



**A STUDY ON THE INFLUENCE OF INVESTMENT DECISION AND
MANAGER OVERCONFIDENCE ON ENTERPRISE INVESTMENT
EFFICIENCY——TAKE JIANGSU SHUANGXING COLOR PLASTIC
NEW MATERIALS CO., LTD. AS AN EXAMPLE**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF BUSINESS ADMINISTRATION
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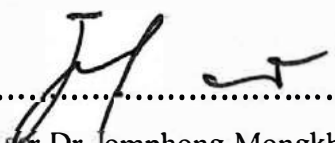
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of International Master of Business Administration in International Business
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Abstract

The purpose of this article is enterprise investment behavior has always been a hot topic in corporate finance research, a highly concerned issue in enterprise management practice, and also faces many challenges. The research object of this study is Jiangsu Shuangxing Colorful Plastic New Materials Co., Ltd., the two objectives of this study were: 1)1. To clarified reduce the irrational and overconfident investment behavior of managers and improve the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. 2)To confirmed that the emphasis on investment decisions and managers' overconfidence have a positive impact on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., LTD.

Quantitative methods are adopted, in which collect and organize data obtained for financial statements are used as an important tool for basic data collection. After processing, 204315 data of Jiangsu Shuangxing Color Plastic New Material Co., Ltd., etc. were obtained. In addition, the statistic program as SPSS 26 has applied on the dissertation. The qualify relations by using the theories discussed in the literature review but the testing in conceptual framework can calculate to explain Correlation Coefficients and Multiple Regression in each linkage.

The research results of LTD. found that indicating a direct relationship between variables and mutual influence. It is clear that overconfidence among managers is an important reason for inefficient investment behavior caused by irrational decisions,it is clear that the emphasis on investment decisions and managers' overconfidence have a positive impact on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd., which meets the research purpose. Studying the impact of overconfidence among managers on enterprise investment behavior and attempting to provide new theoretical explanations for the phenomenon of inefficient investment in

enterprises has important theoretical and practical significance.

Keywords: manager overconfidence, investment decision, investment efficiency, enterprise financial management



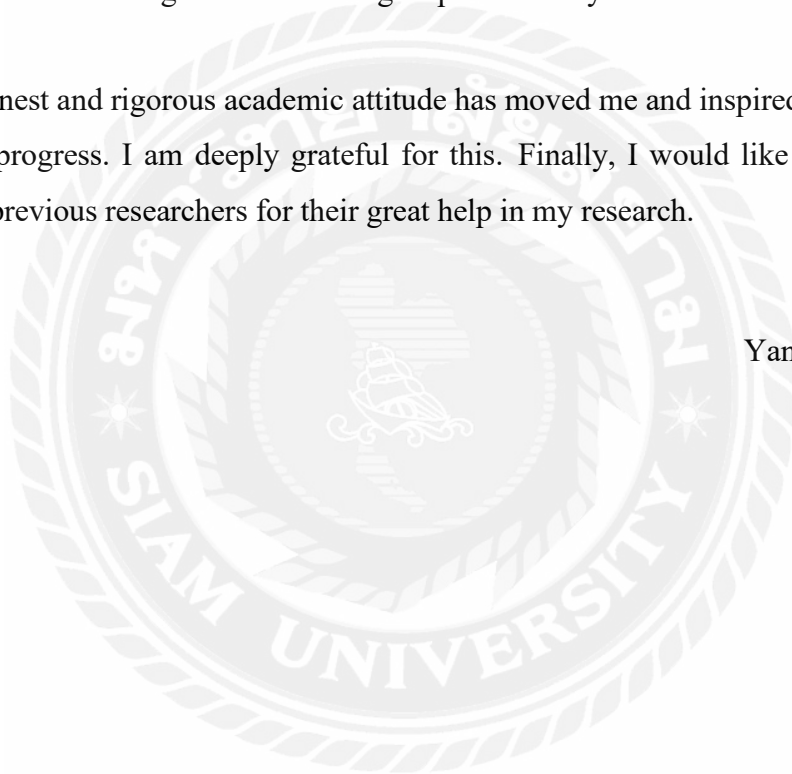
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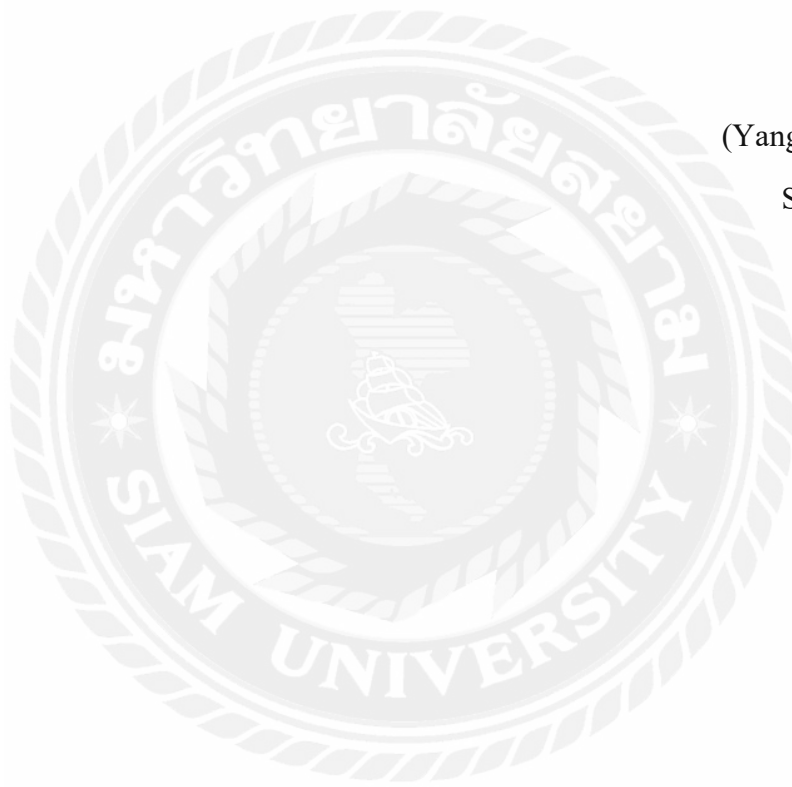
Declaration

I, Yang, ZhongBin, hereby certify that the work embodied in this independent study entitled “A Study on the influence of investment decision and manager overconfidence on enterprise investment efficiency—Take Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. as an example” is result of original research and has not been submitted for a higher degree to any other university or institution.

Yang ZhongBin

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Chapter 1

INTRODUCTION

1.1 Background of the Study

Enterprise investment behavior has always been a hot topic in corporate finance research and a highly concerned issue in enterprise management practice. The current situation also faces many challenges. Modern Corporation's financial theory implies the assumption of rational people. In recent years, the rise of behavioral finance has challenged the assumption (Evans, 2006). The research of corporate finance has also begun to pay attention to the influence of managers' irrational behavior on the investment behavior of enterprises under the influence of behavioral finance. Overconfidence is originally a term in cognitive psychology. Psychologists believe that people in the future often show overconfidence (Chen & Zhao, 2006). Overconfidence in behavioral finance theory is a kind of the most important psychological deviation. It refers to people's excessive optimism about their ability, knowledge and future predictions. They believe that their knowledge is more accurate than the facts, that is, the weight of their own information is greater than the weight of the fact. Over confidence is often expressed as the possibility of decision makers to overestimate the expected return or the likelihood of success, to underestimate the cost and the probability of failure.

Based on the COVID-19 outbreak has had an unprecedented impact on the economy of every country. In China, Thailand and other countries, the spread of COVID-19 has made investors, the public and policymakers aware that such external uncertainties can cause economic damage, and the magnitude of the consequences is unknown (Hatoum, 2021). At the same time, during the COVID-19 outbreak, institutions and offices restricted the income of most individuals and investors, affecting the overall lives of Chinese citizens. This problem has greatly impacted the investment behaviour in China's financial markets. The definition of an individual investor is a person who buys securities on one's behalf. These investors have very small trading volumes and are mainly involved in stock market activities (Chen & Zhao, 2006). It is considered acceptable for investors to face problems when making reasonable and accurate financing decisions (Ahmed & Duellman, 2013).

The efficiency of investment determines the continuous growth of the company's future cash flow and will have a meaningful impact on the company's value. With the continuous advancement of China's materialization process, companies from all walks of life generally have a high enthusiasm for investment, which can easily lead to inefficient investment in companies. Scholars have explored the reasons for inefficient investment from different perspectives in recent years, such as its internal governance structure, free cash flow, and enterprise life cycle (Chyz et al., 2019). However, early scholars are mainly based on the "rational man" hypothesis, believing that managers within a company are rational when making decisions. However, according to the study of psychology, traditional economics under the "rational man" is not "rational"

managers because of irrational psychological characteristics of overconfident tendency; this tendency will make managers when making decisions show blindly optimistic, and underestimate risk phenomenon, thus affect the company's investment efficiency (Akhlaque et al., 2017). In addition, as an important part of the governance of the company's equity structure, it can supervise and restrain the behaviour and decision of managers, thus impacting the company's daily operations (Chyz et al., 2019). Therefore, it is of theoretical and practical significance to study the impact of managers' overconfidence on corporate investment efficiency and whether the checks and balances of equity can play a role in the relationship between the two. Therefore, this paper analyzes the factors affecting the investment decision and confidence of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. in the present, summarizes the basic situation of the market environment, evaluates the achievements through a questionnaire survey and quantitative analysis, and analyzes the reasons for the shortcomings of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. in the current practice, and puts forward some perfect suggestions. Based on the above reasons, this paper determines the topic of the investment decision of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. and the overconfidence of the investment efficiency of the enterprise, and carries out the research.

During the COVID-19 outbreak, market and organizational factors are changing most investor behaviour in China (Akhlaque et al., 2017). And the organization's accounting information and net assets are the main factors in determining investment decisions. After all, it is tough to make investment-related decisions, especially stock-related decisions, under uncertain conditions (Graham, 2013). In addition, exceeding the growth rate of earnings per share, gross domestic product and foreign direct investment is considered the main link, and it does partly have a significant impact on the share price of companies listed on the Chinese stock market.

On the other hand, COVID-19 will mainly result in multiple financial services categories as of October 2022, as they are considered opportunities to develop severe sales restrictions and lack of consumer confidence (Sharif et al., 2019). However, several categories are fundamental and recover well in the long term. Moreover, the impact of COVID-19 caused a recession, so insurers are facing increased pressure on price sensitivity issues. This will increase some of the difficulties faced by travel insurers and businesses that have experienced recorded claim costs (Suto, 2003). Travel insurance is expected to reach another level by 2024, mainly affected by the virus. The world economy is affected by COVID-19, and financial markets are also affected by the spread of the virus (Zhang et al., 2007). Most investors face their portfolios being overwhelmed, although some opportunities help benefit from the current COVID-19 pandemic. During the boom years, traditional investment strategies were studied and documented (Ashraf, 2020). Therefore, the main purpose of this study is to analyze the investment behaviour of Jiangsu binary Star Color Plastic New Material Co., Ltd. in China as an example. Through in-depth interviews, combined with questionnaires and data from official websites such as annual reports and financial reports, we will further analyze the impact of investment behaviour on the financial market and provide some experience and lessons for other companies in the same industry.

1.2 Problem of the Study

Earlier studies suggested that overconfidence was utterly detrimental to individual decision-making (Teng & Yi, 2017). According to Pikulina et al.(2001), existence is critical in transforming confidence into overconfidence. On the left side of the critical importance, this confidence can positively impact the development of things. Still, on the right side of the critical value, the level of confidence will be transformed into overconfidence, which will not be conducive to the development of things. As far as managers in the company are concerned, the transformation of confidence level significantly affects the level of decision-making. Malmendier and Tate (2008) research has confirmed that the overconfidence of managers largely influences the implementation of important company decisions. Therefore, it will be the main research content of this paper to explore the influence of managers' overconfidence on the inefficient investment of enterprises. Therefore, this paper on the investment decisions and managers' overconfidence in the efficiency of enterprise investment research literature is divided into excessive investment and investment under two categories. In the process of subsequent empirical, more detailed study the manager's overconfidence of excessive investment and managers' overconfidence on the influence of insufficient investment.

1.3 Research Questions

When making investment decisions, every investor faces a trade-off between expected return and risk. Therefore, an investor's perception of risk affects his investment decisions (Nofsinger, 2017). The following research questions were designed to explore.

1: What impact will this investment decision have on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd.?

2: What impact does managers' overconfidence have on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd.?

1.4 Objectives of the Study

Saad (2010) states that behavior finance that financial activity participants is not completely rational, so for the main body to carry out irrational research helps to cause the attention of managers' investment behavior to prevent or reduce the efficiency investment caused by the overconfidence of managers,etc.In reality, one's investment decision is not always based on rational considerations, but can also be irrational aspects that are related to his psychology or often known as financial behavior (Ashraf, 2020).

Therefore, further aims at two small aspects:

1. To clarifies reduce the irrational and overconfident investment behavior of managers and improve the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd.

2. To confirm that the emphasis on investment decisions and managers'

overconfidence have a positive impact on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., LTD.

1.5 Significant of the Study

Based on the above background, this paper combined with the academic research results, and reached a practical conclusion. Financial behavior is divided into two main groups, namely cognitive psychology and limit of aspirate (Ritter, 2003). Therefore, this paper will present the research significance of this paper from both theoretical and practical aspects.

1.5.1 Theoretical significance

Theoretically, since the manager of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. is clearer about the actual situation of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. than external investors, external investors expect managers to make full use of their information advantages to make financing decisions. If the company chooses equity financing, the outside investors will think that the company's current stock price will be relatively high, or the internal shareholders will lack confidence in the new investment projects, so they can take the risk by issuing new investors (Ahmed & Duellman, 2013). This will allow outside investors to demand an increased return on capital, which will lead to lower stock prices, and will also move the company's assets from existing shareholders to possible future shareholders (Hatoum, 2021). Therefore, when the cash flow of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. can not meet the investment needs of new projects, the operators of Jiangsu Double Star Color Plastic New Material Co., Ltd., oriented by the interests of shareholders, will not issue stocks with too low value, but take them as an investment project with positive net present value. Therefore, the literature on this aspect is not mature, and there are few articles with practical value.

1.5.2 Practical significance

The future operating performance of an enterprise is the decision that investors are most concerned about, most interested in and most easily subject to interference by external factors in the investment process. Usually, Bradbury et al. (2015) believe that making investment decisions, investors usually predict an enterprise's future profitability or cash flow prospects, thus making certain investment decisions and evaluating them. Therefore, the analysis and research of investors' decision results are also of practical significance. According to the prospect theory of behavioral economics, the behaviour of any subject will have risks and benefits under different circumstances. The differences are mainly manifested in two aspects: one is the ability of the subject's own to obtain information. The individual can obtain and process information; the second is the ability of actors to evaluate information. Due to the different levels of risk that actors face in different environments and their differences in predicting future development prospects of things, investors often have inconsistent risks and returns when making investment decisions.

1.6 Limitation of the Study

On the one hand, domestic and foreign theoretical circles have greatly studied investment decisions and overconfidence, but most of these studies are separated. For example, most studies on investment level and efficiency are carried out from corporate governance, such as Hatoum (2021) assumed that managers are rational and subjectively want to cause inefficient investment for their own interests. The two factors, that is, assume that managers objectively cause this result due to overconfidence. At this stage, there are still some shortcomings in the research of investment decisions caused by managers' overconfidence, which can be summarized as the following two aspects: First, how to choose the alternative variables of managers' overconfidence is still the difficult and bottleneck in the study of behavioural finance theory. The measures mentioned in the reference are highly subjective and noisy, greatly affecting their results' reliability and validity. For example, in China, the method of using a profit forecast is the most applicable (Chen & Zhao, 2006). Still, it also has some limitations because only the companies with good corporate governance and strong profitability will choose to forecast the future profit, resulting in noise in the sample. Looking for a test method suitable for China's national conditions.

On the other hand, due to the financial statements used for this study-Jiangsu Double Star Plastic New Material Co., Ltd.'s internal cash flow is relatively sufficient, resulting in the lack of insufficient internal cash flow, Jiangsu Double Star Plastic New Material Co., Ltd. will have insufficient investment such inefficient investment behaviour research. In addition, due to the author's time, energy and professional limitations, this paper only combines the performance forecast and the number of mergers and acquisitions. If more variables that can quantitatively measure overconfidence are applied, the results will inevitably be more accurate. Although there is a regret, it can also provide some ideas for future research.

Chapter 2

LITERATURE REVIEW

In this case, does overconfidence exist in the managers of Chinese enterprises? How to test the existence and degree of these psychological characteristics? How does it affect the investment behaviour of enterprises? All these have become important topics for Chinese enterprises to have wise decision-making efficiency and investment behavior. And Kempf and Ruenzi (2006) found that Vietnamese companies with high state ownership tend to take fewer adventures than those with low state ownership. Government-owned companies tend to have political and financial advantages, making them less motivated to pursue a competitive advantage (Zhu et al., 2020). Identified possible government impacts on corporate decisions. But will these effects help mitigate the moon's development? Thus, Fairchild (2009) explored the role of government ownership in monitoring molybdenum and research and development. At present, some large and medium-sized companies in China also have the problem of excessive investment. In the current economic environment, overinvestment has become a problem that cannot be ignored in corporate management activities. So this chapter by providing an overview of the concept of the research and define the current background to explain through the Jiangsu double star colour plastic new material co., LTD., investment decisions and managers' overconfidence on the influence of enterprise investment efficiency is analyzed, and through the Internet literature search, make full use of the relevant literature content and ideas, obtain rich theoretical support. Collect online through CNKI, Google Academic, researchgate and other resource sites. Offline mainly through the university library, Siam University library and other collections of data, as well as the above online search for all kinds of relevant information, the collected data is carefully sorted and classified, which is conducive to the writing of the paper.

2.1 Literature Reviews

2.1.1 Focus on the overconfidence literature review

The word "overconfidence" derives from cognitive psychology. So far, management overconfidence has covered a wide range of studies, including psychology, management, economics, finance and so on. The top term for manager overconfidence in existing research is overoptimism and arrogance. At present, the classification of manager overconfidence in academia mainly draws on Malmendier and Tate (2008) divided managers' overconfidence into the following three types: first, overestimate, that is, overestimate their strength, performance, management level and the possibility of success, and underestimate their probability of failure. The second is overprecision, believing that your information is the most accurate. The third is too high positioning; that is, their ability is higher than ordinary people, and the reason for success is all attributed to their own, ignoring other external factors. There are several main definitions of overconfidence in academia. Wei et al., (2011) think that overconfidence refers to the actor's unrealistic optimism about the future. The actors

tend to rate themselves as above average probability of experiencing a positive event outcome and below average probability of experiencing a negative event outcome. Survey data show that people tend to show unrealistic optimism about the future.

Overconfident managers overestimate the returns to their investment projects and view external funds as unduly costly. Research shows that when individuals are confident in the future, their expectations align with reality, with a tendency to show overconfidence even in positive situations. Naser and Nuseibeh (2003) states that confidence is the subjective probability or trust of the event we believe to occur. Accordingly, the subjective probability is the trust of the actor on the correctness of the judgment or decision. This view holds that when actors make judgments or decisions, they often rely on processing certain information rather than on objective facts. Shleifer and Vishny (1997) noted that overconfidence is a systematic overestimate of the probability of future uncertain events. However, due to human information processing ability limitations, many actors do not fully process objective probability information. For example, when an individual judges the uncertainty about future outcomes, he tends to overestimate the subjective probability. Lööf (2004) proposed that the level of confidence means that our subjective probability or trust in the decision changes over time within a certain range. This means that people always make subjective judgments about the outcome (i. e., confidence). As Zacharakis and Meyer (2000) pointed out that if the same conditional probability is expressed in the choice of various alternatives and the confidence in the choice made, and the two work together, then when the subjective probability of a specific result increases, the actor's confidence in the choice also increases. Several studies show that actors often show systematic bias when processing probabilistic information, which is believed to result from their intrinsic information-processing ability. Wang and Li (2017) noted that overconfidence is when an individual overestimate his abilities the what they have. This view suggests that an individual displays overconfident behaviour when he believes his abilities are above average. Kotlar et al. (2014) noted that there are three types of overconfidence: (1) individuals overestimate their abilities; and (2) individuals overestimate the likelihood of success or failure and attribute the results to uncertainty. TCompanies that have strong governance can increase the company's investment by using internal funds, because shareholders want to get returns in the future, and his overconfidence in the risk of success and failure is considered a psychological manifestation of overconfident behaviour. Hilton (2001) pointed out that people often have overconfidence in their daily life.

Zhu, et al. (2020) found that in the process of decision-making investment, wrong personal beliefs often affect individuals' estimation of their investment ability, causing investors to overestimate their ability and luck level. At the same time, individual false beliefs can affect the expected performance outcomes of the selected chosen. Pike (2009) noted that there is a positive correlation between the occurrence of overconfidence tendencies and the outcome of uncertain events. For example, if a woman thinks she will have more children and her husband will have higher income levels, then the person may show a tendency to show overconfidence. The have found that when making investment decisions, people tend to show personal beliefs (such as

overestimating their abilities) and personal beliefs (such as that luck is related to success), and therefore over-predict their abilities. Menkhoff et al. (2006) believes that overconfidence is an optimistic judgment generated by individual ability, luck or other psychological factors and that overconfidence and optimistic bias have a similar structure. Kim (2013) found that individuals tend to be overconfident in making decisions. Moreover, he found that one is often overconfident in decision-making.

Xiao (2011) argues that overconfidence refers to actors' unrealistic optimism about the future. Actors often consider the probability of experiencing a positive event higher than the average and experiencing a negative event lower than the average. Survey data tend to show unrealistic optimism about the future. Duellman et al. (2015) believe that overconfidence refers to an optimistic judgment due to personal ability, luck or other psychological factors, and overconfidence has a similar structure to the optimistic deviation. During decision-making, overconfidence generation is often associated with anticipation of the outcome of future events. Overconfidence behaviour occurs when individuals predict that they may be successful in the future. People tend to show overconfidence when making investment decisions. Brown & Sarma (2007) found that in the process of investment decision-making, wrong personal beliefs often affect individuals' estimation of their investment ability, resulting in investors overestimating their ability and luck level. At the same time, individual false beliefs can also influence the expected performance outcome of the selected project.

Existing studies have shown that manager overconfidence can significantly impact the company's decision-making, especially in innovation activities that provide a sustainable competitive advantage for the company. Schumpeter believes managers are heterogeneous and prefer different individuals to formulate strategies, allocate resources and distribute profits. Therefore, examining the heterogeneity of managers is beneficial to explain and predict the innovation behaviour of enterprises. Agrawal and Mandelker (1987) based on the high ladder team theory and the prospect theory, emphasizes that managers are vulnerable to their own preferences, emotional fluctuations and other factors to make decisions in the case of limited rationality. Bigus (2003) shows that overconfident managers overestimate return, underestimate risk, and show higher risk tolerance and failure tolerance for investment projects. Therefore, managers' overconfidence has a certain positive role in promoting enterprise innovation.

2.1.2 Focus on manager overconfidence impact on literature review

Managers' overconfidence affects the existence of enterprise innovation input agency problems causing rational managers to be short-sighted and resist the innovation behaviour of enterprises. Overconfident managers more firmly believe that the probability of project success is high. Hilton (2001) indicates a positive correlation between the level of R & D investment of enterprises and managers' degree of risk preference. Kotlar et al. (2014) pointed out that overconfident managers are eager to use the success of high-risk investment projects to prove their ability. Secondly, the increase of innovation investment may not increase the innovation output of enterprises, but the overconfidence of managers will affect the capitalization level.

Pennings and Smidts (2000) state that the enterprise research and development process is divided into two stages, the former is used to understand and obtain new technology and the planned cost of the latter is the research results before commercial production and use in a design final improvement, output new results, obviously enterprise innovation accumulation of output is discrete early difficult to judge whether input can bring positive net cash flow so capitalized expenditure good measure the phased innovation output. Malo-Alain et al. (2021) think that managers with overconfidence tend to invest in risky innovation projects to achieve higher output. The value of enterprise innovation investment does not necessarily increase with the increase of innovation projects initiated by overconfident managers. In addition, inefficient and ineffective R & D investment is contrary to the goal of maximizing enterprise value, so the impact of managers' overconfidence on enterprise innovation still needs to discuss efficiently. Wei et al. (2011) indicate that managers who prefer innovation indirectly promote the efficiency of capital conversion by increasing the innovation output of enterprises by improving the salary structure of R & D personnel.

In recent years, scholars have begun to study the impact of other information from peer companies on corporate decisions. Hovakimian (2004) point out that enterprises in the same region will refer to the cash flow information of their peers to correct their own investments. Abor (2007) pointed out that the information available from the stock prices of peer companies makes up for the incomplete information and environmental uncertainty in the company's investment decisions. Similarly, the Barros and Silveira (2008) shows that the investment efficiency of 8,341 Chinese industrial enterprises positively correlates with productivity. When investing, enterprises are not only constrained by their own characteristics but also refer to the investment decisions of other companies in the market with the same or similar background and industry.

2.1.3 Summary of the literature review

Researchers have confirmed that investment decisions are important to the company's performance. Shum and Faig (2006) have found that investment decisions in China have improved the productivity of mining companies. However, Ahmed and Duellman (2013) emphasized that R & D intensity is negatively correlated with business performance and positively correlated with short-term business value.

Based on the literature mentioned earlier review, Drawing on the above research results of domestic and foreign scholars, This paper argues that the definition of manager overconfidence is the ability to attribute all success to the individual, Ignoring the action of external forces, Lome, Huang and Ritter (2009 believe that increasing investment in research and development is an important tool for leaders aimed at boosting future corporate performance. So a positive deviation occurs when the confidence interval is judged. Overates the accuracy of the information, an underestimating the risk. This leads to irrational behaviour and negative results; attention needs to be paid to the value of managers' overconfidence and investment decisions to Jiangsu Double Star Color Plastic New Material Co., Ltd., And conduct a comprehensive and systematic discussion, In order to add some to the relevant theories, promote its steady development.

2.2 Theory of Reviews

2.2.1 Principal-agent theory

The modern enterprise system has a widespread separation of company management rights and ownership. The separation of the two rights that the shareholder or the property owner of the company retains the ownership of the remaining capital and transfers the management right to the company's manager forms a logical starting point for the current corporate governance research. The relationship between the principal-agent originates from the contractual relationship. When the civil subject employs another subject type to serve it and pay the corresponding employment fee according to some agreement in the industry, the principal-agent relationship will be established accordingly. This relationship is manifested in the scope of the company from the control of the company to professional managers, and the managers carry out daily operations and have the right to make investment decisions. Shareholders become principals, and managers become agents. Ang et al. (2010) found that R & D collaboration with different partners (suppliers, customers, competitors, universities and public research institutions) improved the company's profitability. Unlike the traditional employment contract relationship, the company's agent has a great right to make independent decisions on the enterprise's business activities, and the principal cannot observe and supervise the decision-making behavior of the agent at all times. In this case, it is very easy to produce a conflict between the principal and the agent. For example, operators may obtain information through various means to seek personal gain and then make behaviors inconsistent with shareholders. The principal-agent conflict caused by this information asymmetry often leads to decision-making errors. In this context, it is not surprising that companies have made inefficient investments. In addition, the information asymmetry within the company is also an important reason for the inefficiency of the company. Collison et al. (1996) due to the large difference in information between shareholders and managers to obtain real and accurate operational and financial information about other enterprises when making investment decisions; on the other hand, there are interests and emotional factors among managers, making it difficult for the managers to deeply understand and analyze other enterprises and make wrong decisions. That is to say, in order to pursue higher interests, managers make inefficient business decisions at the cost of infringing on the interests of shareholders, which increases the possibility of inefficient investment in the company.

Due to the lack of technology, knowledge and energy, the rights owners cannot use their rights to manage the company in the best way to maximize their interests. The professional society has many professional agents, rich knowledge and skills, and good management agents, which just makes up for the defects of the owner running the company. Thus, Bessière (2007) believe that rational owners are willing to grant agents part of the rights to manage the company to improve the enterprise's business performance and maximise the owners' interests. Under this relation, the agent exercises the management of the principal while the owner retains the title. An important feature of modern corporate governance is that shareholders and

management jointly decide the company's internal management and business activities. However, as the board of directors is the highest decision-making body of an enterprise, it often leads to the information asymmetry between the owners and the operators due to its inherent agency problems, which thus causes the operators to conceal the true business situation from the shareholders when making business decisions, resulting in damage to the interests of the owners. Therefore, the principal-agent relationship in the corporate governance structure should be avoided as far as possible. Specifically, on the one hand, establish a reasonable and effective external director system; on the other hand, build an effective and sufficient internal director system; respectively, establish good incentive mechanism, restraint mechanism and supervision mechanism within the board of directors to reduce the false information among the internal directors.

2.2.2 Theory of Reasoned Action

This theory can explain and predict the decision-making process of human behaviour, and has been subsequently used for reference and extended by many scholars. Beliefs and assessments of behavioral outcomes will influence a person's attitudes, so Butler et al. (2005) suggest that external stimuli influence a person's attitudes because external influences change a person's beliefs. Rational behaviour tells a person that his behaviour intention determines a certain behaviour, and the attitude of a person's behavior and subjective norms together determine his behavioral intention. Most notably, the Theory of Reasoned Action has been used to predict and explain several health behaviour (Lin et al., 2008). And behavioral intention is directly affected by supervisor norms and behavior attitudes, while other factors can only indirectly affect behavioral intention by affecting supervisor norms and behaviour attitudes. Generally, these other factors are called external variables.

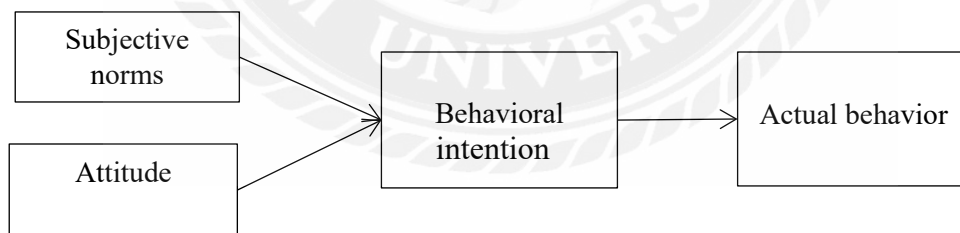


Figure 2-1 Theory of Reasoned Action (TRA)

2.2.3 Theory of information asymmetry

Traditional economics research assumes that the market is perfect so that both parties can obtain complete market information. However, in the actual market economic activities, the amount of information mastered by different subjects is different, and the party who has sufficient information mastery has an information advantage, while the party who has insufficient information mastery is at an information disadvantage. The theory suggests that, on the one hand, information

asymmetry leads to backward selection(Hsieh, et al., 2018). Specifically, the seller in the market knows more about the various information about goods and services than the buyer. At this point, the seller can profit by transmitting reliable information to the buyer. For example, in the second-hand market, the seller of the second-hand transaction will know the quality of the used goods better than the buyer, but the buyer will make the buyer buys the product at a price higher than the product value, making the seller get profit due to the information advantage; on the other hand, the information asymmetry will cause the moral hazard problem. The buyer in the market will use their knowledge of the information to take actions that prevent the seller from supervising and observing, damaging the interests of the seller (Suto, 2003). For example, in the insurance business, the policyholder may conceal the relevant key information in the insurance process, thus resulting in information asymmetry between the insurer and the insured. The consequences caused by this information asymmetry will damage the insurer's interests when the insurance liability occurs(Kim et al., 2008).And information asymmetry will lead to the low efficiency of resource allocation in market activities and the adverse consequences of high credit risk in the market. Butler et al. (2005) hold that when the company makes foreign investment in the form of equity, the relevant market price is lower than the real value. Moreover, adverse selection and moral hazard arise due to information asymmetry(Hackbarth, 2008). Therefore, companies with few technological advantages should be more cautious about investing.

To sum up, it can be seen that the theory of information asymmetry can be well used to explain the present common investment efficiency problems in the market. The reasons for investment efficiency and efficiency can be better analyzed through two different perspectives of the buyer and the seller. Therefore, this paper will be conducted in the following analysis.

2.3 Research Relevant

In the principal-agent theory, The principal (shareholders) of the company can alleviate the agency conflict through the following aspects: First, The principal of the company can implement a more reasonable equity incentive internally, So that the agent holds the corresponding shares of the company, balance the interests of the agent with those of other shareholders(Johnson and Mitton, 2003); Establish an effective supervision mechanism for agents, Prevent corporate agents from taking advantage of information asymmetry to profit for themselves, And thus make investment decisions at the expense of the company's owners (Suto, 2003).Therefore, the principal should effectively supervise the agent, And punish agents that do not in the interests of shareholders and other stakeholders, In as to reduce the agent problem; Improve the information transparency of the company, Since the asymmetric information game theory is the theoretical basis of the principal-agent theory, Therefore, improving the transparency of information can solve the problem of information asymmetry on both sides of the game. The client can grasp the trend of the company's operation and investment decisions through the regular and comprehensive information report, which can effectively curb opportunistic agent

behaviour (Hirshleifer et al., 2012). Therefore, through the analysis of the principal-agent theory, it can be found that the cause of non-efficient investment in the company is very likely because of the agency conflict between the owner and the manager of the company, which makes the owner unable to effectively supervise and restrain the investment and operation decisions of the managers. Based on the principal-agent theory, solving the agency problems within the company to alleviate the conflict between the owners and managers of the company will help the company to avoid the occurrence of inefficient investment phenomenon. Moreover, as an important part of the contract theory of institutional economics, the principal-agent theory mainly studies the agency relationship between the entrusting party and the entrusted party. Booth et al. (2001) hold that such a relationship means that one or more actors designate or hire other actors to serve them and grant the latter the corresponding decision-making power. The latter demand remuneration from the former based on the services provided by themselves, and the quantity and quality of the services determine the amount of remuneration. The authorizer is the principal, and the authorized person is the agent. In modern enterprises, the principal-agent relationship is reflected between creditors and debtors, shareholders and managers, and large and small shareholders (Bhushan, 2014). However, in this principal-agent relationship, contradictions can always cause non-efficiency investment. The goal of shareholders is to maximize the value of the enterprise, while managers pursue the maximization of their own interests. On the one hand, managers may invest in projects with negative NPV to control more resources and get higher remuneration; on the other hand, managers may under-invest because they want more leisure time or consider their reputation to take investment risks.

Shareholders and creditors: Shareholders prefer high-risk projects because most of the project's risks will be borne by the creditors, but if the project is successful, the shareholders will have the majority of the profits. This situation will cause the problem of enterprise over-investment (Xiao, 2011). In addition, when the enterprise debt ratio is high, the cause of insufficient investment may be that the shareholders and managers can avoid the risk of bankruptcy or prevent the control of the enterprise from being damaged.

Information asymmetry theory: Information asymmetry theory refers to the market economic activities; all kinds of people the relevant information understanding is different; the full information will be in a favourable position, and the poor information will be at a disadvantage. First, compared with the recipient, the provider of capital is in the weak information party, so it will raise the interest rate of loans or impose other restrictions, making the external financing cost significantly higher than the internal financing cost (Huang et al., 2011). When the financial resources of the enterprise are limited, the enterprise may cause insufficient investment due to financing difficulties. Second, external investors and internal managers of the enterprise have different levels of information on the future net present value of the enterprise. External investors subjectively confirm the probability of the future net present value distribution and predict the future net present value accordingly. However, the real probability may differ, resulting in underinvestment or excessive

investment. Third, the debtor has information asymmetry. So the creditors with weak information will demand higher interest rates due to adverse selection. In this way, the enterprises with high credit ratings may abandon the positive NPV project due to the high cost of capital, resulting in insufficient investment, while the enterprise with low credit rating may think that the interest rate is still low so that the funds obtained through borrowing can be invested, which may lead to excessive investment (Baker and Wurgler, 2006). Under the theory of principal-agent investors, managers' overconfident influence on the enterprise investment efficiency, based on the analysis of these theories for Jiangsu binary color plastic new material co., LTD., investment efficiency, investment level and capital market to provide effective theoretical tools.

2.4 Conceptual Framework

This article will follow "Literature Review and Review-theoretical analysis-empirical analysis" (Grable, 2017). In the literature research, this paper will review, organize and comment on the existing literature, find the deficiencies in the literature about the impact of managers' overconfidence on enterprise investment behaviour, and on this basis, raise the main questions that this paper tries to answer. Thus, the theoretical framework is provided as follows:

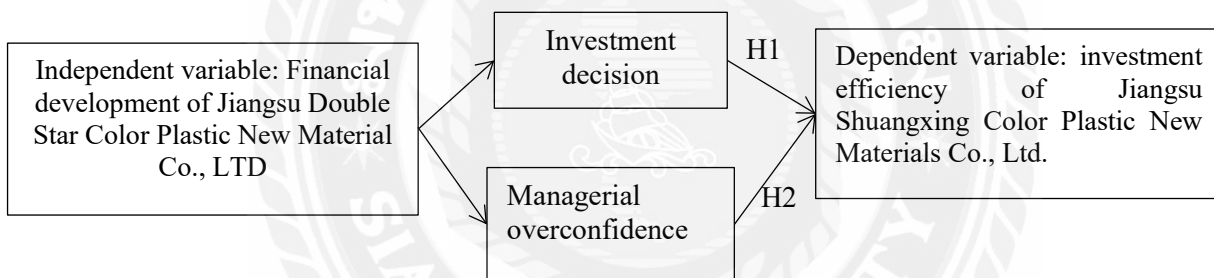


Figure 2-2 Conceptual Framework diagram

Independent variable: the financial development of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd., the influencing variables are investment decisions and manager overconfidence; dependent variable: the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. This study mainly verifies the impact of managers' investment decisions and overconfidence on the investment efficiency of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd.

2.5 Terms and Definition Used in This Study

Many definitions need to be clarified in this study.

Manager Overconfidence: Overconfidence is a psychological term that values yourself more than you actually do (Grable, 2017). The industry, scale, profit level and development prospect of an enterprise can somewhat affect the overconfidence of enterprise managers. Managers in a better enterprise are likely to have overconfidence. Managers' overconfidence can be shown as overconfident enterprises, which often make mistakes or even failures in management. In such a case, it is easy for managers

to make wrong decisions, and this may lead to low efficiency of enterprise investment. At the same time, the company is in a poor enterprise, and the change in the operating environment may make managers feel overconfident because the performance fluctuations often make them overestimate the future performance, thus ignoring the risk level of the enterprise itself (Suto, 2003). Based on the theory of information asymmetry and principal agency, this paper studies the role of managers' overconfidence in Jiangsu Double Star Color Plastic New Material Co., Ltd.

Investment level: If an enterprise is in a good state, its investors are unlikely to have underinvestment because good business performance usually reflects the intrinsic value of the enterprise and expected profitability in the future (Bhushan, 2014). Therefore, when a company is in a good state, investors will choose to invest funds in the company. Good performance in the past enables managers to predict the external financial situation with experience to improve their investment level.

Investment decision: Take the investment decision of a company as an example. Suppose there is information asymmetry between the company managers, owners and relevant creditors. In that case, the investment efficiency of the company will be greatly reduced, and investors may make wrong investment decisions due to the overconfidence of the enterprise managers (Hovakimian, 2004). On the other hand, underinvestment behaviour often means that the enterprise lacks good development prospects, profit level, and low market value. Therefore, no equity check and balance mechanism to coordinate and restrict the interests of managers and investors will lead to non-efficient investment behaviour.

Enterprise financial management: Enterprise financial management refers to the management of asset purchase (investment), capital financing (financing), operating cash flow (working capital), and profit distribution under certain overall objectives. The goal of financial management is to achieve the best effect of investment and financing as far as possible to ensure the normal production and operation of enterprises (Hovakimian, 2006). However, due to the information asymmetry between investors and managers, investors and managers will be affected by the principal-agent problem in the investment decision process, which causes a conflict of interest between them and inefficient investment behaviour (Grable, 2017). Under the principal-agent theory, two or more owners jointly control the business activities. A company imposes its will on other members through its assets, capital, operational decisions, business and personnel removal authority. If the manager acts as the agent of two or more owners at the same time, the principal-agent relationship will occur, and then the information asymmetry problem occurs.

Chapter 3

RESEARCH METHODOLOGY

3.1 Introduction

This study mainly uses a quantitative research method, through obtaining relevant first-hand data, to conduct quantitative analysis and confirm the hypothesis. The role of overconfidence on enterprise investment is mainly reflected in the direct impact on the investment level and regulating the sensitivity of investment to cash flow. In the theoretical aspects, Aghion et al. (2001) first found that overconfidence can affect corporate investment. His "arrogance" hypothesis is that the "arrogance" of managers easily leads to inefficient acquisition behaviour; others further verify that overconfident managers will make corporate investment and acquisitions more frequently. Based on Principal-agent theory as the main theory, combined with Theory of Reasoned Action and Theory of information asymmetry, the stable and rational deviation of overconfidence, studies the influence of overconfidence of managers on the investment behavior of enterprises, and trying to provide new theoretical explanation and empirical basis for the inefficient investment phenomenon of enterprises. This study mainly adopts a quantitative research method, by obtaining relevant first-hand data, conducting quantitative analysis and confirming hypotheses. The effect of overconfidence on corporate investment is mainly reflected in its direct impact on investment level and the sensitivity of regulating investment to cash flow.

On the one hand, in company operations, overconfident managers often overestimate the company's future performance and underestimate risks. Camerer et al. (2005) believes that compared with the moderately confident behavior of senior executives, the overconfident behaviour of senior executives is positively correlated with the investment growth level of the company; It can be seen that Chinese scholars at home and abroad have reached a consensus on the impact of overconfidence on the investment level. In investment decisions, managers may overestimate cash flow inflows and underestimate investment risks, thereby increasing the scale of venture capital. Therefore, this chapter explains the content and ideas of relevant literature by summarizing relevant concepts and defining the current context of this study, and conducts searches on the Internet to fully utilize its rich theoretical support. Conduct research through resource websites such as CNKI, Google Academic, and researchgate.

On the other hand, the use of quantitative research methods is based on the widely used relative compensation of managers in existing literature to measure their overconfidence, that is, the ratio between total executive compensation and total compensation. This article uses abnormal compensation levels of managers to measure their overconfidence. This article uses the model established by Chen (2014) to measure managers' overconfidence through the difference between actual wages and previously estimated normal wages (i.e. the regression residual of the model).

This article takes Jiangsu Xingcai Plastic New Materials Co., Ltd. as a research case, and uses various reports and database information, Systematically analyzing the financial behavior of Jiangsu Xingcai Plastic New Materials Co., Ltd. under the influence of overconfident managers, including excessive investment and financing, as well as the root causes of debt defaults, this study investigates the impact of overconfidence on overinvestment by managers; Analyze the changes in investment efficiency, financing structure, market response, and corporate value after the implementation of aggressive strategies, and study the impact of managers' overconfidence under strategic influence on debt default paths. Empirical conclusions: (1) Managers' overconfidence can lead to excessive investment by enterprises. (2) Investment decisions can exacerbate excessive investment caused by managers' overconfidence. After quantitative analysis, the research hypotheses were clarified, and it was determined that overconfidence among managers plays a more significant role in exacerbating overconfidence and leading to overinvestment; In regions with lower levels of marketization, investment decisions have a stronger inhibitory effect on overconfidence and overinvestment.

3.2 Research Design

1. Corporate financing, investment and mergers and acquisitions

The definitions of financing, investment, mergers and acquisitions are multi-level, so they vary. Domestic and foreign scholars use different measurement indicators to indicate the enterprise financing, investment and merger and acquisition situation, including the purchase cost, market value, enterprise income or option method. Corporate mergers and acquisitions (Mergers and Acquisitions) include two meanings: merger and acquisition. Acquisition refers to the purchase of assets or shares of another company through its own funds, borrowing loans, issuing bonds or issuing shares, to control the target enterprise. Drawing from Fraser et al. (2006), this paper equated the premium to goodwill to explore the impact of managers' overconfidence goodwill. Greenwood et al. (2001) also verified the institutional problems and debt financing through empirical data: the related theory of leadership structure effect. At the same time, most overconfident managers tend to believe that the adverse and high-risk information of the company is temporary and will improve quickly. Thus, the efficiency of mergers and acquisitions is low.

Therefore, the higher the overconfidence, the more likely it is to pay a huge premium. In addition, because managers within the company have a special status and information advantage, their irrational m & behaviour may lack strong regulation, causing managers sometimes pursue of high pay, high reputation or high position and selfish purposes at a higher premium to mergers and acquisitions, the enterprise goodwill value rising. Zavertiaeva et al. (2018) show that, compared with the general public's overconfidence psychology, managers' overconfidence tendency is generally high. When making M & A decisions, overconfidence often makes them overestimate their knowledge, experience and information mining ability, which leads them to believe too much in their information resources, think that the information they have is more reference value than external information, and think that the market will

underestimate the value of the acquired company. Since the merger transaction frequency is relatively easy to define, this paper selects it as an overconfident proxy variable (Hatoum, 2021). Combined with the actual situation of listed companies in China, this paper selects the return on equity (ROE) to measure the performance level of enterprises. It uses the return on total assets (ROA) index to conduct the robustness test to ensure the rationality of the selected index.

2. Managers are overconfident

Psychologists have determined that overconfidence causes people to overestimate their knowledge, underestimate their risks, and exaggerate their ability to control events (Menkhoff et al., 2006). Similarly, these studies suggest that these managers are not immune to overconfidence bias, given the uncertainty of the business environment. Overconfident fund managers tend to consider themselves better than others on different attributes, underestimate the possibility of financial distress, and overestimate future returns. When others suggest to him, he will feel that it is a provocation to his authority. Malmendier and Yan (2011) empirically study managers' overconfidence in M & A. They believe that managers' self-attribution to shareholders based on past successful experience leads to overconfidence in corporate decision-making and that the shareholder wealth effect created by the acquirer is negative or diminishing. The people around him praised him endlessly, making him even more proud. The consequence is that in many cases, new projects of a company often make mistakes, resulting in repeated failures of the company. Lin and Chen (2008), in an empirical analysis of the domestic situation, the following conclusions are drawn: Overconfident managers are more inclined to foreign mergers and acquisitions and reveal the significant decline or statistically insignificant performance of mergers and acquisitions from the aspects of shareholder wealth effect and corporate finance.

Due to the different sample times selected, different merger and acquisition events, and covering all companies in a relatively short time, some research results are inconsistent. Lööf (2004) In a study in the 1990s, it was found that the higher the salary level of managers, the higher their status in the enterprise, the more power they will have, and the more likely they will have overconfidence. It is precisely because he is too confident that he feels that he is so capable and can do anything. When a person is too confident, they often feel that their work is perfect; This method has been widely recognized in China through discussion and demonstration by domestic scholars (Bhushan, 2014). Therefore, this paper tries to determine the degree of management overconfidence from multiple perspectives based on previous literature to achieve the robustness of the research results.

On the one hand, this paper evaluates the management's overconfidence from its relative compensation. It regards the compensation proportion of the top three executives as a specific quantitative indicator. On the other hand, this paper uses the shareholding change index of managers to conduct the robustness test to verify the objectivity of the index.

3. Investment decisions

The investment decision is a very important financial decision of an enterprise. In recent years, Haas and Peeters (2006) have investigated the factors affecting enterprise

investment at the micro perspective from the perspectives of free cash flow and equity concentration. However, these studies regard the investment behaviour of enterprises as the result of independent decisions. However, the corporate financial decisions are not entirely dependent on the individual characteristics of the company but will be significantly affected by other companies in the same industry.

Investment decision-making refers to the final decision made by the investment subject on investment activities based on investigation, analysis, and argumentation. Determined by the overall economic environment at different levels (Lu et al., 2020). This includes policy orientation, actual interest rate levels, investment risks, and other factors. Social psychology calls the phenomenon that a subject is influenced by the behaviour of other subjects in its group "peer effect". Investment is a commitment to placing funds or other resources for a certain period of time in the hope of obtaining benefits in the future. Investments are related to investing funds in various alternative of assets, both real assets and financial assets (Singh, 2009). The root cause of peer effect lies in the uncertainty of decision-making and the limited rationality. Decision makers may lack the exact causal information between action and outcome, and it is difficult to accurately predict the outcome of a particular behavior or program.

Hovakimian (2006) the uncertainty during protocol generation, selection and evaluation. From the perspective of investment decisions, overconfident managers believe that the enterprise has broad development space in the future, and to believe in their own management ability and control ability in the evaluation of investment project feasibility will overestimate project returns and underestimate the potential risk, so excessive investment phenomenon is relatively common in listed companies in China. Kim (2013) believes that manager overconfidence will increase the possibility of overinvestment and that the greater the free cash flow, the greater the severity of overinvestment. In addition, overconfident managers also have the problems of attribution bias, the project success attributed to their own decision-making level is high, and they think uncontrollable factors mostly cause failure. At the same time, individual successful projects will strengthen managers' overconfidence and encourage them to more project investment, especially in high-risk, high-yield projects.

3.3 Hypothesis

Irrational investment decision-making behaviour is common, but in past studies, "manager rationality" is taken as the premise, believing that they all make rational decisions to improve enterprise performance, but ignoring that "the cognitive deviation of economic people is a normal, rather than an accidental fact (Wang & Li, 2017). So this study that "limited rational" hypothesis is the basis of research managers investment decisions, and the principal-agent theory, Tobin Q theory and information asymmetry theory into the study of enterprise investment efficiency, to explore managers overconfidence and investment decisions of Jiangsu binary color plastic new materials co., LTD., the daily operation and the influence of the future development.

Therefore, the following assumptions are made:

H1: Investment decision have an impact on on the investment efficiency of Jiangsu shuangxingse plastic new material Co., Ltd.

H2: Manager overconfidence have an impact on on the investment efficiency of Jiangsu shuangxingse plastic new material Co., Ltd.

3.4 Sample Size

The research sample was the residents of Surabaya and Jombang (Grable, 2017). The sampling technique in this study was convenience sampling and purposive sampling. Convenience sampling is a sampling method where research objects are easily accessible (Lu et al., 2020). Purposive sampling is a sampling method based on criteria that are related to the research objectives.

The importance of sampling size: If the sampling size is too large, it will not only increase the workload of research, but also waste a lot of manpower, material resources, financial resources, and time (Wang & Li, 2017). Overconfident managers overestimate the returns to their investment projects and view external funds as unduly costly. Thus, they overinvest when they have abundant internal funds, but curtail investment when they require external financing. According to the needs of the study analysis, it follow Ting et al. (2016) to sample screening by standards: 1) exclude companies identified as ST or * ST in the current year; 2) exclude companies in the financial and insurance field; 3) exclude companies with serious data vacancies; 4) exclude companies with obvious abnormal sample data. After processing, 204315 data of Jiangsu binary Color Plastic New Material Co., Ltd., etc. were obtained. In addition, to avoid the influence of extreme values on the fitting effect of the regression model, all the continuous variables of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. were tailed at 1% and 99%.

3.5 Data Collection and Data Analysis

Quantitative analysis refers to the use of "numbers" to characterize the characteristics of an object (Grable, 2017). This article selects Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. from 2015 to 2022 was selected as the research sample, and based on this, the sample is screened as follows: (1) The financial data of listed companies in industries such as finance and insurance fluctuates significantly, which will affect the research hypothesis of this article. Therefore, industry samples such as finance and insurance are excluded. (2) The missing and abnormal data related to the enterprise will not reflect the true situation of the enterprise, so samples with missing data and abnormal financial data will be excluded. (3) There is a certain suspicion of falsification in the relevant data of ST company, so the sample of ST listed companies was excluded during the research period (Ahmad, 2020). Knowing that the risks and profit levels of investments vary, it is important for investors to see the factors in investment, related to asset allocation. In the small test, SPSS26.0 was used to test the reliability and validity of the data collected from the financial statements. The test results showed that Cronbach's Alpha coefficient between each variable was greater than 0.9. The KMO of each variable is greater than 0.6, and the Sig value is less than 0.01 (Singh, 2009). Therefore, we believe that the values of each variable meet relevant

requirements, and the design of the financial statements is reasonable.

This paper based on the data analysis, it use these financial statements to conduct a data survey:

Descriptive statistics

Descriptive statistics is a method of summarizing and expressing quantitative data by revealing the distribution characteristics of data (Bhushan, 2014). Using sample information and Probability theory to estimate and test the quantitative characteristics of the population, it can find some laws of the distribution and trend of the quality characteristic value (population), which is convenient for taking measures. Used for summarizing and characterizing data, it is usually the basis for further quantitative analysis of the data or an effective supplement to inferential statistical methods (Wang & Li, 2017). The research direction of this article belongs to financial management, and descriptive statistics are just right, it can provide information about products, processes, or quality management systems, and can also be used for management.

Regression analysis

Regression analysis is a statistical method used to study the relationship between variables, which more accurately describes how changes in one variable affect other variables through mathematical models (Wang & Li, 2017). The asset allocation strategy depends on investment objectives, investment constraints, and the investor's attitude to risk. At the same time, regression analysis can also be used for estimation and prediction.

In addition, in order to reduce the impact of extreme values in the sample on the empirical results, Winsorize extreme value adjustments were performed on the samples at the 1 and 99% levels to eliminate the impact of extreme values on this study. Through elimination and screening, 204315 balanced Panel data was finally obtained as the research sample. Similarly, the methodology of this study allows for replication in many countries such as the United States or Europe. The variable data used in this article mainly comes from the China Stock Market and Accounting Research Database (CSMAR) and the company's financial statements. The data of other variables is mainly collected through the CSMAR database. Use STATA15.0 software to process and empirically analyze all data.

Chapter 4

RESULT OF THE STUDY

4.1 Description of statistical variables

After completing the preprocessing of the data, this paper conducts a simple statistical analysis of the sample, describes the overall situation of the sample data, and roughly analyzes the relationship between the variables before regression.

As shown in Table 4-1, the mean values of ROA and ROE were 0.038 and 0.064 respectively, which were greater than 0, indicating that the average performance of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. had good average performance and strong profitability during the study period. However, the median ROE is 0.065, the minimum value is -0.486, and the standard deviation is 0.110. The gap between the minimum value and the median is obvious and fluctuates little, indicating that a considerable part of Jiangsu binary Star Color Plastic New Material Co., Ltd. has serious performance problems.

The average number of managers' overconfidence (OC) was 0.5, indicating that during the study period, more than half of the managers of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. were overconfidence. This ratio is compared with Umoren and Asogwa (2013) The research results are not much different, reflecting the phenomenon of overconfidence of managers that is common in Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. Cases of other control variables are shown in Table 4-1.

Table 4-1 Descriptive statistics of the variables

variable	sample number	average value	standard error	least value	median	crest value
ROA	204315	0.038	0.033	-0.134	0.033	0.206
ROE	204315	0.064	0.110	-0.486	0.063	0.363
OC1	204315	0.300	0.300	0	1	1
LEV	204315	0.440	0.210	0.034	0.431	0.908
SIZE	204315	22.268	1.269	19.633	22.108	26.061
DP	204315	0.216	0.606	-0.364	0.103	4.360
FIRST	204315	0.342	0.148	0.083	0.319	0.643
DLALITY	204315	0.243	0.430	0	0	1

4.2 Analysis of basic variables

Many studies have analyzed the impact of unreasonable management practices on capital structure, particularly debt decisions (Gervais et al, 2007). In fact, overconfident

managers see debt as a source of funding and are less affected by underissues. Moreover, an overconfident manager believes that the cash flow process is less volatile than reality, so he sees the possibility of bankruptcy as slim. Given the lower cost of bankruptcy, he may choose for higher debt leverage. In the second version, Hackbarth (2004) simulated the effects of management overconfidence in the capital structure trade-off model. In the first version, he considers situations where the manager tries to maximize the value of the company and establishes a positive relationship between the manager's bias and the use of the debt. The resolution of problems related to free cash flow explains the growing reliance on debt. Harford et al. (2008) argue that management overconfidence has wider implications. He found that overconfident managers chose higher debt levels, issued new debt more frequently, and tended to adjust capital structure decisions. Hovakimian (2004) considered the impact of management overconfidence on the bondholders or shareholder conflict. He demonstrated that overconfidence could alleviate the underinvestment problem, but would increase the risk transfer problem. From the existing research of overconfidence, it can be seen that overconfidence is a psychological deviation that enterprise managers are prone to appear (Bhushan, 2014). It will lead managers to over-believe in their own experience and ability and form unobjective expectations of the decision-making results.

This phenomenon of overconfidence of managers is one of the potential reasons for the financial risks of enterprises. The data of this paper is mainly derived from the Tai'an CSMR database, manual finishing Jiangsu double star color plastic new material co., LTD., annual report data, in order to determine the key factors discussed by most people, and feedback to the initial hypothesis theory, for the following proof well, and analysis includes confirmatory factor analysis, hypothesis test, get the relationship between variables and variables, and verify the hypothesis proposed in chapter 2.

4.3 Quantitative analysis

Based on the data given in the company's balance sheet income statement and Cash flow statement, calculate the Current ratio, Quick ratio, equity ratio, return on net assets and other indicators, use these data to quantify the company's financial situation, and then analyze the size of the company's various indicators and the strength of various capabilities (Vu et al., 2018). In short, it means using data to express. The ultimate goal of the production and disclosure of accounting statements is to better allocate social resources. So, existing and potential investors, creditors, governments, and related institutions all need the company to provide a true and fair financial statement to reflect the company's financial condition, operating results, and fund flow. Company managers, in order to occupy more social resources and obtain illegitimate profits, use various means to deliberately whitewash accounting statements and set accounting statement traps (Ahmad, 2020). At present, due to a large number of issues such as inaccurate financial information and financial fraud in China, the shadow of financial fraud has been caused. Especially in terms of personal credit, most of the customers they target are not affiliated with our company, and many are distributors that are not well-known to our company. Among them, the Jiangsu double star color plastic new

materials Co., Ltd., the property rights according to the Tai 'a company shareholders in the database, missing data by Wan De database according to the nature of the company, the listed company can be divided into two categories of state-owned and non-state-owned, the rest of the data are from the Tai' a database. After testing, the sample data is in line with the basic assumptions of multiple linear regression, and D. W. Is also carried out. Inspection and VIF inspection. D.W. The values were all between 1. 9 and 2. 0 (listed in the regression results), and the variance inflation factor of each variable was less than 3, which further indicated that there was no significant serial autocorrelation and multicollinearity in the observed samples. Therefore, the multiple linear regression method was used to analyze the statistical data. The regression results of the full sample and the return sample of different cash flow levels show that overconfidence is significantly positively correlated with investment level at the level of 1, indicating that overconfident managers are more inclined to increase investment level than non-overconfident managers, and hypothesis 1 is confirmed (Ting & Lean, 2011). However, the coefficient of the interaction term is significantly negative, that is, overconfidence will reduce the sensitivity of investment to operating cash flow (Bhushan, 2014). With the introduction of control variables in the model, it does not change the significance of overconfidence, operating cash flow and interaction, and the effect of explanatory variables is relatively stable. In the full sample regression model 2 and model 3, the asset-liability ratio is significantly positively correlated with the level of investment, indicating that debt is a major source of capital for investment, but the proportion of independent directors has no significant impact on the level of investment.

Table 4-2 Regression results for the full sample and different cash flow levels

Explained variable	Full sample				Insufficient cash flow			Cash flow is abundant	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
<i>Ku-1</i>									
Constant term	0.004	-0.096"	125**	0.036	-0.007	-0.023	-0.047***	-0.091**	-0.109***
	-1.187	(-4.711)	(-5.733)	-6.299	(-0.224)	(-0.704)	(-11.752)	(-3.849)	(-4.309)
<i>I.cloud</i>	0.046*	* 0.041*	0.042***	0.011	0.004	0.007	0.027**	0.028***	0.026**
	-6.395	-5.588	-5.751	-0.805	-0.339	-0.557	-2.53	-2.575	-2.402
<i>OitCit/Kit-i</i>	-0.462*	* -0.470"	-0.466***	-0.271*	-0.330**	-0.367***	-0.082	-0.082	-0.056
	(-7.198)	(-7.422)	(-7.334)	(-1.862)	(-2.313)	(-2.592)	(-0.867)	(-0.871)	(-0.59)
<i>Ca/Ka-1</i>	0.967*	* 0.935*	0.932***	-0.075	0.095*	0.105**	1.234***	1.227***	1.228***

	-49.949	-48.176	-47.766	(-1.488)	-1.787	-1.97	-56.038	-52.799	-52.456
			**						
<i>Qit</i> — <i>l</i>	0.018"		0.021	0.	0.022*			0.001	0.003
			***	0.020***	**				
	-11.519		-12.232	-8.591	-9.153			-0.596	-1.203
			** 0.						
<i>u</i>	0.143"		151**	0.	0.			0.	0.
			*	0.083 ...	0.083***			0.067***	0.073***
	-10.069		-10.237	-4.077	-3.976			-3.89	-4.074
<i>G</i>									
<i>Society</i>	0.035		0.038	-0.061	-0.076			0.057	0.070
	-0.708		-0.752	(-0.843)	(-1.054)			-0.985	-1.2
<i>Su</i>	-0.022		-0.021	-0.013	-0.010			-0.015**	-0.016**
	(-3.758)		(-3.404)	(-1.418)	(-1.068)			(-2.196)	(-2.232)
<i>Y</i>	Control			Control				Control	
<i>I</i>	Control			Control				Control	
Adj- <i>R</i> ²	0.27	0.289	0.292	0.009	0.055	0.078	0.381	0.382	0.385
<i>DW</i>	1.945	1.933	1.934	998	1.975	1.962	1.955	1.953	1.952
	857.		111.1	5.			1		
<i>F</i>	5	403.55	3	516	14.02	6.513	101.36	474.78	130.23

Note: ** and *** indicate that the correlation coefficient is significant above 10%, 5% and 1% respectively, the same below

In order to further analyze the adjustment effect of overconfidence on investment-cash flow sensitivity, the sample population is regressed according to whether the operating cash flow is sufficient or not. It is assumed that when the operating cash flow is less than or equal to zero, the internal capital is insufficient, otherwise, the internal capital is sufficient. Among the 204,315 total samples, the proportion of operating cash flow greater than zero is relatively large, indicating that most companies have good liquidity in operation. In the regression model 4 of the sample with insufficient cash flow, only the coefficient of the interaction term is significant, while the other two explanatory variables are not significant, and in the process of adding control variables, the correlation between overconfidence and investment level is still not obvious. It can be seen that when the internal funds of enterprises are insufficient, the disposable funds of managers are limited. Although overconfidence has a positive impact on the level of investment, the effect is not significant (Yao, 2019). Because of the low cost of equity financing in China, when the operating cash flow is insufficient, overconfident managers tend to choose external financing to supplement the investment funds, which shows that overconfidence reduces the sensitivity of investment to internal cash flow (Bhushan, 2014). With the increase of control variables, although the significance of the impact of operating cash

flow on investment is gradually increasing, the coefficient value is far lower than that of the full sample regression, indicating that compared with the total sample, when internal funds are insufficient, the explanatory degree of operating cash flow on investment level is greatly reduced.

The regression coefficient of asset-liability ratio is significantly positive, but lower than the coefficient value in the whole sample, indicating that although the internal cash flow of enterprises is insufficient and external financing is needed, it does not increase the dependence of enterprises on debt. This is mainly related to the financing preference of "equity financing-debt financing-internal capital" of listed companies in China. Overconfidence and operating cash flow have a significant explanatory effect on the investment level of enterprises with abundant internal capital. However, the regulation of overconfidence on cash flow is not obvious. The possible reason for this situation is that it is relatively easy for listed companies in China to raise funds from the capital market at a lower cost. When enterprises have high external funds and sufficient internal funds, they will face very low financing constraints (Zavertiaeva et al., 2018). Overconfident managers can invest according to the evaluation of project benefits and risks, and do not need to be constrained by cash flow. For enterprise managers with sufficient internal funds, overconfidence will significantly increase the level of investment. Compared with the regression of the first two groups of samples, indicating that when internal funds are abundant, managers can judge investment projects completely according to returns and risks, and no longer need to be restricted by investment opportunities. At this point, Assumption 2 has all been verified.

4.4 Robustness test

In view of the fact that the measurement index of managers' personal overconfidence is limited, the replacement test of this index is not carried out. After 2006, listed companies only disclose the net value of fixed assets and construction in progress in their public financial statements. Considering the availability and applicability of data, the change of net value of fixed assets is used as a substitute variable for the level of investment in the empirical analysis (Bhushan, 2014). Because the net value is the original value minus the balance of depreciation and impairment provision, However, the change of depreciation and impairment is not caused by the active investment of the enterprise. Therefore, the depreciation amount and impairment amount in the notes to the statement are used as the supplement to the net value, and the change of the original value of assets is used as the substitution variable of the investment level to conduct the substitution test on the explained variables (Puri & Robinson, 2007). The test results are shown in Table4-3. Because the alternative variables better represent the investment scale of enterprises, the regression goodness of fit of each sub-sample has improved, the signs and significance of most explanatory variables have not changed, only the interaction terms of general manager's overconfidence and cash flow have changed signs in the case of non-significant, which further indicates that the general manager is only responsible for daily operation. After the above test, the conclusions of Hypothesis 1 and Hypothesis 2 are still valid.

Table 4-3 Robustness Test Results of Replacement Investment Level

Defined variable	Total sample		Chairman		General manager		Two jobs in one		Two jobs at the same time	
Constant term	-0.14	*** (-6.62)	-0.12*	(-6.92)	-0.16'	*** (-6.71)	-0.14	*** (-6.96)	-0.14	*** (-7.02)
6	0.05	*** (7.4)	0.071	(11.05)	0.02	(2.51)	0.08	*** (8.32)	0.06	(6.44)
OnCiz/ Kit-i	-0.67	(-10.55)	-1.181	(-20.61)	-0.11	(-1.27)	-1.27	(-14.09)	-1.08	(-11,83)
Ctt/ Ku-1	1.09	(58.61)	1.091	(70.13)	1.09	(55.89)	1.08	(66.25)	1.08	(66.84)
Qu-1	0.02	(13.81)	0.02	(16.54)	0.03	(13.82)	0.03	-16.84	0.03	(16.64)
L Cloud	0.17	(11.48)	0.14,	(11.92)	0.18	(11.24)	0.16	(11.93)	0.15	(11.64)
Ga	0.03	-0.62	0.00	-0.11	0.04	-0.8	0.00	0	0.01	-0.27
S also	-0.03	(14.29)	-0.02,	(-4.37)	-0.03	(-3.99)	-0.02	(-3.83)	-0.02	(-4.00)
h		Control		Control		Control		Control		Control
Adj*		0.404		0.498		0,423		0.508		0.514
		1.942		1.926		1.96		1.927		1.93
DW										
F		166.429		235.22		158,335		215.994		219.693

4.5 Analysis of the basic regression results

After initially discussing the relationship between manager overconfidence and enterprise investment decision, this paper will further analyze the relationship between the above two. As shown in Table 4-4, the V of the corrected fixed effect (FE) model was 0.2388, while the R² of the mixed regression equation was 0.4125, and the F statistics were significant at the 1% level, indicating that the model is effective in the overall setting and has a significant linear relationship among the variables. By comparing the two models, the OC coefficient of managers' overconfidence level is -0.0368 and -0.1022 respectively, and both of them are significant at the level of 1%. Therefore, it can be learned that when the higher the level of overconfidence of managers, the greater the downward pressure on the investment decision of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. will be, which can verify the hypothesis of this paper.

Table 4-4 Regression results of managers' overconfidence and corporate investment decisions

	FE model		mixing OLS	
	coefficient	7 Value	coefficient	7 Value
OC	-0.018L	-7.11	-0.1037 5	-57.75
LEV	-0.0011 *	-1.8	0.14131	-177.1
SIZE	0.0005 ***	1.77	0.0186*	13.31

DP	0.0005 **	1.78	0.01085	15.76
DLALITY	-0.0001	-0.51	-0.0043	-1.17
FIRST	-0.0131 *	-11.8	0.0175 ***	5.17
YEAR	YES		YES	
INDLSTRY	YES		YES	
R ¹	0.1388		0.4155	
F-value	371.0		105.10	

Note: The regression model in this paper is corrected by error using the heteroscedasticity criteria.

4.6 Results of the Study

Ang et al. (2010) presented the first study to quantify the extent of the individual owner effect and provide support for the characteristics of individual risk as a fundamental component of traditional capital structure theory. The results showed that corporate leverage was positively correlated with the owner's age, business experience, complexity, the number of financial institutions used by the owner, and whether the owner used the computer for business purposes or pledged collateral. Furthermore, the authors show that corporate leverage is inversely associated with the company's age and return on assets (Bhushan, 2014).

Harford and Zhao (2008) tested the relationship between leadership optimism, overconfidence, and debt financing during the 1998-2003 period from a sample of 135 Brazilian companies. The authors found that the coefficient of the cognitive variables had a positive effect on the debt levels. The resulting coefficients varied from 0.02 to 0.13 and were all significant at 5%. Therefore, this section reviews the search on the strength of executive overconfidence and its role in capital structure decisions, see Table 4-5 below:

Table 4-5 Study hypothesis validation table

No.	Hypothesis	Result
H1	Investment decision have an impact on on the investment efficiency of Jiangsu shuangxingse plastic new material Co., Ltd.	Establish
H2	Manager overconfidence have an impact on on the investment efficiency of Jiangsu shuangxingse plastic new material Co., Ltd.	Establish

Through data analysis, it is found that, on the one hand, for the sample enterprises with overinvestment, the managers' overconfidence exacerbates the degree of overinvestment and reduces the investment efficiency. Overconfidence is also

considered an overestimation of one's abilities, performance and chances of success. Managers' overconfidence does have a negative impact. On the other hand, for the sample enterprises with underinvestment, the overconfidence of managers makes up for the degree of underinvestment and improves the investment efficiency, while the overconfidence of managers has a positive impact. Results found that the hypothetical content had a positive effect and therefore H1-H2 was valid.

4.7 Discussion

4.7.1 Corporate value continues to deteriorate, and debt defaults appear

Managers' overconfidence can aggravate enterprises' over-investment, thus reducing investment efficiency. When managers are overconfident, their decision-making behaviour often harms investment efficiency. If the investment decision is improper, the negative impact on the investment efficiency will be huge.

In management, people generally have a psychological tendency - overconfidence, that is, they believe they have management ability. Some scholars believe that moderate manager self-confidence is conducive to enterprise performance, but once the management is overconfident, it will reduce enterprise performance (Heaton, 2002). This view holds that managers' overconfidence will lead to excessive investment, insufficient technological innovation and technological backwardness of enterprises. However, these "confident people" are not always successful because some people will change their views and behaviors due to some accidental events (Hovakimian, 2006). For example, some managers believe that technological innovation is worthless; Some managers believe that they have certain skills and other specific abilities; Some managers regard certain aspects as factors to be considered when judging problems. In 2018, Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. tried to focus on its main business by selling assets and targets in the expansion period. Managers overestimate the correctness of the decision and the company's ability to bear risk, overconfidence psychology. Excessive investment and excessive financing led to the debt default of Jiangsu Double Star Color Plastic New Material Co., LTD.

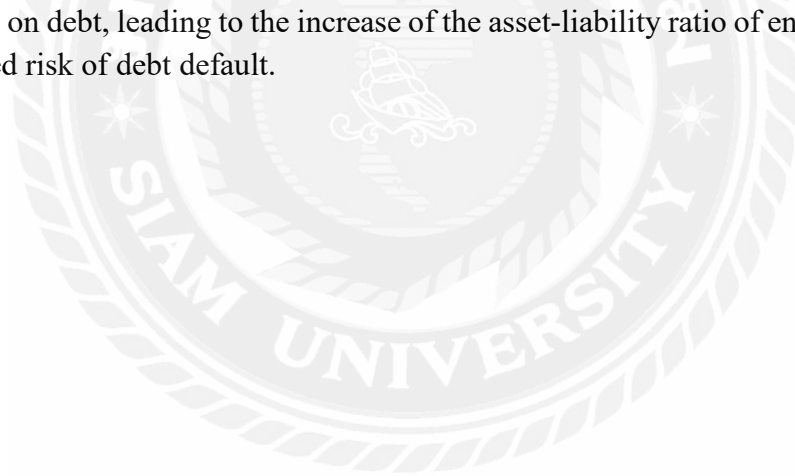
To sum up, although the aggressive expansion strategy of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. plays a positive role in the enterprise performance and value, it stops at the early stage. Then, with the further expansion of the enterprise investment scale, it is easy to have no time to pay attention to the coordinated development of the old and new fields. In addition, the blind and excessive investment of enterprises not only consumes a lot of capital, but also said enterprises with more debt (Arias & van-Beers, 2013). The long-term high asset-liability ratio of enterprises makes the liquidity of enterprises tight, the value of enterprises is continuously deteriorating, and the debt default is on the verge of triggering.

4.7.2 Low efficiency of investment and unreasonable financing structure

The intermediate variables that enterprise strategy radical affect debt default are low investment efficiency and unreasonable financing structure. In analysing how the overconfidence of the managers of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. leads to the debt default of enterprises, this paper finds two influence paths,

namely, investment behaviour and financing behaviour. In the case of overconfidence, corporate strategy increases the risk of corporate debt default by negatively affecting investment efficiency (Bhushan, 2014). Strategic aggressive enterprises expand rapidly, which is easy to produce excessive investment, the net present value of some investment projects is less than 0, the overall investment efficiency decreases, endogenous financing is eroded, the debt repayment ability of enterprises is weakened, and the debt default is easy to break out.

Someone who is overconfident will tend to override the information obtained because he is too confident in his own beliefs, too confident, and trusting in his views and knowledge so that other information that is actually related is important to be ignored. The more aggressive the enterprise strategy, the lower the investment efficiency, the greater the risk of debt default; Under the managers' overconfidence, the enterprise strategy aggressively increases the risk of enterprise debt default by positively affecting the financing structure (asset-liability ratio). Managers should always act rationally when making financial decisions (Azouzi & Jarboui, 2012). The company must have a steady stream of capital support. When the enterprise investment project is too large and internal financing is insufficient to support, overconfident managers are more willing to choose debt financing to raise external funds. They think companies are undervalued and are unwilling to raise money by issuing shares. The more aggressive the enterprise strategy, the more investment, the greater the dependence on debt, leading to the increase of the asset-liability ratio of enterprises and the increased risk of debt default.



Chapter 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

As an important mode of economic operation, the efficiency of investment not only affects the company's business performance and growth ability but also has an important impact on the national macroeconomic development and the overall economic operation (Bhushan, 2014). In order to solve the Jiangsu binary color plastic new materials co., LTD., the common problem of low investment efficiency, this paper first reviews the traditional economics under the principal-agent theory, the theory of information asymmetry theory, through the theoretical analysis of the relationship between overconfidence and low investment efficiency, and equity checks and balances in the relationship between the two, and put forward the corresponding research hypothesis. Then Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. was selected as the research sample, and the corresponding research model was established. Finally, it starts the hypothesis and the regression analysis of the model (Baker & Wurgler, 2007). The overconfidence of managers significantly improves the investment level of enterprises, and the overconfidence of state-owned listed companies has a stronger positive impact on the investment level than that of non-state-owned listed companies; The overconfidence of managers significantly aggravates the overinvestment of enterprises, which reduces the investment efficiency of enterprises. Managers' overconfidence significantly corrects the degree of underinvestment of enterprises, that is, it improves the investment efficiency of enterprises.

The impact of the above managers' overconfidence on the investment efficiency of enterprises is stronger in Jiangsu Shuangxing Color Plastic New Material Co., LTD. Therefore, the results of this study further verify that: (1) Managers' overconfidence will affect the investment level of enterprises rather than directly affecting the investment efficiency. (2) The overconfidence of managers intensifies the degree of overinvestment of enterprises, that is, it improves the investment efficiency of enterprises. Overall, the findings of this paper are consistent with Tinget al (2016), who studied the Malaysian government and concluded that R & D intensity can create a competitive advantage and help companies increase long-term profits. However, the sample of this study was limited to that of state-owned listed companies, so this study was not considered in hypothesis testing. Moreover, due to the certain differences and heterogeneity between state-owned and private enterprises, the control variables used in the test are two factors, namely management compensation, management equity incentive and senior management work avoidance, which may have some errors with the results assumed in this study.

5.2 Recommendation

5.2.1 Establish effective manager overconfidence restraint mechanism

Gudmundsson and Lechner (2013) believe that overconfidence occurs when individuals consider themselves "above average," which affects personal behavior in three ways: overestimation, over-precision, and placement. However, the conclusion of the evaluation shows that when managers have a high degree of overconfidence, they can appropriately restrict their investment scale and investment type, thereby weakening their decision-making power. In corporate finance theory, managers should maintain fairness when making decisions that best serve their interests (Abor, 2007). Conditional companies can establish a reasonable authorization and approval system within the company, and large-scale investments need to be approved by relevant units. Regarding rewarding overconfident managers, rewards should be combined with the traditional principal-agent theory. This is because overconfident managers can make inefficient investments that are not conducive to the company's interests, which is also the most important issue.

As Kim and Lee (2008) emphasized, self-attribution is an important channel that fosters overconfidence by attributing success to internal factors, such as personal ability and external factors. In addition, overconfident managers tend to overestimate the resource endowments of their companies and the results under their control (Bessière, 2007). Therefore, in this process, managers must consider the company's value. Since principal-agent theory believes that overconfidence of agents can lead to abnormal investment behavior, it also applies to investment behaviour. In order to solve this problem, companies need to establish a fair, incentive-effective, fair and reasonable management mechanism for everyone. However, for those overconfident managers, their behavior may lead to damaging company value and inefficient results.

The author's thinking about this is to appropriately reduce the direct compensation of enterprise managers and choose to give them a certain proportion of equity rewards because the salary and compensation of managers are a manifestation of their value. Excessive compensation to give managers confidence and self-esteem will exacerbate the degree of overconfidence of managers. At the same time, stock options can link managers' interests more with the value of the company's shareholders and the entire enterprise; this allows managers to be more cautious when making investment decisions and reduces their level of overconfidence. The granting of stock options links managers' confidence in the company with their confidence in their abilities, thereby enabling them to work harder, reduce inefficient investment, and devote more energy to company management.

To sum up, equity incentives for enterprise managers should be considered from two aspects: first, providing reasonable incentives for enterprise managers to improve their confidence level; second is to providing a certain proportion of stock options when providing equity incentives to employees to enhance their confidence in their work. The purpose and significance of incentives, incentive targets and scope, performance evaluation standards, and incentive conditions should be fully considered for enterprises (Baker et al, 2003). However, employees should pay more attention to job satisfaction and a sense of gain. In addition, the author believes that the reasonable allocation of stock options and the reasonable evaluation and treatment of internal employees after implementing equity incentives are also very important.

5.2.2 Control the overconfidence of managers, improve the level of investment decisions

Managers' overconfidence can exacerbate excessive investment in enterprises, thereby reducing investment efficiency. When managers are overconfident, their decision-making behaviour often has a negative impact on investment efficiency. If investment decisions are improperly made, the negative impact on investment efficiency will be enormous.

In management, people generally have a psychological tendency - overconfidence, which means they believe they have management skills. Overconfident managers tend to use more short-term debt when they believe the company's prospects are good, while realists prefer lower-risk long-term debt (Landier & Thesmar, 2009). They often overestimate the safety of corporate investment projects and underestimate the possibility of default. For these managers, short-term debt financing will optimize the cash flow allocation. On the contrary, Chapman et al. (2006) reported that companies whose chairmen have a high degree of self-attribution (SAB) and executive directors, especially those overconfident CEOs, tend to have longer debt maturities and engage in long-term borrowing. The early findings of Fosberg (2004) suggest that overconfident managers tend to choose short-term debt maturity. These managers believe that stock pricing is more incorrect than debt pricing and conditional on obtaining external financing.

As a result, overconfident CEOs prefer debt over equity. They prefer short-term debt to long-term debt and long-term debt to permanent debt (equity). Chatterjee and Hambrick (2007) believe that moderate manager confidence is beneficial to corporate performance, but once managers become overconfident, it can lead to a decline in corporate performance. This view holds that managers' overconfidence can lead to excessive investment, insufficient technological innovation, and technological backwardness. However, these "confident people" are not always successful, as some people may change their views and behaviours due to accidental events. For example, some managers believe that technological innovation is worthless; some believe that they have certain skills and other specific abilities; some view certain aspects as factors to consider when judging a problem.

Therefore, it is necessary to control the overconfidence of managers and improve the level of investment decision-making. In the long run, overconfidence in the management of Chinese enterprises will lead to lower investment efficiency. Fraser et al. (2006) used survey data collected over five years to identify representatives of their confidence in managers. The author derived their overconfidence measure based on the viewpoint that the confidence range of the point estimate reflects the individual probability distribution attributed to the random process under discussion. Over the past five years, they have conducted quarterly surveys of US CFOs, asking them to forecast market stock returns for one and ten years and to provide an 80% confidence interval. They used the narrow personal probability distribution of stock market returns to measure respondents' confidence. They quantified the degree to which CFOs were calibrated and examined the cross-sectional determinants of overconfidence.

Consistent with the psychological literature, Cooper et al. (2008) pointed out that overconfidence is associated with both personal traits and corporate culture. The overconfidence of management in Chinese enterprises is often related to managers' management ability, leadership level, personal characteristics, and operating environment.

In the short term, this will have a negative impact on investment efficiency. For example, due to overconfidence, managers' actions to determine certain issues are not based on objective facts but rather on personal values or emotional factors, which can increase the risk of managers' decision-making errors. In the long run, in most Chinese companies, overconfidence in management can have a negative impact on investment efficiency. If managers' overconfidence can improve performance in the short term, it will promote their management behaviour and increase the risk of excessive investment. Butler et al. (2005) pointed out that managers' overconfidence increases with increasing skills and education but decreases with increasing professional experience. However, if managers are overconfident in the short term, it is not conducive to improving efficiency. When the "confident" mentality of decision-makers dominates, the ability of decision-makers to control and coordinate decision-making behavior becomes an important issue in the decision-making process. Managers who are overconfident and unable to effectively control their decision-making behaviour can easily lead to investment errors.

5.3 Further Study

Due to the internal cash flow of most of the sample enterprises cited in the article being sufficient, the article lacks research on whether the internal cash flow of Jiangsu Double Star when the New Material Co., Ltd. is insufficient. In addition, due to the limitation of time, energy and professional level, this paper, in setting overconfidence variables, only the combination of Jiangsu binary color plastic new material co., LTD., performance forecast and mergers and acquisitions of two factors, if the more quantitative measure of overconfident variable application, must make the results more accurate. In addition, this paper also has a small problem. Because the article does not include cash flow, profit growth rate and other variables in the research scope, which cannot verify the existence of overconfidence. Cash flow, net profit growth rate, net interest rate of sales are the profit indicators of the enterprise, and these indicators are to reflect the business performance of the enterprise rather than the overconfidence index itself. Jiangsu Double Star Color Plastic New Materials Co., Ltd.'s performance forecast and the number of mergers and acquisitions are not considered. These are the places to be further improved. Although there is a regret, it can also provide some ideas for future research.

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Appendix

Full text of Jiangsu Shuangxing Color Plastic New Materials Co., Ltd. 2021 Annual Report Financial Report

The unit of the statements in the financial notes is: yuan

1. Consolidated balance sheet

Prepared by: Jiangsu Double Star Color Plastic New Material Co., Ltd

Unit: yuan

project	On December 31,2021	On December 31,2020
circulating assets:		
monetary resources	1,599,267,001.12	1,282,600,316.54
Settlement provision		
Open out the funds		
Trading financial assets		465,249,000.00
Derivative gold, financing products		
bill receivable	579,309,069.74	295,680,337.40
accounts receivable	1,069,508,615.10	947,581,682.04
Receivables, item financing	113,208,213.06	143,484,720.39
advance payment	550,684,663.36	594,082,594.35
Premium receivable		
Receivable points, accounts protection		
Provisions for the reinsurance contract receivable		
accounts receivable-other	2,572,718.27	3,149,591.76
Including: interest receivable		
dividends receivable		
Purchase and resale of financial assets		
stock	1,561,779,949.35	1,179,471,800.46
Contract assets		
Holding assets for sale		

Non-current assets coming due within one year		
Other streams, dynamic assets	18,529,584.06	12,461,314.86
Current capital, total production	5,494,859,814.06	4,923,761,357.80
non-current assets:		
Issuing loans and making advances		
Debt investment		
Other debt, the right to make an investment		
Long-term receivables		
Long-term shares, rights investment		
Other equity instrument investment		
Other non-current financial assets	523,536,781.80	446,212,155.79
Investment in real estate		
fixed assets	4,303,186,133.22	3,404,596,754.09
construction in process	1,258,142,778.95	861,576,530.79
Productive biological assets		
Oil and gas assets		
Right to use assets		
immaterial assets	346,931,917.81	334,331,419.59
Development expenditure		
goodwill		
Long-term stay, amortization of expenses	29,350,539.97	35,385,467.26

Deferred income tax assets	39,750,653.03	30,333,696.04
Other non-current assets	129,546,914.45	181,600,642.67
Total of non-current assets	6,630,445,719.23	5,294,036,666.23
Total assets	12,125,305,533.29	10,217,798,024.03
cash liabilities:		
money borrowed for short time		
Borrowing from the central bank		
Open into the funds		
Tradable financial liabilities		
Derivative gold, financial debt		
notes payable	1,234,149,097.00	1,011,048,200.00

debit balance in suppliers'account	234,867,136.95	169,434,002.97
item received in advance		
Contract liabilities	76,400,984.80	103,060,944.37
Sell to repurchase financial assets		
Deposit-taking and interbank deposits		
Acting trading of securities funds		
Underwriting securities funds as an agent		
Payable position, work pay	33,709,865.23	23,568,341.95
tax payable	66,606,751.52	85,152,620.05
accounts payable-others	570,580,710.66	298,111,117.05
Among them: interest payable		
dividends payable		
Fee and commission payable		
Payable points, and guaranteed accounts		
Hold liabilities for sale		
Non-current liabilities arising due within one year		
Other streams, dynamic liabilities	491,827,157.42	210,131,420.54
Negative flow, total debt	2,708,141,703.58	1,900,506,646.93
non-current liability:		
reserve fund for insurance contracts		
money borrowed for long term		
bond payable		
Including: preferred shares		

perpetual bond		
lease obligation		
Long-term payable		
Long-term employee compensation payable		
anticipation liabilities		
deferred income		
Deferred income tax liabilities	18,051,387.27	6,452,693.36
Other non-current liabilities	324,583.33	419,583.33

Total of non-current liabilities	18,375,970.60	6,872,276.69
Total liabilities	2,726,517,674.18	1,907,378,923.62
owner's equity:		
capital stock	1,156,278,085.00	1,156,278,085.00
Other rights, beneficial tools		
Including: preferred shares		
perpetual bond		
capital reserve	5,186,573,882.09	5,185,545,435.71
Less: Inventory stocks	88,240,894.76	18,877,333.00
Other comprehensive, combined with income		
Special reserve		
surplus public accumulation	397,358,221.41	258,901,914.31
General risk preparation		
undistributed profit	2,746,818,565.37	1,728,570,998.39
Total owner's equity attributable to the parent company	9,398,787,859.11	8,310,419,100.41
Minority shares, east equity		
Total of the owner's equity	9,398,787,859.11	8,310,419,100.41
Total liabilities and owner's equity	12,125,305,533.29	10,217,798,024.03

Legal representative: Wu Peifu in charge of accounting work: Zou Xuemei Head of accounting institution: Hu Liqun

2. Balance Sheet of the parent company

Unit: yuan

project	On December 31,2021	On December 31,2020
circulating assets:		
monetary resources	1,596,229,426.97	1,276,258,630.85
Trading financial assets		465,249,000.00
Derivative gold, financing products		
bill receivable	579,309,069.74	295,680,337.40
accounts receivable	1,073,066,456.30	960,373,493.31
Receivables, item financing	113,208,213.06	143,484,720.39
advance payment	546,072,958.51	588,212,976.97
accounts receivable-other	2,244,716.22	3,035,078.80

Including: interest receivable		
dividends receivable		
stock	1,488,126,458.84	1,109,021,448.18
Contract assets		
Holding assets for sale		
Non-current assets coming due within one year		
Other streams, dynamic assets	18,305,350.82	12,409,709.13
Current capital, total production	5,416,562,650.46	4,853,725,395.03
non-current assets:		
Debt investment		
Other debt, the right to make an investment		
Long-term receivables		
Long-term shares, rights investment	95,100,955.61	95,100,955.61
Other equity instrument investment		
Other non-current financial assets	523,536,781.80	446,212,155.79
Investment in real estate		
fixed assets	4,271,387,109.29	3,365,448,962.73
construction in process	1,253,718,925.69	861,576,530.79
Productive biological assets		
Oil and gas assets		
Right to use assets		
immaterial assets	344,447,334.33	331,767,032.51
Development expenditure		
goodwill		
Long-term stay, amortization of expenses	29,350,539.97	35,385,467.26
Deferred income tax assets	32,083,204.80	23,380,485.79
Other non-current assets	129,546,914.45	181,600,642.67
Total of non-current assets	6,679,171,765.94	5,340,472,233.15
Total assets	12,095,734,416.40	10,194,197,628.18
cash liabilities:		
money borrowed for short time		
Tradable financial liabilities		

Derivative gold, financial debt		
notes payable	1,234,149,097.00	1,011,048,200.00
debit balance in suppliers'account	220,209,995.60	162,725,667.38
item received in advance		
Contract liabilities	68,791,502.24	93,191,538. 11
Payable position, work pay	33,689,865.23	23,509,372.78
tax payable	66,040,240. 15	84,512,158.82
accounts payable-others	570,412,750.30	297,787,205. 18
Among them: interest payable		
dividends payable		
Hold liabilities for sale		
Non-current liabilities arising due within one year		
Other streams, dynamic liabilities	491,281,890.72	209,363,835.64
Negative flow, total debt	2,684,575,341.24	1,882,137,977.91
non-current liability:		
money borrowed for long term		
bond payable		
Including: preferred shares		
perpetual bond		
lease obligation		
Long-term payable		
Long-term employee compensation payable		
anticipation liabilities		
deferred income		
Deferred income tax liabilities	18,051,387.27	6,452,693.36
Other non-current liabilities		
Total of non-current liabilities	18,051,387.27	6,452,693.36
Total liabilities	2,702,626,728.51	1,888,590,671.27
owner's equity:		
capital stock	1,156,278,085.00	1,156,278,085.00

Other rights, beneficial tools		
Including: preferred shares		

perpetual bond		
capital reserve	5,186,573,882.09	5,185,545,435.71
Less: Inventory stocks	88,240,894.76	18,877,333.00
Other comprehensive, combined with income		
Special reserve		
surplus public accumulation	397,358,221.41	258,901,914.31
undistributed profit	2,741,138,394.15	1,723,758,854.89
Total of the owner's equity	9,393,107,687.89	8,305,606,956.91
Total liabilities and owner's equity	12,095,734,416.40	10,194,197,628.18

3. Consolidated income statement

Unit: yuan

project	In 2021	Year of 2020
1. gross revenue	5,931,205,322.21	5,061,313,756.89
Including: operating income	5,931,205,322.21	5,061,313,756.89
interest revenue		
Earned premiums		
Fee fee and commission income		
2. Total operating costs	4,486,429,100.49	4,256,209,296.46
Including: operating costs	3,982,256,149.62	3,920,117,401.05
interest expense		
Fee charges and commission expenses		
surrender value		
net payments for insurance claims		
Withdraw the reserve fund for the insurance liability contract net amount		
Policy dividend expenditure		
Coverage		
Taxes and Additional	20,949,159.97	20,798,485.89
selling expenses	29,129,400.64	20,166,763.11
general expenses	173,068,516.27	110,892,299.03
research and development	266,889,660.90	157,267,685.13

expenditure		
cost of financing	14,136,213.09	26,966,662.25
Including: interest expense	947,670.21	
interest revenue	6,249,354.49	4,079,099.12
Plus: Other earnings	86,474,352.70	61,468,699.49
Investment income (loss is filled as "-")	13,454,829.19	25,017,074.41
Among them: the investment income of the joint venture enterprises and joint ventures		
Terminated and recognized income of financial assets measured at amortized cost		
Exchange gain (losses marked as "-")		
Net exposure hedging benefit (losses are listed in the number "-")		
Income from change in fair value (loss filled in with "-")	77,324,626.01	30,497,370.83
Credit impairment loss (the loss is listed as "-")	-24,557,901.71	-83,294,662.89
Impairment loss (loss listed as "-")	-6,520,816.91	-3,498,924.23
Asset disposal income, benefit (losses filled with "-")	7,765.75	
3. Operating profit (the loss is listed as "-" number)	1,590,959,076.75	835,294,018.04
Plus: non-operating income	482,121.31	124,438.62
Less: non-operating expenses	56,799.53	3,130,840.78
4. Total profit (total loss filled in with "-")	1,591,384,398.53	832,287,615.88
Less: income tax expense	205,953,299.85	111,746,088.74
5. Net profit (net loss included in "-" number)	1,385,431,098.68	720,541,527.14
(1) Classification by business continuity		
1. Net profit from continuing operations (net loss included in "-")	1,385,431,098.68	720,541,527.14

2. Net profit from termination (net loss filled in "-")		
(2) Classification according to the ownership ownership		
1. Net profit attributable to the shareholders of the parent company	1,385,431,098.68	720,541,527.14
2. Minority shareholders' profit and loss		
6. Net after-tax amount of other comprehensive income		

Net after-tax amount of other comprehensive income attributable to the parent owner		
(1) Other comprehensive income that cannot be reclassified into profits and losses		
1. Remeasure the benefit plan change Move the forehead		
2. Other comprehensive income that cannot be converted to profit and loss under the equity method		
3. Fair price of investment of other equity instruments Value change		
4. Fair price of the enterprise's own credit risk Value change		
5. Other		
(2) Other comprehensive income that is reclassified into profits and losses		
1. Other benefits available under the equity method composite income		
2. Changes in the fair value of other debt investments		
3. The amount of financial assets reclassified into other comprehensive income		
4. Credit impairment provisions for other debt investments		
5. Cash flow, volume hedging reserves		

6. Balance in the translation of foreign currency financial statements		
7. Other		
Net after-tax amount of other comprehensive income attributable to minority shareholders		
VII. Total comprehensive income	1,385,431,098.68	720,541,527.14
Total aggregate income attributable to the owner of the parent company	1,385,431,098.68	720,541,527.14
Total consolidated income attributable to minority shareholders		
Viii. Earnings per share:		
(1) Basic earnings per share	1.21	0.623
(2) Diluted earnings per share	1.209	0.623

If the enterprise merges under the same control in the current period, the net profit realized by the merged party before the merger is: yuan, and the net profit realized by the merged party in the previous period is: yuan.

Legal representative: Wu Peifu in charge of accounting work: Zou Xuemei Person in charge of accounting institution: Hu Liqun

4. Profit statement of the parent company

Unit: yuan

project	In 2021	Year of 2020
1. operating receipt	5,866,376,432.81	5,004,462,007.69
Less: operating costs	3,940,936,700.50	3,883,988,102.67
Taxes and Additional	20,181,315.75	20,061,302.32
selling expenses	27,347,267.70	18,759,205.57
general expenses	169,026,268.42	107,250,250.78
research and development expenditure	259,761,620.43	151,298,900.02
cost of financing	14,154,918.85	26,977,813.63
Including: interest expense	947,720.21	
interest revenue	6,216,739.99	4,079,099.12
Plus: Other earnings	86,058,250.00	61,008,944.49
Investment income (loss is filled as "-")	13,454,829.19	25,017,074.41
Among them: the investment income of joint venture enterprises and joint ventures		

Income of financial assets measured at amortized cost (loss listed as "-")		
Net exposure hedge benefit (loss filled as "-")		
Income from change in fair value (loss filled in with "-")	77,324,626.01	30,497,370.83
Credit impairment loss (loss in the name "-") Fill in)	-20,961,372.55	-75,021,572.61
Asset impairment loss (the loss is numbered "-") Fill in)		
Income from asset disposal (the loss is numbered "-") Fill in)		
2. Operating profit (the loss is listed as "-" number)	1,590,844,673.81	837,628,249.82
Plus: non-operating income	408,400.00	100,070.00
Less: non-operating expenses	22,465.02	3,017,571.70
3. Total profits (total losses shall be listed as "-")	1,591,230,608.79	834,710,748.12
Less: income tax expense	206,667,537.83	114,202,184.28
4. Net profit (net loss included in "-" number)	1,384,563,070.96	720,508,563.84
(1) Net profit from continuing operations (net loss shall be included in the number "-")	1,384,563,070.96	720,508,563.84
(2) Net profit from operation termination (net loss shall be filled in with "-" number)		
5. Net after-tax amount of the other comprehensive income		
(1) Other comprehensive income that cannot be reclassified into profits and losses		
1. Remeasure and set the benefit plan Change the amount		
2. Other comprehensive that cannot be converted to profit and loss under the equity method		

3. Fair investment in other equity instruments		
Value change		
4. Changes in the fair value of enterprises with their own credit risks		
5. Other		
(2) Other comprehensive income that is reclassified into profits and losses		
1. Other comprehensive income of the convertible profit and loss under the equity method		
2. The fair value of other debt investments change		
3. The amount of financial assets reclassified into other comprehensive income		
4. Credit impairment of other debt investments prepare		
5. Cash flow, volume hedging reserves		
6. Balance in the translation of foreign currency financial statements		
7. Other		
Six, comprehensive, total income	1,384,563,070.96	720,508,563.84
Vii. Earnings per share:		
(1) Basic earnings per share		
(2) Diluted earnings per share		

5. Consolidated cash flow statement

Unit: yuan

project	In 2021	Year of 2020
1. Cash flow generated from operating activities:		
Cash received from sales of goods and labor services provided	4,848,427,230.62	5,092,275,588.13
Net increase in customer deposits and interbank deposits		
Net increase in borrowing from the central banks		

A net increase in borrowed funds to other financial institutions		
Cash received from the premium of the original insurance contract		
Net cash received from the reinsurance business		
The net increase of guaranteed household reserves and investment funds		
Cash for interest, fees and commissions		
A net increase in the split in funds		
Net increase in repurchase business funds		
Net cash received from agents in the trading of securities		
Tax refund received	66,441,325.97	104,887,703.07
Received other cash related to business activities	107,998,469.76	75,319,177.59
Subtotal of cash inflows from operating activities	5,022,867,026.35	5,272,482,468.79
Cash paid for purchasing goods and receiving services	3,249,814,391.20	3,687,944,919.05
Net increase in customer loans and advances		
Net increase in central bank and interbank deposits		
Cash for the payment under the original insurance contract		
Net increase in open funds		
Cash for paying interest, fees and commissions		
Cash to pay the policy dividend		
Cash paid to and for employees	219,003,685.47	146,029,490.67
All taxes and fees paid for	252,107,604.30	93,607,935.65
Payment of other cash related to operating activities	260,580,199.02	160,693,838.44
Subtotal of cash outflow from operating activities	3,981,505,879.99	4,088,276,183.81
Net cash flow generated from operating activities	1,041,361,146.36	1,184,206,284.98
2. Cash flow generated from investment activities:		
Collect the cash received from the investment		

Cash received from the investment income	13,454,829.19	25,017,074.41
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Net cash recovered from the disposal of fixed assets, intangible assets and other long-term assets	9,320.00	
Disposal of net cash received by subsidiaries and other business units		
Received other cash related to the investment activities	1,595,249,000.00	2,650,000,000.00
Investment activities are now, gold flows into the subtotal	1,608,713,149.19	2,675,017,074.41
Cash paid for the purchase and construction of fixed assets, intangible assets and other long-term assets	1,057,610,854.97	713,273,372.45
Cash paid for the investment		
Net increase in pledged loans		
Obtain the net cash paid by subsidiaries and other business units		
Pay other cash related to investment activities	1,130,000,000.00	2,615,921,000.00
Investment activities now, gold outflow of subtotal	2,187,610,854.97	3,329,194,372.45
Net cash flow generated from investment activities	-578,897,705.78	-654,177,298.04
3. Cash flow generated from financing activities:		
Cash received from the absorption investment		
Among them: cash received by subsidiaries by absorbing minority shareholders		
Cash received from obtaining loans		
Received other cash related to financing activities	88,240,894.76	
Subtotal of cash inflows from financing activities	88,240,894.76	
Cash paid on the debt		
Cash paid for distributing dividends, profits, or paying interest	228,727,224.60	34,688,342.55
Among them: dividends and profits paid by subsidiaries to minority shareholders		

Payment of other cash related to financing activities	99,985,455.16	18,877,333.00
Subtotal of cash outflow from financing activities	328,712,679.76	53,565,675.55
Net cash flow generated from financing activities	-240,471,785.00	-53,565,675.55
4. The impact of exchange rate changes on cash and cash equivalents	-17,537,673.42	-23,032,827.09
5. Net increase in cash and cash equivalents	204,453,982.16	453,430,484.30
Add: cash and cash equivalent balance at the beginning	1,049,228,279.95	595,797,795.65
6. Balance of ending cash and cash equivalents	1,253,682,262.11	1,049,228,279.95

6. Cash flow statement of the parent company

Unit: yuan

project	In 2021	Year of 2020
1. Cash flow generated from operating activities:		
Cash received from sales of goods and labor services provided	4,769,626,902.32	5,012,953,623.62
Tax refund received	66,441,325.97	104,782,609.17
Received other cash related to business activities	106,734,672.89	74,183,809.72
Subtotal of cash inflows from operating activities	4,942,802,901.18	5,191,920,042.51
Cash paid for purchasing goods and receiving services	3,190,815,279.57	3,621,970,842.46
Cash paid to and for employees	210,887,289.14	139,512,060.25
All taxes and fees paid for	248,902,433.82	90,757,403.17
Payment of other cash related to operating activities	252,404,730.10	154,687,409.68
Subtotal of cash outflow from operating activities	3,903,009,732.63	4,006,927,715.56
Net cash flow generated from operating activities	1,039,793,168.55	1,184,992,326.95
2. Cash flow generated from investment activities:		
Collect the cash received from the investment		
Cash received from the investment income	13,454,829.19	25,017,074.41

Net cash recovered from the disposal of fixed assets, intangible assets and other long-term assets		
Disposal of net cash received by subsidiaries and other business units		
Received other cash related to the investment activities	1,595,249,000.00	2,650,000,000.00
Investment activities are now, gold flows into the subtotal	1,608,703,829.19	2,675,017,074.41
Cash paid for the purchase and construction of fixed assets, intangible assets and other long-term assets	1,052,730,354.97	712,720,066.25
Cash paid for the investment		
Obtain the net cash paid by subsidiaries and other business units		
Pay other cash related to investment activities	1,130,000,000.00	2,615,921,000.00
Investment activities now, gold outflow of subtotal	2,182,730,354.97	3,328,641,066.25
Net cash flow generated from investment activities	-574,026,525.78	-653,623,991.84
3. Cash flow generated from financing activities:		
Cash received from the absorption investment		
Cash received from obtaining loans		

Received other cash related to financing activities	88,240,894.76	
Subtotal of cash inflows from financing activities	88,240,894.76	
Cash paid on the debt		
Cash paid for distributing dividends, profits, or paying interest	228,727,224.60	34,688,342.55
Payment of other cash related to financing activities	99,985,455.16	18,877,333.00
Subtotal of cash outflow from financing activities	328,712,679.76	53,565,675.55
Net cash flow generated from financing activities	-240,471,785.00	-53,565,675.55
4. The impact of exchange rate changes on cash and cash equivalents	-17,536,764.07	-23,038,980.15
5. Net increase in cash and cash equivalents	207,758,093.70	454,763,679.41

Add: cash and cash equivalent balance at the beginning	1,042,886,594.26	588,122,914.85
6. Balance of ending cash and cash equivalents	1,250,644,687.96	1,042,886,594.26

7. Consolidated statement of changes in owners' equity

The amount of this period

Unit: yuan

project	In 2021													
	Owner equity of the parent company											minority equity	own The right to Yi he count	
	capital stock	Other rights, beneficial tools			capital reserve	Less: Inventory stocks	Other comprehensive income	Special reserve	surplus public accumulation	General risk preparation	No points With profit moist			other
	preferred stock	perpetual bond	other											
1. End balance of last year	1,156,278.00				5,183,545.37	18,877,333.00			258,901.91		1,728,570.99		8,310,419.10	8,310,419.10
Plus: Accounting policy change														
Early-stage error correction														
Business consolidation under the same control														
other														
2. Balance at the beginning of the current year	1,156,278.00				5,183,545.37	18,877,333.00			258,901.91		1,728,570.99		8,310,419.10	8,310,419.10

					5.71					8.39		0.41		0.41
	085.													
	0													

	0													
i. The amount of increase or decrease in this period (fill in with the number of "-")					1,028,446.38	69,363,561.76			138,456,307.10	1,018,247,566.98		1,088,368,758.70		1,088,368,758.70
(1) Total comprehensive income										1,385,431,098.68		1,385,431,098.68		1,385,431,098.68
(2) Owner input and reduction of capital					1,028,446.38	69,363,561.76						-68,335,115.38		-68,335,115.38
1. Common stock invested by the owners					-30,621,893.40	69,363,561.76						-99,985,455.16		-99,985,455.16
2. Capital invested by the holders of other equity instruments														
3. The amount of share payment included in the owner's equity					31,650,339.78							31,650,339.78		31,650,339.78
4. Other														
(3) Profit distribution									138,456,307.10	-367,183,531.70		-228,727,460.60		-228,727,460.60
1. Withdraw of surplus reserves									138,456,307.10	-		138,456,307.10		138,456,307.10

									710.		7.10				
2. Withdraw from the general risk preparation															
3. Distribution of the owners (or shareholders)											-228,7 27,22 4.60		-228,7 27,22 4.60		-228,7 27,22 4.60
4. Other															
(4) Internal carry-over of owners' equity															
1. Capital reserves converted into additional capital (or share capital)															
2. Surplus reserves converted into additional capital (or share capital)															

3. Surplus reserves to cover for losses															
4. Set the amount of benefit plan to carry forward retained earnings															
5. Other comprehensive income, benefit carry-forward retained earnings															
6. Other															
(5) Special reserve															
1. Extraction in this period															
2. Use this period															
(6) Others															

Iv. Closing balance of this period	1,156,278,085.00				5,186,573,882.09	88,240,894.76				397,358,221.41		2,746,818,565.37		9,398,787,859.11		9,398,787,859.11
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The last amount

Unit: yuan

project	Year of 2020															
	Owner equity of the parent company											minority equity	proprietary Rights and interests count			
	capital stock	Other rights, beneficial tools			capital reserve	Less: Inventory stocks	Other comprehensive income	Special reserve	surplus public accumulation	General risk preparation	No points With profit moist			other	subtotal	
	preferred stock	perpetual bond	other													
1. Closing balance of the last year	1,156,278,085.00				5,185,545,435.71					186,851,057.93		1,114,768,670.18		7,643,443,248.82		7,643,443,248.82
Plus: Accounting policy change																
Early-stage error correction																
Business consolidation under the same control																
other																
2. Balance at the beginning of the	1,156,278,085.00				5,185,545,435.71					186,851,057.93		1,114,768,670.18		7,643,443,248.82		7,643,443,248.82

current year	,278				545,43			1,057.		768,67		443,24		43,248.
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	085.00				5.71			93		0.18		8.82		82
3. Change amount in current period (fill in with "-")					18,877,333.00			72,050,856.38		613,802,328.21		666,975,851.59		666,975,851.59
(1) Total comprehensive income										720,541,527.14		720,541,527.14		720,541,527.14
(2) Owner input and, reduce capital														
1. Common stock invested by the owners														
2. Capital invested by the holders of other equity instruments														
3. The amount of share payment included in the owner's equity														
4. Other														
(3) Profit distribution					18,877,333.00			72,050,856.38		-106,739,198.93		-53,565,555.55		-53,565,675.55
1. Withdraw of surplus reserves								72,050,856.38		-72,050,856.38				

2. Withdraw from the general risk preparation															
3. For the owner Distribution of (or shareholders)										-34,68			-34,68		-34,68
										8			8		8
										8,34			8,34		,342.5
										2. 55			2. 55		5
4. Other					18,87								-		-
					7								18,8		7
					,333.								7,33		,333.0
					0 0								3. 00		0
(4) Internal carry-over of owners' equity															
1. Capital reserves converted into additional capital (or share capital)															
2. Surplus reserves converted into additional capital (or share capital)															
3. Surplus reserves to cover for losses															
4. Set the amount of benefit plan to carry forward retained earnings															
5. Other comprehensive income is carry forward to retained earnings															
6. Other															
(5) Special reserve															
1. Extraction in this period															

2. Use this period															
(6) Others															
Iv. Closing balance of this period	1,15 6 ,27 8, 085. 0 0				5,18 5, 545,4 3 5.71	18,87 7 ,333. 0 0			258,9 0 1,91 4. 31		1,72 8, 570,9 9 8.39		8,31 0, 419,1 0 0.41		8,310, 4 19,10 0. 41

8. Statement of Changes in owners' equity of the parent company

The amount of this period

Unit: yuan

