Accounting conservatism and enterprise investment efficiency

In Partial Fulfillment of the Requirements
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by

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ACCOUNTING CONSERVATISM AND ENTERPRISE INVESTMENT EFFICIENCY

ABSTRACT

Investment is one of the most necessary foundations and activities of every enterprise. A good investment activity can increase the profits of the enterprise. Higher investment efficiency depends on correct investment decisions, which can create greater value for enterprises, even determine whether or not enterprises can survive in the capital market. Accounting conservatism is the basic principle of a company, based on the principle of receiving bad news faster than good news. It improves the quality of the company's financial information, reduces agent costs, and improves investment efficiency. This paper distinguishes investment efficiency from overinvestment and underinvestment as well as discusses their relationship with accounting conservatism based on information asymmetry and principal-agent theories respectively. This paper uses market-to-book ratio to measure accounting conservatism, uses the residual analysis model to measure investment efficiency, and the relationship is measured by multiple regression. The result is there is a negative relationship between accounting conservatism and overinvestment, and the relationship between accounting conservatism and underinvestment is positive.

JEL classification: M41; G31

Keywords: Accounting conservatism; investment; investment efficiency
1. INTRODUCTION

Investment is one of the foundation activities of every enterprise, it is very important and it is one of the driving forces of the enterprise’s economic development. Accounting conservatism is the basic principle of a company, financial information must be carefully and professionally verified and measured, the expected loss must be recorded in time, and the expected income can only be recognized after quantification. Accounting conservatism is helpful to improve the quality of financial report, reduce the contradictions caused by the problems of agent management and the overconfidence of manage level, and reduce the agency costs so that improve the efficiency of enterprise investment. As a result, this paper will discover the connection and relationship between accounting conservatism and the efficiency of enterprises’ investment.

In fact, some managers may make unreasonable investments for personal purposes. In order to earn more money, they do not choose to return the available capital to the shareholders, but continue a new investment cycle, which may easily cause overinvestment. Also, most shareholders prefer to invest in high-risk projects, because the higher the risks, the higher the profits. Once the investment is successful, most of the profit is absorbed by the shareholders themselves, even if the investment fails, the risk of external investors is much higher than that of shareholders. As a result, avoiding from taking on high risk and low return, the external investors have to take initiatives to protect their own interests, which have resulted in a significant increase in funding costs and a reduction in income. Overinvestment and underinvestment can be improved or exacerbated by accounting conservatism, it is interesting and academic, so I will analyze how accounting conservatism affects overinvestment separately and particularly, as well as how will accounting conservatism make influence on company’s underinvestment activities.
Shivakumar (2005) finds in his research that, in enterprises with accounting conservatism policy, it is necessary to recognize the financial losses related to their investment activities immediately, so the management expenses and the default risks will increase. At the same time, due to the constraint of accounting conservatism on the recognition of enterprise losses, it is difficult to transfer the losses, so the recognition can only be conducted during the tenure of the management, so the management's excessive investment behavior will be restrained to some extent.

This paper finds the relationship between accounting conservatism and efficiency of investment to discover how will accounting conservatism affect the enterprise’s investment efficiency. Firstly, this paper looks for both Chinese and foreign literatures to find the related concepts, conceptual basis, measurement methods that define accounting conservatism and investment efficiency, and then finding their mutual relationships. Secondly, from the CSMAR database, finding the financial data of A share companies listed in Shanghai and Shenzhen stock exchanges market in the fiscal year from 2015 to 2017. Thirdly, use the value of market-to-book ratio to interpret the extent of accounting conservatism of the companies, use the regression residual model to measure the value of investment efficiency, and then separate them into two parts, the overinvestment part and the underinvestment part. Then, set up two multiple regressions to develop the relationship between both accounting conservatism and overinvestment, and accounting conservatism and underinvestment, study on them separately. Finally, this paper shows there is a negative relationship between accounting conservatism and the overinvestment activities, if the accounting conservatism index becomes larger, it will contribute to a lower overinvestment rate; in contrast, the relationship between accounting
conservatism and underinvestment is positive, which means if the company’s accounting conservatism level becomes higher, their underinvestment tendency will also be higher.

The concept of accounting conservatism is originated from western countries, so, most of the research is carried out in the West. Chinese academic circles accepted the concept of accounting conservatism late, so the research on the relationship between accounting conservatism and investment efficiency started relatively late. However, in this paper, it uses the database from China, use the information from Chinese companies, the results are also about Chinese companies. It is good for Chinese financial analysis.

The reminder of the paper is structured as follows. Section 2 discusses the previous literature about accounting conservatism, efficiency of investment and the relationship between them. Section 3 shows the research design about how to measure their relationship. Section 4 discusses the research results, show the data and correlations. Section 5 is the summary and limitation of this paper.

2. LITERATURE REVIEW

2.1 Accounting conservatism

a) Principle of Accounting Conservatism

find before the year 1966, accounting conservatism is existed. Peek (2006) finds the cause of accounting conservatism, he compares listed companies and private enterprises and finds the accounting policy is more conservatism in listed companies. Because in the private enterprises, creditors and companies mainly communicate in a private way, however, in listed companies, their financing is hampered by a breakdown in communication between creditors and shareholders, so they must increase their accounting conservatism level. Accounting conservatism means that when the company or the environment is unknown, the accountants can predict possible economic losses and investment risks, including not overestimating company’s own assets and revenues, and not underestimating liabilities and expenses. Accountants should always be cautious, and then make an accurate estimate of the measurement of accounting elements (Sun, 2015). In terms of the impact on enterprises, if the accounting conservatism principle is fully applied, it can reduce the proportion of contractual party defaults, improve the quality of audit accounting, reduce investment risks and enhance the competitiveness of the company.

Basu (1997) and Watts (2003) find in their investigation that, under the requirements of accounting conservatism, if the enterprise has the conservatism policy in their accounting department, they will recognize the bad news more and more quickly than recognize the good ones, the company record the losses from their activities immediately, and will only record the profit when they actually receive the cash or there is a cash inflow. These will result in the decrease tendency of the company’s total assets.

In china, our country find the existence of accounting conservatism later than the foreign countries. Li (2005) finds from his research that a company with a net loss will do some human manipulation to turn the company to the right direction of making profit in the coming year, as a
result, they turn to recognize the losses in prior to record the profits, which will make the company’s totally in a accounting conservatism level. Chen (2006) find from his survey that most of the Chinese companies have a relatively conservative accounting policy, the level is pretty high, also, the revolution of accounting conservatism policy will improve our country’s total conservatism level.

b) How to calculate Accounting Conservatism

Basu (1997) sets up reverse metering model, which accurately reflects the asymmetry and timeliness of accounting conservatism. Basu (1997) uses earnings model, and the asymmetry that accounting earnings respond to bad news faster than good news (if the gain is good news, whereas the loss is bad news). Under these, can prove if accounting conservatism is existence. The formula is

\[ \frac{EPS}{P} = \beta_0 + \beta_1 \times Neg + \beta_2 \times Ret + \beta_3 \times Neg \times Ret + \epsilon \]

\( EPS \) means earning per share, \( P \) means closing price of last year, \( \beta_1 \) means the sensitivity of accounting earnings to profitability, \( \beta_1 + \beta_2 \) means the sensitivity of loss, \( \beta_2 \) means the extent of accounting conservatism.

When \( Ret > 0 \), \( Neg = 0 \); when \( Ret < 0 \), \( Neg = 1 \).

Khan (2009) improves this model.

Skewness measurement used by Basu(1997), Givoly and Hayn(2000), and Ball(2000). If the accounting conservatism is accurate, then the revenue will be delayed recognition, on the other hand, the loss will be recognized in a timely manner. So the possibility of negative accounting surplus increases, there will be a negative skewness.

Beaver and Ryan (2000) discover net asset measurement method, which compare and contrast the difference between net assets and market value, because on the basis of accounting conservatism, the company will underestimate assets and overestimate liabilities, so, the company's net assets will be generally undervalued.

Accrual basis method from Ball and Shivakumar (2005)

Current and future cash flow of the company have a positive relationship, based on it, cash flow can be a signal to measure the balance. This method can reflect a company’s economic condition independently, avoiding the influence from stock market.


Stober use the numerical value of market to book ratio to reflect the extent of company’s accounting conservatism. If the number is bigger than 1, the degree of accounting conservatism of the company is good, and with controlling the other variables, if the value gets larger, the result gets better.

2.2 Efficiency of investment

a) Basic theory of investment efficiency

Principal-agent theory

Some employees may use internal information for their own benefit, such as excessive investment and consumption. As a result, the company's investment is insufficient and the investment efficiency is reduced. Burley and Means (1930s), set up Principal-agent theory, which advocates the separation of ownership and management rights.

Information asymmetry theory
In the market economy, buyers and sellers cannot completely grasp the information of the other party, and such information asymmetry will cause the party without information to receive different degrees of interest damage. (George and Michael, 1970). Outside buyers discount securities to make sure they don't overpay. Therefore, the internal managers will think that the price of their securities is undervalued, so they will reduce the issuance of securities, thus reducing investment opportunities, resulting in insufficient investment.

b) Calculation method of investment efficiency

Investment-cash flow sensitivity used by Fazzari and Petersen (1988) to measure overinvests. Investment is not only related to investment opportunities, but also related to the company's internal cash flow.

Vogt (1994) sets up a model includes variables of investment opportunity, cash flow and their interactive items, the interaction item’s coefficient can measure whether the company overinvests or underinvests. If it is negative, it means overinvests, otherwise, underinvests. At present, China does not have its own investment efficiency measurement method, and most of them use foreign methods for reference.

2.3 Accounting conservatism and Efficiency of investment

Accounting conservatism can be divided into overinvestment and underinvestment. When an enterprise has institutional investors of different nature, robust accounting information can have a positive impact on investment efficiency. In other words, when an enterprise overinvests, accounting conservatism can effectively reduce the probability of overinvestment. When the enterprise investment is insufficient, accounting conservatism can alleviate it.

a) Domestic related documents
Liu and Wu (2010) study the accounting conservatism of corporate governance and conclude that the higher the accounting conservatism of a company, the higher the efficiency of capital investment of a company. Ye (2011) finds when a company considers about asset impairment, it will be in accordance with the requirements of accounting conservatism from the negative return of the project, to prevent overinvestment.

About underinvestment, the opinions are polarized. Some people such as Jiang (2010), he thinks accounting conservatism can alleviate underinvestment; some people like Li (2009), he finds that accounting conservatism can aggravate underinvestment, because the management is too cautious in choosing investment for fear of risk. Also, an undervalued accounting surplus reduces a company's ability to invest in the long term, so underinvestment can be more significant.

b) Foreign related documents

The literature done by Bushman (2005) shows that conservatism improves investment efficiency by reducing managerial overinvestment. A company with higher Accounting Conservatism can react quicker than others when investment efficiency changes. Through investigation, Lara and Penalva (2010) find Accounting conservatism has a buffer effect on non-efficient investment, so that the profitability of enterprises can be improved. Studies done by Ball and Shivakuma (2015) have shown that in a firm with accounting conservatism, all possible losses in the investment process are recognized immediately, so the management cost increases accordingly and the default risk is higher. Moreover, it is difficult to transfer the losses caused by overinvestment, which will restrict the investment behavior and investment efficiency to a certain extent. Biddle (2009) finds there is a positive relationship between accounting conservatism and underinvestment. A firm with limited invest ability often has the feature of low
liquidity of cash and high finance leverage rate. From the perspective of accounting conservatism, these enterprises will choose some investment projects with lower risks and higher rewards, the managers are hesitant, so they tend to miss a lot of good investment opportunities, which lead to underinvestment. At the same time, the investors tend not to do any investments of the projects from these companies, because these companies meet the risk of bankruptcy. So, Accounting conservatism reduces the number of potential investors in these enterprises and makes it more difficult for these enterprises to get funds from others, thus exacerbating the degree of underinvestment.

Hence, there comes to two hypotheses:

\[ H1: \text{The stronger the accounting conservatism is, the weaker the enterprise investment efficiency (overinvestment) is.} \]

\[ H2: \text{The stronger the accounting conservatism is, the stronger the enterprise investment efficiency (underinvestment) is.} \]

3. RESEARCH DESIGN

3.1 Relationship model between Accounting conservatism and Efficiency of Investment

Based on Biddle’s investment efficiency model, the below models of measuring relationship between Accounting conservatism and investment efficiency can be set up. \( Invest \) means the new added investment in the fiscal year, \( C \) is the numerical value to represent the accounting conservatism index, \( OverI \) and \( UverI \) means the enterprise’s investment activities, \( Ins \) and \( SH \) are control variables, \( Ins \) means the institutional shareholding ratio, \( SH \) means the ownership concentration.

\[
Invest = \alpha_0 + \alpha_1C + \alpha_2OverI + \alpha_3C \cdot OverI + \alpha_4Ins + \alpha_5SH \quad (a)
\]
According to model (a), under the condition of company overinvests, $\alpha_1$ measures the relationship between Accounting conservatism and new added investment, $\alpha_1 + \alpha_3$ measures the relationship between Accounting conservatism and overinvests. If $\alpha_1 + \alpha_3 > 0$, the negative relationship can be proved.

$$\text{Invest} = \beta_0 + \beta_1C + \beta_2U\text{verI} + \beta_3C \ast U\text{verI} + \beta_4I\text{ns} + \beta_5SH \quad (b)$$

According to model (b), Under the condition of company underinvests, $\beta_1$ measures the relationship between Accounting conservatism and new added investment, if $\beta_1 > 0$, the relationship between Accounting conservatism and underinvests can be proved, and the relationship is positive.

### 3.2 Variable selection and model construction

**Accounting Conservatism**

**a) Accrual base method**

According to Givoly’s (2000) investigation results, for enterprises with relatively stable scale, the long-term cash flow should be consistent with the accumulated profit. The reliability of accounting should be measured by the total amount of non-profit accrued liabilities. If it is positive, it means that enterprises accounting policy is conservative. The larger the amount, the higher the extent of accounting conservatism. Non-operating accruals can be obtained by subtracting operating accruals from total items.

**b) Basu’s (1997) modal**

The core concept of Basu’s modal is Accounting conservatism recognize losses and gains in different speed.

$$\frac{EPS}{P} = \beta_0 + \beta_1 \ast Neg + \beta_2 \ast Ret + \beta_3 \ast Neg \ast Ret + \epsilon \quad (a)$$
EPS is an index that measures accounting earnings, Ret is annual return on individual stocks, Neg is dummy variable. When Ret > 0, Neg equals to 0; when Ret < 0, Neg equals to 1. When Ret > 0, the equation will be:

\[
\frac{EPS}{P} = \beta_0 + \beta_2 * Ret + \varepsilon
\]

\(\beta_2\) reflects the timeliness of response to good news; when Ret < 0, the equation will be:

\[
\frac{EPS}{P} = \beta_0 + \beta_1 + (\beta_2 + \beta_3) * Ret + \varepsilon
\]

\((\beta_2 + \beta_3)\) reflects the timeliness of response to bad news. \(\beta_3\) is the difference between recognize good news and bad news, which is the index of Accounting conservatism.

Khan and Watts (2009) set up CScore based on Basu’s (1997) model, which is a conservatism index that reflects a particular year for a particular company.

\[
GScore = \beta_2 = \mu_1 + \mu_2 Size + \mu_3 MTB + \mu_4 Lev \quad (b)
\]

\[
CScore = \beta_3 = \lambda_1 + \lambda_2 Size + \lambda_3 MTB + \lambda_4 Lev \quad (c)
\]

Then put these two into equation (a), the new equation is:

\[
\frac{EPS}{S} = \beta_0 + \beta_1 * Neg + (\mu_1 + \mu_2 Size + \mu_3) * Neg * Ret + \varepsilon \quad (d)
\]

Through (d), \(\mu_1, \mu_2, \mu_3, \mu_4\) can be calculated, put them into (c), the conservatism index can be calculated.

c) Market-to-book ratio

This paper use the method from Stober (1996) to measure accounting conservatism, because his approach shifted from stock market orientation to balance sheet orientation. The advantage is it doesn’t depend on the fluctuation of the stock market and the stock price, therefore, it is more stable and reliable.
3.3 Efficiency of Investment

This paper uses Biddle’s model below, Invest is the new added investment in this year, Rev means the revenue growth rate of the enterprise.

\[ Invest = \lambda_0 + \lambda_1 \times Rev + \varepsilon \]

This model can measure if the company is overinvests or underinvests. By doing the regression and residual analysis with these two variables, if the residual is positive, the company overinvests, represented by OverI; if the residual is negative, the company underinvests, represented by UnderI.

4. EMPIRICAL RESULTS

4.1 Sample selection and sample data sources

Through the CSMAR database, this paper selects the financial data of all A share companies listed in Shanghai and Shenzhen stock exchanges market in the fiscal year 2015-2017 (for new added investment: 2014-2016). Because the data needed in this paper is difficult to obtain from life or in the form of questionnaire and real life. After excluding all companies with abnormal financial conditions, missing variables, relevant data of finance and insurance, deleting the stock issued in that year, 3400 observed data are finally obtained.
### 4.2 Descriptive statistics of each variable

Table 4.1

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>MIN</th>
<th>MAX</th>
<th>Average</th>
<th>SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest</td>
<td>340</td>
<td>1.48008078</td>
<td>164.6822</td>
<td>2.930846</td>
<td>1.450765</td>
<td>0.007442</td>
</tr>
<tr>
<td>Ins</td>
<td>340</td>
<td>1.14</td>
<td>59.84</td>
<td>2.84</td>
<td>1.7</td>
<td>1.26</td>
</tr>
<tr>
<td>SH</td>
<td>340</td>
<td>0.4383047</td>
<td>759.2765</td>
<td>6.039864</td>
<td>5.601559</td>
<td>0.133668</td>
</tr>
<tr>
<td>C</td>
<td>340</td>
<td>0.4475</td>
<td>0.45</td>
<td>0.44875</td>
<td>0.00125</td>
<td>0.44875</td>
</tr>
<tr>
<td>Rev</td>
<td>340</td>
<td>5.65684333</td>
<td>49466.32</td>
<td>43.31782</td>
<td>37.66097</td>
<td>-0.876983</td>
</tr>
</tbody>
</table>

From the descriptive statistics, the average value of invest is about 3, which is greatly larger than the median, so, I can say the amount of new investments is below the market average among the companies chosen from the database, and most of them have a sense of underinvest. The companies that exceed market average level have larger new investments scale, because the influence is stronger. Similarly, according to the regression results of invest and revenue growth rate, from the residuals, most of them are smaller than 0, which means underinvest, only a few are greater than 0, which means overinvest, and the rate is about 1/10. It shows in Chinese enterprises, the phenomena of underinvestment is more common than overinvestment. Also, from the table we can see, both the average and median value of variable C are positive, shows that the list company’s accounting policies are generally conservatism.

### 4.3 Regression analysis and hypothesis testing

#### a) The relationship between accounting conservatism and overinvest

\[
Invest = \alpha_0 + \alpha_1 C + \alpha_2 Over1 + \alpha_3 C \ast Over1 + \alpha_4 Ins + \alpha_5 SH \quad (a)
\]
Table 4.2
Regression results

<table>
<thead>
<tr>
<th></th>
<th>(1) invest</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.188</td>
</tr>
<tr>
<td></td>
<td>(0.384)</td>
</tr>
<tr>
<td>OverI</td>
<td>1.010***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>C*OverI</td>
<td>-0.017</td>
</tr>
<tr>
<td></td>
<td>(0.417)</td>
</tr>
<tr>
<td>INS</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.390)</td>
</tr>
<tr>
<td>SH</td>
<td>0.0003</td>
</tr>
<tr>
<td></td>
<td>(0.449)</td>
</tr>
<tr>
<td>_cons</td>
<td>0.911***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>Obs.</td>
<td>31</td>
</tr>
<tr>
<td>R-squared</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Standard errors are in parenthesis
*** p<0.01, ** p<0.05, * p<0.1

According to table 4.2, this table shows the correlation and regression results of accounting conservatism and overinvestment. Firstly, the P value between Invest and OverI is really small, which is closed to zero, so it shows that there is a strong correlation between these two variables.

Secondly, the sum of cross term coefficient of C * OverI and the coefficient of C (α1 + α3) is 0.188 minus 0.017, equal to 0.171, which is bigger than 0, it shows under the condition of company overinvests, the relationship between accounting conservatism and overinvests is negative, the higher the accounting conservatism, the weaker the possibility of overinvests. The hypothesis 1 can be confirmed.

b) The relationship between accounting conservatism and underinvest
\[ \text{Invest} = \beta_0 + \beta_1 C + \beta_2 \text{UnderI} + \beta_3 C \times \text{UnderI} + \beta_4 \text{Ins} + \beta_5 \text{SH} \] \hspace{1cm} (b)

**Table 4.3**
Regression results

<table>
<thead>
<tr>
<th></th>
<th>(1) invest</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.0003806</td>
</tr>
<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
</tr>
<tr>
<td>UnderI</td>
<td>0.9996543</td>
</tr>
<tr>
<td></td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>C*UnderI</td>
<td>0.0003594</td>
</tr>
<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>(0.037)</td>
</tr>
<tr>
<td>INS</td>
<td>9.293-07</td>
</tr>
<tr>
<td></td>
<td>(0.294)</td>
</tr>
<tr>
<td>SH</td>
<td>-9.19e-06</td>
</tr>
<tr>
<td></td>
<td>(0.201)</td>
</tr>
<tr>
<td>_cons</td>
<td>1.056***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>Obs.</td>
<td>306</td>
</tr>
<tr>
<td>R-squared</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Standard errors are in parenthesis

*** p<0.01, ** p<0.05, * p<0.1

According to table 4.3, this table shows the correlation and regression results of accounting conservatism and overinvestment. Firstly, the p value between both \( \text{Invest} \) and \( C \) and \( \text{Invest} \) and \( C \times \text{UnderI} \) is smaller than 0.05, which means there are high correlations between \( \text{Invest} \) and these two variables. The p value between \( \text{Invest} \) and \( \text{UnderI} \) is smaller than 0.01, it is 0.9996543 and the meaning of this is there is a very strong correlation between these two variables.

Secondly, the coefficient of \( C \) (\( \beta_1 \)) is 0.0003806, it is bigger than 0, so, it shows under the condition of company underinvests, the relationship between accounting conservatism and
underinvests is positive, the higher the accounting conservatism, the higher the possibility of underinvests. The hypothesis 2 can be proved.

5. CONCLUSION AND LIMITATION

5.1 Conclusion

This paper uses the market-to-book ratio model from Stober (1996) to measure the variable of accounting conservatism, and the investment model from Biddle, to find the relationship between accounting conservatism and efficiency of investment. Use the CSMAR database, selects the financial data of all A share companies listed in Shanghai and Shenzhen stock exchanges market in the fiscal year 2015-2017 (for new added investment: 2014-2016). Obtaining about 340 values in total, only 34 of them are overinvestments, and the rest 306 are all underinvestment, the rate between them is about 1/10. Then, through doing the multiple regression, the results are as follows:

First, from the regression residual of investment model, there are only 34 samples represents the phenomena of overinvestment, and there are 306 samples tend to be underinvestment, so, I can say the probability of a company being underinvestment is higher than a company being overinvestment.

Second, both the average and median value of accounting conservatism are bigger than 0, which means the list company’s accounting policies are generally conservatism. Therefore, I can also estimate that Chinese companies generally have a conservative accounting policy. It is a good news.
Third, there is a negative relationship between accounting conservatism and overinvestment. For overinvested enterprises, accounting conservatism inhibits their activity from investing too much. Due to the accounting conservatism policy, the possible losses caused by the enterprise investment activities must be recorded immediately and the profits are only recorded when the cash inflow actually happens. Therefore, the losses caused by the investment decisions of the manager must be recorded in his financial period. It is difficult to transfer the losses caused by overinvestment, this will make investors more cautious in decision-making. The manager will end the projects which is harmful to the enterprise profits in time, so as to improve the efficiency of enterprise investment.

Forth, there is a positive relationship between accounting conservatism and underinvestment. For underinvested enterprises, accounting conservatism improve their activity of underinvestment. Accounting conservatism emphasizes the recording of losses must be timely, and the earnings should be delayed recognize, which makes the manage level of an enterprise to invest prudently and avoid risks. At the same time, under the accounting conservatism policy, the operating conditions passed by enterprises to external investors may be lower than the actual level, and the foreign investors may reduce their investment amount. The less the corporate’s fund, the more cautious their investment will be, some profitable investment opportunity will be abandoned, exacerbating the company’s underinvestment condition.

Last but not least, accounting conservatism has a completely opposite regulating effect on the overinvestment and underinvestment of enterprises, so the relationship between accounting conservatism and investment efficiency should be analyzed dialectically. In addition, according to the data analysis, the possibility of underinvestment of state-owned enterprises is much greater than that of overinvestment, but once the latter one happens, it will do more harm to the
company. Therefore, companies with excessive investment behavior need to adopt a more strict accounting policies and better governance. Also, the scale and amount of investment should be increased in the underinvestment enterprises to make more money and improve the value of enterprises.

5.2 Limitation

First, all of the data in this paper is from Chinese website and are Chinese data, so the results are also only for Chinese enterprises. However, the measurement methods and theoretical basis are from western countries, whether the concepts and Chinese capital market can make a good connection can be critical.

Second, The data amount selected in this paper is small, so there may be a smaller correlation result in the correlation test, especially for the test between accounting conservatism and the activity of overinvestment. If the data reaches ten thousands amount, the results will be better.

Third, for the theoretical basis, principal-agent theory and information asymmetry theory are used, the theoretical basis of this paper is relatively thin.
## APPENDIX

Variables and definition

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest</td>
<td>The new added investments</td>
</tr>
<tr>
<td>OverI</td>
<td>Overinvests, when regression residual &gt; 0</td>
</tr>
<tr>
<td>UderI</td>
<td>Underinvests, when regression residual &lt; 0</td>
</tr>
<tr>
<td>EP</td>
<td>Net earnings per share at the end of the year/share price at the end of the previous year</td>
</tr>
<tr>
<td>Ret</td>
<td>Stock return</td>
</tr>
<tr>
<td>Neg</td>
<td>Ret &gt; 0, Neg = 0; Ret &lt; 0, Neg = 1</td>
</tr>
<tr>
<td>C</td>
<td>Accounting conservatism index</td>
</tr>
<tr>
<td>Ins</td>
<td>Institutional shareholding ratio</td>
</tr>
<tr>
<td>SH</td>
<td>Ownership concentration, other receivables/total assets</td>
</tr>
<tr>
<td>Rev</td>
<td>Revenue growth rate</td>
</tr>
</tbody>
</table>
REFERENCES

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