporting is to provide high quality financial reporting information concerning economic entities, primarily financial in nature, useful for economic decisions making (FASB, 1999; IASB, 2008). Providing high quality financial reporting information is important because it will positively influence capital providers and stakeholders in making investments, credits, and similar resources allocation decisions enhancing overall market efficiency (IASB, 2006; IASB, 2008).

The third chapter presents the review of literature about financial reporting quality and investment efficiency. This chapter includes the quality of financial reporting; financial reporting quality and economic growth; the effect of the concentration and structure of ownership on financial reporting quality; financial reporting quality, audit committee and board monitoring; investment efficiency and investment inefficiency; financial leverage, financial constraints and over (under) investment; investment inefficiency, corporate governance and capital structure.

The fourth chapter presents the research methodology and statistical population of this study. This chapter also deals with explaining financial reporting quality and investment efficiency models and descriptive statistics related to these models.

The fifth chapter deals with analysis and interpretation of financial reporting quality and investment efficiency in companies listed in the Tehran Stock Exchange (TSE) and also the results of hypotheses tests.

6.1.2 Financial Reporting Quality

The major findings of financial reporting quality are given below:

With respect to the analysis of 3387 observations over 14 years, it is found that the accruals Mean over this period is 1.8% with the standard deviation of 19.9% that shows 68% (2310 observations) of total observations lie between -18.1% and 21.7% of the accruals, indicating that the accruals for the majority of observations are not too dispersed. However, the negative trend of the accruals (fig. 4.3) over 14 years, suggests that the 242 companies had a negative growth. The above trend indicates the increasing level of conservatism in Iran.

According to the table 4.3 and 4.4, it is found that cash flow variables of previous, current and the following year have a different Mean and measure of disparity. For instance the cash flow in the following year had higher disparity and Mean over the previous year. However, when the trend of cash flow is observed over 13 years, it shows a direct impact on the accruals. As the cash flow in previous and the following years decreases, the accruals trend descends as well.

It is found that 2310 observations (68% of total observations) had a change in revenue between -16% to 48%. Moreover, change in revenue showed a positive relationship or effect on the accruals.

Although cash flows and change in revenue had a positive and direct impact on the accruals, gross property, plant and equipment showed a negative relationship with the accruals. It was observed that as gross property, plant and equipment increased, the accruals decreased to a great extent, which is an indication of its implications.

For assessing the relative contribution of each independent variable in financial reporting quality, stepwise method shows that the relative contribution of all variables is significant.

There is a correlation between accruals as dependent variable and independent variables such as: cash flow in the previous, current and the following year, change in revenue and gross property, plant and equipment. Correlation coefficient of financial reporting quality model is 0.777.

The coefficient of multiple determination (R^2) in financial reporting quality model is 0.604, therefore, about 60.4 % of the variation in the accruals as a proxy for financial reporting quality is explained by the cash flow in previous, current and following year, change in revenue and gross property, plant and equipment.

The share of coefficient of determination (R^2) by the current year cash flow is 0.312, therefore, about 31.2% of the variation in the accruals is

explained by cash flow of the current year. The current year cash flow has maximum variation in the accruals. The share of coefficient of determination by other independent variables is respectively: cash flow of the next year 15.2%, change in revenue 6.1%, previous year cash flow 5.6% and gross property, plant, and equipment 2.3%.

Since the Durbin Watson statistic in financial reporting quality model is 1.779 and it is close to 2, it may be concluded that evidence of positive serial correlation in the residuals is very low.

Since P-value of F-test in the financial reporting quality model is less than 0.05 ($P < 0.0001$), this model is significant for assessing financial reporting quality in companies listed in the Tehran Stock Exchange (TSE).

The standardized beta coefficient of the current year cash flow of financial reporting quality model is -0.844. It indicates that a change of one standard deviation in the current year cash flow has resulted in a change of -0.844 standard deviation in the accruals variable.

It is found in financial reporting quality model that the positive coefficients of the previous year cash flow variable ($cashflow_{i,t-1}$) as well as the following year cash flow variable ($cashflow_{i,t+1}$) and change in revenue variable ($\Delta revenue_{i,t}$) prove the positive relationship between these variables and the accruals as a dependent variable. This explains the fact that increases in previous year cash flow variable ($cashflow_{i,t-1}$), the following year cash flow variable ($cashflow_{i,t+1}$) and change in revenue variable ($\Delta revenue_{i,t}$), increases the accruals.

It is found in financial reporting quality model that the negative coefficients of the current year cash flow variable ($cashflow_{i,t}$) and gross property plant and equipment (PPE) variable prove the negative relationship between these variables and the accruals. Therefore, the more the current year cash flow variable ($cashflow_{i,t}$) and increase in gross property plant and equipment (PPE) variable, the more the decrease in the accruals.

The Mean for the financial reporting quality residuals in 14 years for 3146 observations is -0.0008 with standard deviation of 12.4%.

It is found that the variable of the current year cash flow ($cashflow_{i,t}$) and the variable of the next year cash flow ($cashflow_{i,t+1}$) have a higher explanatory power than other variables for estimating of accruals as a proxy for financial reporting quality.

6.1.3 Investment Efficiency

The major findings as far as the investment efficiency is concerned are given below:

Considering the analysis of 3014 observations over 13 years, it is found that the investment Mean over this period is 104% with the standard deviation 351% that shows 68% (2050 observations) of total observations lies between -247% and 455% of investment. However, the negative trend of investment (fig. 4.5) over 13 years, suggests that the 242 companies had a negative growth.

It is found that sales growth had an average 25% growth over 13 years. However, there was a huge disparity between the observations, ranging from -42% to 92% growth and a positive relationship with investment.

It is found that return on assets of previous year had a negative relationship with investment, and also it is found that 68% (2050 observations) of total observations lie between -6% and 32% of return on assets of previous year.

Considering the fact that market to book value (MTB) index is considered as one of the conservatism indices, and everything else constant; the higher market to book value (MTB), the higher is the degree of accounting conservatism. It is found in this research that conservatism had

quite a bit of fluctuations between 1995 and 2010 whereas it was on an ascending trend between 1999 and 2006.

It is found that 68% of observations declared that current year operation revenue over 13 years ranged from -06% to 34% with a positive impact on investment.

There are 3014 observations for assessing investment efficiency in companies listed in the Tehran Stock Exchange of which 1248 observations were underinvestment and 1097 observations were overinvestment. Therefore 41.4% of companies listed in Tehran Stock Exchange in 13 years had underinvestment and 36.3% of companies in the same period had overinvestment and just 22.3% of these companies had investment efficiency.

The study showed that there is a significant relationship between sales growth and investment.

The study revealed that there are no significant relationship between other independent variables such leverage, cash, size, previous year investment and returns with investment as dependent variable.

When Richardson model was applied for analysis of data, the result showed that this model is not significant for assessing investment efficiency in companies listed in the Tehran Stock Exchange and this model cannot explain the firm's new investment of companies listed in the TSE.

The growth opportunities model has been used for assessing of investment efficiency in companies listed in the TSE. This model believes that firm growth opportunities have to explain the firm's new investment.

There are positive and negative residuals in assessing of investment efficiency by using growth opportunities model. Negative residuals are considered as underinvestment and positive residuals are considered as overinvestment and both are as investment inefficiency.

There is a correlation between investment as dependent variable and sales growth, previous year return on assets, ratio of market value to book value of assets and current year return on assets variables (independent variables). Correlation coefficient in investment efficiency model (growth opportunities model) is 0.52.

When growth opportunities model is applied, the coefficient of determination (R^2) was 0.271. Therefore about 27.1% of variation in the investment is explained by sales growth, previous year's return on assets, ratio of market value to book value of assets and current year return on assets.

Since the Durbin-Watson statistic in investment efficiency model (growth opportunities model) is 1.902 and it's close to 2, it may be concluded evidence of positive serial correlation is very low.

Since the P-value of F-test in investment efficiency model (growth opportunities model) is less than 0.05 ($p < 0.0001$) this model is significant for estimation of investment efficiency in companies listed in the TSE.

It is found that the positive coefficients of current year return on assets (OP_t) variable, market to book value of assets (MTB_t) variable, and sales growth (SG_{t-1}) variable prove the positive relationship with the firm's investment. Therefore, increase in the current year return on assets (OP_t) variable, market to book value of assets (MTB_t) variable, and sales growth (SG_{t-1}) causes firm's investment to grow.

It is found that the negative coefficient of the previous year return on assets (ROA_{t-1}) variable shows the negative relationship of this variable with firm's investment. Therefore, the more the increase in previous year return on assets (ROA_{t-1}), the more the decrease in investment.

6.1.4 Findings Based on Hypothesis

The first hypothesis is that the financial reporting quality has a negative relationship with underinvestment. Here dependent variable is underinvestment and financial reporting quality is the independent variable. Inferring from correlation coefficient (-0.422) of FRQ with $p < 0.0001$, there is a negative relationship between these two variables even at an error level of less than 0.0001, that leads to the acceptance of this hypothesis.

The second hypothesis is that there is a negative relationship between financial reporting quality and overinvestment. Here overinvestment is considered dependent variable and financial reporting quality is considered independent variable. Understanding from correlation coefficient (-0.408) of FRQ with $p < 0.0001$, there is a negative relationship between these two variables even at an error level of less than 0.0001, that leads to the acceptance of this hypothesis.

The third hypothesis is that there is a positive relationship between firm size and financial reporting quality. Here financial reporting quality is considered dependent variable and firm size is considered independent variable. Inferring from correlation coefficient (+0.532) of firm size with $p < 0.0001$, there is a positive relationship between these two variables even at an error level of less than 0.0001, that leads to the acceptance of this hypothesis.

The fourth hypothesis is that there is a negative relationship between financial reporting quality and sales fluctuations. Here financial reporting quality is considered dependent variable and sales fluctuations is considered independent variable. Inferring from correlation coefficient (-0.551) of sales fluctuations with $P < 0.0001$ indicates that there is a negative relationship

between these two variables even at error level of less than 0.0001 that leads to the acceptance of this hypothesis.

The fifth hypothesis is that there is a positive relationship between financial reporting quality and financial leverage. Here financial reporting quality is considered dependent variable and financial leverage is considered independent variable. Inferring from correlation coefficient (+0.306) of financial leverage with $p < 0.0001$, there is a positive relationship between these two variables even at an error level of less than 0.0001, that leads to the acceptance of this hypothesis.

The sixth hypothesis is that there is a positive relationship between financial reporting quality and book to market value ratio (BTM). Here financial reporting quality is considered dependent variable and book to market value ratios considered independent variable. Inferring from correlation coefficient (+0.458) of financial reporting quality with $P < 0.0001$ indicates that there is a positive relationship between these two variables even at error level of less than 0.0001 that leads to the acceptance of this hypothesis.

Seventh hypothesis states that there is negative relationship between financial reporting quality and ownership diversity. In this hypothesis financial reporting quality is considered dependent variable and ownership diversity is considered independent variable. In this hypothesis it became evident that although the relationship between financial reporting quality and ownership diversity is negative, this relationship is not significant and $p = 0.521$. Therefore the hypothesis is rejected.

The eighth hypothesis states that there is positive relationship between investment inefficiency and ownership diversity. In this hypothesis investment inefficiency is considered dependent variable and ownership diversity is considered independent variable. The analysis of data revealed

that the relationship between these two variables are not significant and $p=0.103$. Hence, the hypothesis is rejected.

6.2 Suggestions

Considering the research findings and the significance of financial reporting quality in increasing investment efficiency, it is recommended that the present shareholders and potential investors of stock exchange market pay more attention to financial statement quality for better and more efficient investment.

Since managers of firms with free cash flow and large cash balance are more prone to engage in improper investment, it is suggested that managers and auditors of these firms reduce information asymmetry by increasing financial reporting quality in order to prevent improper investment.

It is suggested that companies which have overinvested but their investment has been inefficient, increase their financial reporting quality so that investment in negative NPV projects is prevented and the investment ends more efficiently.

It is suggested that companies which have underinvested reduce information asymmetry by increasing financial reporting quality and attract investors for investing on positive NPV projects.

Taking into account the present conditions of the market and the research findings it is suggested that investors consider accruals for future cash flow prediction.

With respect to the role and relationship between return on assets as well as sales growth and investment, it is suggested to investors to take into consideration return on assets and sales growth for decision making as well as evaluating the firm's potentials for future investment.

It is suggested to investors to pay attention to the ratio of market to book value (MTB) for assessing a firm's conservatism level. Considering all other things constant, the higher the market to book value (MTB) level, the higher is the conservatism level. In addition, investors should remember that conservatism can be referred to as a mechanism that if properly implemented, can help solve agency problems and information asymmetry.

Considering the importance of cash flow statement in estimating the firm's future benefits as well as the role of accruals in preparing cash flow statement, it is suggested that managers and accountants be more cautious and use the most appropriate and reliable methods in estimating accruals.

All managers and accountants of firms are strongly recommended to be careful while estimating accruals and preparing quality financial statements because the quality of accounting information has the capability of increasing the number of its users.

Taking into consideration the decreasing trend in financial reporting quality over the period which has been studied (1995-2010), it is suggested that the managers of the Tehran Stock Exchange and related organizations study the influencing factors of financial reporting quality and take appropriate decisions and set proper regulations accordingly.

Since smaller firms have lower financial reporting quality, it is suggested to use factors such as financial leverage and book to market value ratio that positively affect financial reporting quality.

It is suggested that firms with higher sales fluctuations, study the influencing factors to reduce sales fluctuation so that they can enhance their quality of financial reporting.

It is suggested that sales and marketing managers strengthen their skills and knowledge by conducting workshops and seminars related to their respective areas in order to prevent sales fluctuations.

Firms that are not financially strong can use financial reporting quality as a tool to improve investment because it has been observed that the firms having higher financial reporting quality are financially strong.

It is suggested for those who are interested in investing in companies listed in the Tehran Stock Exchange, pay more attention to book to market ratio and select shares with higher book to market ratio.

Taking into account the decreasing investment trend of companies listed in the Tehran Stock Exchange and other organizations, it is recommended that these companies study the influencing factors of decreasing investment trend in the market to reverse this trend by taking appropriate decisions.

It is suggested that managers and researchers of any accounting and financial field scrutinize the influencing factors of financial reporting quality and create a reliable and safe atmosphere for attracting foreign investors.

Conducting workshops and seminars for learning accounting methods and for preparing user friendly financial statements is suggested.

Conducting workshops and seminars for assessing and analyzing financial statements, especially analyzing cash flow statements for those who are interested in investing in stock market is suggested so that shareholders can do a better monitoring.

Conducting workshops and seminars is suggested for assessing and analyzing financial statements and identifying information asymmetry of companies for reducing the problem of information asymmetry.

Accounting and auditing should be considered a social practice should be developed in accordance with ethical norms and professional guidelines In Iran.

Considering the importance of financial reporting quality in improving investment and economy of a country, it is suggested that the

Iranian Auditing Organization and its related organizations study this filed more extensively.

Auditors' rotation system should be introduced with a view to provide greater independence to auditors and they should be provided better incentives to resist management pressures in Iran.

The financial manager's position should be recognized in a company as individuals who take financial decisions that have implications on all the operations.

Considering the importance of different dimensions of profit quality and the related economic side effects, it is suggested that the topics of profit quality and financial reporting quality be included in the syllabus of accounting courses.

6.3 Conclusion

Despite the fact that the previous studies claimed the existence of a number of uses that financial reporting quality can have for better investment efficiency, there are very few proofs and practical reasons to support this claim. This research was conducted with the objective of evaluating the relationship between financial reporting quality and investment efficiency. In this research the financial information of 242 firms' financial statements of the Tehran Stock Exchange (TSE) belonging to 28 industries from 1995 to 2010 has been used for evaluating the relationship between financial reporting quality and investment efficiency.

Most of previous studies have shown that firms facing financial constraints limit managers' ability to finance potential projects (Hubbard, 1998). A firm facing financial constraint will pass up positive project due to large costs of raising capital, resulting in underinvestment. With respect to the first hypothesis and negative relationship between financial reporting

quality and underinvestment, companies can reduce underinvestment by increasing financial reporting quality.

According to previous researchers (Verrecchia, 2001; Myers and Majluf, 1984) when there is information asymmetry between firms and investors there is adverse selection cost. This information asymmetry could lead suppliers of capital to discount the stock price and to increase the cost of raising capital which leads to pass up positive NPV project resulting in underinvestment. Since there is a negative relationship between financial reporting quality and underinvestment, companies should prevent adverse selection cost by improving financial reporting quality that leads to reduction of information asymmetry between firms and investors.

Since there is a negative relationship between financial reporting quality and overinvestment and the fact that managers end up invest inefficiently by making bad project selections, consuming perquisites, or expropriating existing resources, it is predicted that poor project selection leads the firm to overinvest (Stein, 2003). Hence it may be concluded that companies should improve their financial reporting quality to prevent investment inefficiency.

Agency problems also affect investment efficiency due to poor project selection. It also can increase the cost of raising funds if investors anticipate that managers could expropriate funded resources leading to underinvestment. It is also proved that firms with higher financial reporting quality have lower agency problems. Hence, it is suggested to improve financial reporting quality to reduce the agency problems.

Previous research (Biddle and Hilary, 2006) documented no relationship between accounting information quality and investment efficiency in Japan. This is because Japan is a bank-centered system and banks are able to obtain information through private channels. Although Iran is a bank-centered system, this study finds a negative relationship between financial reporting quality with underinvestment and overinvestment.

Therefore, it is concluded that financial reporting quality has an important role in bank-centered economy like Iran with respect to investment efficiency.

All in all, this research finds that financial reporting quality has a negative significant relationship with underinvestment and overinvestment. In other words, financial reporting quality causes an increase in investment efficiency by lowering underinvestment and overinvestment. Underinvestment and overinvestment are considered as investment inefficiencies. These findings will probably provide appropriate evidences for supporting this theoretical issue that higher financial reporting quality can improve the investment efficiency by decreasing information asymmetry between firms and investors that results in decreasing financing costs and on the other hand, decreasing information asymmetry between manager and investor leads to decreasing monitoring costs and adverse selections. These findings are concurrent with the previous studies such as (Gary Biddle, Gilles Hilary, Rodrigo S. Verdi, 2009), and (Ahmad Modares and Reza Hesarzadeh, 2009).

This research also shows that firms that possess more total assets or in other words, are larger in size have a higher financial reporting quality. There is a positive significant relationship between the firm size and financial reporting quality. Therefore, it can be concluded that considering the relationship between financial reporting quality and investment efficiency, larger firms have higher investment efficiency. These findings are concurrent with the previous research done Sajadi et al. (2009).

In another section of this research, analysis has shown that there is a negative significant relationship between financial reporting quality and sales fluctuations. Hence, managers may increase financial reporting quality by decreasing sales fluctuations which eventually leads to better investment efficiency.

This study could prove that there is a positive significant relationship between financial reporting quality and financial leverage. Based on these results, apparently firms with lower financial resources for investment, or in other words, firms with higher financial leverage have a higher financial reporting quality. This relationship indicates that firms with less financial resources may try to attract investors by increasing financial reporting quality. These results are in concurrence with studies conducted by Kordestani and Rahimi (2011).

This study has also proved that the relationship between book to market ratio and financial reporting quality is positively significant. Firms with higher book to market ratio are able to bear risks because with a sudden shock in market, the market value gets closer or becomes equal to book value. Taking into account the positive significant relationship between book to market ratio and financial reporting quality, it may be concluded that higher book to market ratio leads to an increase in financial reporting quality, and since managers look for firms with higher book to market ratio, it would be easier for firms to attract investors and resources than those firms with lower book to market ratio.

This research has shown that there is no significant relationship between financial reporting quality and ownership diversity and also there is no significant relationship between investment inefficiency and ownership diversity. In other words a change in ownership diversity does not cause change in financial reporting quality and investment inefficiency. These results do not match the findings of Sajadi, Zaranejad and Jafari (2009).

This study also provides other evidences about the benefits of accounting information and its quality in the field of investment. These results can persuade the producers of accounting information to provide higher quality information to fulfill the needs of their society and on the other hand encourage the users of this information to pay attention and ponder upon the importance of accounting information.

6.4 Scope for Further Research

Based on the studies conducted in other countries regarding the phenomenon of financial reporting quality and also on the basis of the present study, the following streams for further research are suggested:

1. Studying the effect of independent auditor on financial reporting quality.
2. Examining the relationship between financial reporting quality and auditor tenure.
3. Studying the effect of foreign investors' diversity on financial reporting quality.
4. Examining and comparing the relationship between financial reporting quality and investment efficiency in public and private companies.
5. Studying the effect of industry type on financial reporting quality and investment efficiency.