A Study of the Influence of Earnings Management and Accounting Information Quality on the Investment Efficiency of Chinese Listed Companies

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Abstract. The inefficient investment is mainly caused by information asymmetry and principal-agent problems. Earnings management is an important factor affecting the inefficient investment of enterprises. It directly affects the effectiveness of earnings information and the decision-making of investors. Accounting information, especially information disclosure, is the basis of maintaining the normal operation of investment. It can provide effective incremental information to stakeholders, and make optimal investment decisions. It is found that earnings management is positively related to investment efficiency. It shows that earnings management will have an impact on investment decision-making. Accounting information, especially information disclosure, is the basis for maintaining the normal operation of investment. It can provide effective incremental information to stakeholders and make optimal investment decisions.

1. Introduction

Investment decision-making is not only the core of every enterprise, but also the top priority of financial decision-making. From the point of view of enterprise operation, only if investment decision-making is done well can the enterprise have the possibility of long-term development and profitability. At the same time, whether the investment decision-making is correct or not will directly affect the financing and dividend policy of the enterprise. The impact of the series will ultimately be reflected in the level of corporate risk and earnings and in the capital market. In this sense, the improvement of enterprise value ultimately depends on the investment efficiency of enterprises. The inefficiency of enterprises’ investment is a common problem for every company, especially the imperfection of capital market and the lack of national system in China's listed companies. As a result, many enterprises will not concentrate on developing the real economy and enhancing the competitiveness of enterprises, but expect to set off some turbulence in the stock market. For example, in order to cater to the stock market short-term speculative trading and conceptual speculation, do some books that do not match the actual accounts to deceive investors, let them blindly invest, hedge, speculative activities.

Therefore, whether equity financing or bond financing, will present the problem of inefficient allocation of funds, showing insufficient investment and excessive investment. Obviously, these two
situations will have adverse effects on the interests of listed companies and investors. Insufficient investment will cause enterprises to lack the motive force for development and growth, and excessive investment will lead to overcapacity of enterprises, not only waste a large number of resources and production factors, but also affect the long-term development of enterprises. Earnings management is a kind of enterprise behavior. When the enterprise managers mislead the stakeholders by changing the financial report, earnings management comes into being. Earnings management is also one of the topics widely studied by scholars at home and abroad in recent years, and some of the research results have been published one after another, but at present, this is still a big problem puzzling the academic and practical circles. At present, earnings management can adjust the accounting earnings under the condition of legitimate compliance, mainly because the earnings data can send a strong signal to the capital market, and it is also an important consideration for many contracts signed. Therefore, the regulatory authorities have issued a series of accounting standards and regulatory measures on the earnings of enterprises. The quality of surplus information is monitored, and the listed company management takes various measures to influence the financial report of the enterprise for the consideration of economic interests.

According to the current research, earnings management behavior is mainly through some accounting means to manipulate and control the profitability of the enterprise, making the financial report data lost authenticity, reliability and objectivity, unable to reflect the true operating and profitability of the enterprise, and making the wrong investment to the investors of the enterprise. The quality of accounting information is the most important and the most common way of expression in earnings management behavior. Accounting information, as the most direct and important influencing factor of investment decision-making, has also received more and more attention. In the existing research on the quality of accounting information, we usually use the quality of accounting information to measure the degree of earnings management, that is, the degree of earnings management is high, the quality of accounting information is relatively low; the degree of earnings management is low, the quality of accounting information is relatively high. Therefore, combined with the economic results that earnings management may produce, it may influence the investment efficiency of enterprises and derive the influence of accounting information quality on the efficiency of enterprises. So this paper mainly studies the quality of accounting information and earnings management.

2. Literature Review

Biddle and Hilary (2006) argued that high-quality accounting and constrained earnings management can reduce information asymmetry between managers and investors, thereby improving investment efficiency, and pointed out that high-quality accounting information will affect investment efficiency, and also tested how the impact. McNichols and Stubben (2008) found that firms show good profitability through operating earnings, but this behavior will affect the decision of internal investment, often resulting in inefficient investment decisions. McNichols and Stubben (2008) empirically tests the impact of earnings management on investment expenditure by analyzing the firms investigated by the US Securities Regulatory Commission for irregularities from 1978 to 2002, the firms sued by shareholders for accounting information distortion, and the listed companies whose accounting statements are restated. Asset investment behavior, found that these companies in the earnings management period will occur excessive investment, and after earnings management excessive investment phenomenon disappeared.

Risberg (2006) from the perspective of the timeliness of loss confirmation, pointed out that timely loss confirmation can reduce the overinvestment behavior of enterprises, the relationship between the two is positive u-shaped. From the perspective of timeliness, it is pointed out that earnings quality will significantly affect the investment efficiency of enterprises, and there is a positive correlation between the two. Savov (2006) establishes a model to test the relationship between earnings management and investment when studying the relationship among earnings management, corporate investment and dividend distribution. Through the empirical test and analysis of the data of German listed companies, it is pointed out that the deviation of investment and reporting moves in the same direction, that is, earnings management will significantly affect the investment of enterprises. In the same year, the
German listed companies are also studied. They use simultaneous equations to analyze the endogenous relationship between earnings management and investment expenditure. There is a significant positive correlation between residual management and investment expenditure. Stubben (2008) theoretically analyzed earnings management and investment behavior of enterprises, using causality test method to test, found that those enterprises with earnings management behavior, often have higher capital expenditure, thus pointing out that earnings management does have an impact on the investment behavior of companies, external investors may have it can make inappropriate investment decisions according to the wrong accounting information reported by enterprises.

Biddle and Hilary (2006) studied the data of 34 countries from 1993 to 2004 and the data of the United States and Japan from 1975 to 2001. It was found that the quality of accounting information was significantly related to corporate capital investment behavior. High-quality accounting information reduced the information asymmetry between management and external fund providers and promoted the company. Investment efficiency, and the more important the stock market to external financing, the more significant the impact of accounting information quality on investment efficiency. Verdi (2006) tested the relationship between the quality of financial reports and investment efficiency of American listed companies from 1980 to 2003 using the observations of nearly 50,000 companies. The results showed that the quality of financial reports was negatively correlated with overinvestment or underinvestment.

3. Research Method
The sample of this study is listed companies on the Shenzhen Stock Exchange of China. This study is based on the annual data of 2008-2016. A total of 274 companies and 2192 data are obtained.

According to the above variable table, we can establish a multiple regression model from two aspects of accounting information quality and earnings management. The model is as follows:

Model 1: Research on the impact of accounting information quality on enterprise investment efficiency.

\[ \text{INV}_{it} = \alpha_0 + \alpha_1 \text{AID}_{it} + \alpha_2 \text{AQ}_{it} + \alpha_3 \text{LNSIZE}_{it} + \varepsilon_t \]

Model 2: Research on the impact of earnings management on enterprise investment efficiency.

\[ \text{INV}_{it} = \alpha_0 + \alpha_1 \text{AP}_{it} + \alpha_2 \text{ROA}_{it} + \alpha_3 \text{LNSIZE}_{it} + \varepsilon_t \]

Among them, \( i = 1, 2, 3 \ldots N \) denotes number, \( t \) denotes time, \( t \) is 2012, 2013, 2014, 2015, 2016, \( \alpha_0 \) is intercept term, \( \alpha_1, \alpha_2 \) are coefficients of various explanatory variables, and \( \varepsilon_t \) is error term.

4. Results of Empirical Analysis
In this paper, the regression coefficients of the model are obtained by the complex regression analysis. On the basis of this, the effects of each variable on the explanatory variables are determined. According to the \( R^2 \), adjusted \( R^2 \), F value and T value are used to test the fitness, the explanatory power and the significance of the parameters.

Table 1. Regression analysis of accounting information quality on enterprise investment efficiency.

| Regression coefficient | Standard error | T-value | Sig. | VIF |
|------------------------|----------------|---------|------|-----|
| Constant               | -9.670         | 2.150   | -4.498 | 0.000 |
| AID                    | -0.162         | 0.069   | -2.364 | 0.019 | 1.086 |
| AQ                     | -0.002         | 0.001   | -2.023 | 0.043 | 1.245 |
| LNSIZE                 | 0.567          | 0.099   | 5.760  | 0.000 | 1.321 |

\[ R^2 \] 0.588

Adjusted \( R^2 \) 0.529

The regression coefficient between accounting information disclosure index and new investment is -0.162, T test value is -2.364, T test significance probability P value is 0.018, passed T test at 5% significance level. The regression coefficient is negative, which indicates that the higher the accounting information disclosure index, the less the new investment of enterprises, on the contrary, the lower the accounting information disclosure index. The more new investment enterprises have, the
growth of accounting information disclosure index has a restraining effect on the new investment enterprises, and the accounting information disclosure index has a significant negative correlation with the new investment enterprises. The regression coefficient between accrued quality and new investment is -0.002, T test value is -2.023, T test significance probability P value is 0.043, and passed T test at 5% significance level. The regression coefficient is negative, indicating that the accrued quality decreases by 0.002 percentage points with each increase of accrued quality. The less the new investment is, the lower the accruals quality is, the more investment the company will make. The improvement of accrual quality also has a restraining effect on the new investment of enterprises, and there is a significant negative correlation between the accrual quality and the new investment of enterprises.

In conclusion, the quality of accounting information is negatively correlated with the investment efficiency of enterprises. This may be because the higher the quality of accounting information and the more information disclosed, the more open and transparent the investment decision-making of enterprises will be. If the project is reduced, the investment efficiency will decrease naturally, and the higher the quality of accounting information, the higher the investment efficiency of the enterprise will be restrained.

| Table 2. Regression analysis of earnings management on enterprise investment efficiency. |
|-----------------------------------------------|
| Regression coefficient | Standard error | T-value | Sig. | VIF   |
|------------------------|----------------|---------|------|-------|
| Constant               | -10.042        | 1.906   | -5.268 | 0.000 |
| AP                     | 0.006          | 0.002   | 2.396 | 0.017 | 1.031 |
| ROA                    | 4.669          | 0.899   | 5.194 | 0.000 | 1.016 |
| LNSIZE                 | 0.553          | 0.085   | 6.492 | 0.000 | 1.020 |
| R²                     | 0.585          |         |       |       |
| Adjusted R²            | 0.525          |         |       |       |
| F-statistic            | 9.787          |         |       |       |

The regression coefficient between the total accrued profit and the new investment is 0.006, T test value is 2.396, T test significance probability P value is 0.017, passed T test at 5% significance level. The positive regression coefficient shows that the total accrued profit increases by 0.006 percentage points and the new investment increases by 0.006 percentage points. The higher the investment, the more the new investment. The growth of the total accrued profit has a positive effect on the new investment. Then the total accrued profit has a significant positive correlation with the new investment. The regression coefficient between the return on total assets and the new investment of enterprises is 4.669, T test value is 5.194, T test significance probability P value is 0.0000, and pass T test at 1% significance level. That is to say, the return on total assets increases by 4.669 percentage points, and the regression coefficient is positive, indicating the total assets. The higher the rate of return, the more new investment enterprises have. The growth of return on total assets has a positive effect on the new investment of enterprises, and the total return on assets has a significant positive correlation with the new investment of enterprises.

In summary, earnings management is positively related to the investment efficiency of enterprises, which may be due to the fact that only when the enterprises have earnings can they choose to invest and make investments when they have earnings. Enterprises can improve the return on total assets through the allowable earnings management within the scope, and also have more profits. Investment efficiency will naturally increase if capital is invested.

5. Conclusion and Suggestion

5.1. Conclusion

China's economy is now in the transitional stage. The changes of economic system and external environment are the external factors affecting the investment efficiency of enterprises. The quality of accounting information and earnings management are the most important internal factors. Through the previous literature and empirical results, we can draw the following conclusions: First, this paper uses accounting letter. Interest quality as an independent variable, this paper studies the correlation between
accounting information quality and enterprise investment efficiency, and finds that accounting information quality is negatively related to enterprise investment efficiency, which is also consistent with H1 hypothesis. At present, the quality of accounting information in China is good as a whole. Most listed companies can also record and disclose the financial status of enterprises according to the accounting standards. However, according to the announcement of accounting information quality inspection issued by the Ministry of Finance, there are still some enterprises in China who try to insure themselves, and the problem of fraudulent accounting information still exists, which directly leads to the authenticity, stability and timeliness of accounting information has been seriously affected, and also directly affects the profitability and development of enterprises, such as If the enterprise does not have a good mechanism to manage, it is not clear about the existing problems of the enterprise. This is a very serious problem, which will directly affect the future development trend of the enterprise, affect the enterprise to make investment decisions, greatly reduce the investment efficiency of the enterprise. This is also the fourth chapter of empirical analysis of accounting information quality of enterprise investment efficiency. Conclusion the rate is significantly negative correlation.

Secondly, this paper takes earnings management as an independent variable to study the correlation between earnings management and enterprise investment efficiency, and finds that earnings management and enterprise investment efficiency are positively correlated. It shows that earnings management will have an impact on the investment decisions of enterprises, and it is consistent with the hypothesis that enterprises will rely on accounting information in their investment decisions. It shows that earnings information is a factor that enterprises need to consider when investing, and provides a new perspective for the study of enterprise investment behavior from the accounting point of view. Moreover, the interaction between accounting information quality and earnings management can enhance the explanatory ability of overinvestment. When considering the interaction between accounting information quality and earnings management, the explanatory ability of earnings management to underinvestment is low. It shows that earnings management is not the main reason for underinvestment. The underinvestment of enterprises is caused by other factors including the quality of accounting information, such as sustainability and robustness. Thirdly, it also shows that this is a common problem of enterprises, although the quality of accounting information is more significant than earnings management on the efficiency of enterprise investment.

5.2. Suggestion

Whether accounting information quality or earnings management can affect the investment efficiency of enterprises. Earnings management is also an important factor affecting the inefficient investment of enterprises. It directly affects the effectiveness of earnings information and the decision-making of investors. Accounting information, especially information disclosure, is the basis for maintaining the normal operation of investment. It can provide effective incremental information to stakeholders and make optimal investment decisions. Therefore, although earnings management is the manipulation of earnings information under the generally accepted accounting standards, it does not violate relevant laws and regulations, it should be avoided as far as possible. Absolutely. Perfecting the corporate governance mechanism can also improve the investment efficiency of enterprises. Because of the imperfect corporate governance structure in our country, the managers have all the information about the company's operation and financial status, while the shareholders cannot effectively monitor the enterprise, which provides the managers with space for earnings management. Between. In addition, in China, due to the imperfection of equity incentive mechanism, executive compensation mainly comes from monetary compensation, managers assume all the risks of enterprise operation but do not enjoy the residual claim. This serious unequal payment and income situation prompts managers to increase on-the-job consumption and expand enterprises. Earnings management is just one of the most covert means to maximize their own interests by means of industry scale. In order to improve this situation, from the micro level, we should improve the corporate governance mechanism, strengthen the supervision of enterprise management; at the same time, improve incentive mechanism, try to make the interests of management and shareholders unified, and improve inefficient investment.

Another way to improve the quality of accounting information and disclosure information of listed companies is to mislead investors in their investment decisions because of insufficient supervision by
China's regulators and the fact that listed companies hide their true operating conditions. Under normal conditions, rational investors will make investment decisions according to the limited information they have when they anticipate the existence of concealment and false reports. They often ask for higher capital prices or more restriction clauses to ensure the safety of funds. This makes the value of some high-value companies undervalued, unable to obtain sufficient funds, resulting in inadequate investment; and some low-value companies are overvalued, the capital into some low-profitability projects, resulting in reduced investment efficiency.

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