Literature Review of Decision Behavior Biases of Enterprise Managers – Case study of overconfidence

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Abstract: In the era when knowledge operation becomes an economic growth mode, knowledge industry becomes a leading industry and knowledge economy becomes a new economic form, company operation ad management become more important. However, in company operation process, if managers make decision by virtue of their personal long-term management experience and traditional economic theories, they will show unadvisable behaviors. Managers must fully envisage behavioral situations of decision-making biases to help them better understand decision finiteness. This paper mainly knows deviant behaviors which may be caused by psychological factors of managers in investment decision-making process from the perspective of behavioral finance. Based on analysis of "overconfidence", this paper analyzes main causes of decision-making biases in the face of much information available and puts forward suggestions for enterprise managers as their reference in decision-making process.

Key words: behavioral finance; decision-making bias; overconfidence

In business operation process, decision-making behavior of enterprise managers (generally refer to enterprise leaders owning decision-making power or investors) has been an important factor influencing enterprises' sustainable development. During making investment decision, decision makers often be based on investment decision-making theories in modern corporate finance, perfect capital market, information symmetry and other strict assumed conditions. Although traditional corporate finance has scientific basis and enterprise managers can gain methods about how to make decisions from investment theories, it is also found that among investment decisions made by enterprise managers, many decision-making behaviors are irrational. Thus, enterprise operation risk increases. Many excessive investments and insufficient investments form. Even, there is investment fault phenomenon. The reasons are various. But these traditional decision modes fail to consider "human" factor. This is a significant cause influencing decision-making biases. The emergence and development of behavioral finance can explain irrational financial decision problems caused by human factor.

I. Research limitations of modern corporate finance and development of behavioral finance

In modern corporate finance, the main analysis mode is based on two important postulated conditions: 1) human beings are rational economic persons; 2) human beings are selfish. Under the prediction of such hypotheses, coupled with mathematic logical system and statistic verification skills, corporate finance analysis mode and rational results are gained after a series of deduction. These decision-making analysis processes are excellent in terms of rigorous theories and can further propose solutions, so they are valued by government sector and enterprises. However, in realistic society, many economic phenomena cannot be interpreted by these theories. For the convenience for analysis and conclusions, scholars call such phenomena "abnormal phenomena" or "contradictory phenomena".

In 1951, Professor Burrel published Feasibility study on experimental method of investment strategy. In this article, he proposed the concept of behavioral finance the first time. In his opinion, during measuring investors' income from investment, it is required to establish and apply quantitative investment models and study investors' behavior pattern. Behavioral finance aims at the phenomena which cannot be explained by modern corporate finance, utilizes analytical methods of psychology and adds human factor. It has been verified by experiments. In realistic society, although most enterprise managers have received theoretical training and rich experience in participating in enterprise business and management, there are still many irrational decision-making reasons. People often cannot make rational judgment due to emotional factor. Even if enterprise managers are absolutely rational, they cannot own all reliable information. Therefore, it is very difficult for people to effective conclude things they observe. Such real phenomenon completely deviates from the hypothesis of rational economic persons. This is also the primary cause why decision-making behaviors of enterprise managers are often irrational and thus result in decision biases. There are many psychological factors influencing decision biases, including overconfidence, herd behavior and preference for current situation. This study only discusses overconfidence factor in investment decision-making process.

II. Overconfidence bias of managers' decision-making behavior

Overconfidence means people often excessively believe their judgments. When people feel, they have the ability to control the results, overconfidence tendency will be more obvious. However, overconfidence will make people overrate their knowledge, exaggerate their ability to control events and then underestimate possible risks. This is harmful to sustainable development of enterprises. If enterprise managers own the trait of "overconfidence", they will underrate possible risks in reality and lead to deviant behaviors of decision-making.

(I) Reasons for overconfidence

Some scholars hold that "motivation" is a major factor of overconfidence. People overstate their ability in order to keep self-esteem and reduce anxiety and thus show overconfidence. In the theory of behavioral economics and behavioral finance, the following scholars once studied causes of investors' overconfidence, including Kahnemanand Tversky (1973), Fischhoff, Slovic and Lichtenstein (1978) as well as Fiske and Taylor (1991) etc.

Kahneman and Tversky (1973, 1979) mainly explained forming reasons of overconfidence from the perspective of cognition of information processing. They found that during making judgment and decisions, people would tend to give the prominent information high weight. Psychologists Lichtenstein, S. and B. Fischhoff (1977, 19780 considered individuals would underrate occurrence possibility of the events they could not now or imagine so that they might ignore possible risks and result in overconfidence and overreaction. Lord, Ross and Lepper (1979) found in their researches that people would give small weight to the information different form their ideas or deliberately neglect it. in the opinions of Fiske and Taylor (1991), as long as people believe, they would not consider whether the information is completely correct. The reason why people believe authenticity or non-authenticity of these events comes from individual overconfidence mentality. Griffin and Tversky (1992) discovered people frequently considered extreme information or valued it, but did not worry whether the information was effective or correct.

In the view of Shefrin H (2000), there are many reasons for investors' overconfidence, mainly including availability bias, representativeness bias, blind optimistic bias, and hindsight bias.

(II) Bias expressions of overconfidence in decision making

In realistic society, many investment decision-making biases of enterprise managers can be explained with overconfidence theory:

1. Control illusion

Control illusion means people often believe they are able to control development of events and make events succeed with any basis. However, in fact, they just have control illusion rater than actual control. When an investor makes investment decisions, he may think he can control future things and grasp future changes. Actually, he has no any control ability. Just because he participates, he considers he has control ability. Such illusion is closely related to overconfidence.

2. Narrow confidence interval

Overconfidence will result in too narrow confidence interval. In other words, people narrow the judgment scope for posteriori distribution of an object. Experimental data of psychology show 98% confidence interval people consider actually contains 60% real amount. The researches of Kahneman and Riepe (1998) find under the influence of overconfidence, investors will set a narrow range for index fluctuation range of stock market. As a result, actual indexes are greatly higher than or lower than the predicted value. Ben-David, Graham and Harvey (2006) calculated CFO's expected results for stock market income in Standard & Poor's 500 index. It is found that 80% confidence interval people estimated by CFO only achieves 37.9% stock market income. According to the definition of departure calibration, this indicates CFO seriously deviates from calibration and presents features of overconfidence.

3. Mis-estimation of event probability

Some overstate occurrence probability of good events on themselves and occurrence probability of bad events on others, and underestimate occurrence probability of bad events on themselves and occurrence probability of good events on others. This can also be regarded as overconfidence. Kidd and Morgan (1969) discovered that electrical equipment managers often underestimated downtime of electrical equipment. Cooper, Woo and Dunkelberg (1988) found enterprises would overestimate success opportunities of their business activities. Inaccurate probability estimation due to overconfidence made people tend to believe large occurrence probability of some positive events on themselves. During predicting future results, they always believed good events would happe more easily than bad events and thus believed small occurrence probability of some negative events.

(III) Empirical study of managers' overconfidence

Lichtenstein, Fischhoff and Phillips (1982) found most people had overconfidence tendency for their correct cognition degree. When investors are overconfident in their decision-making ability and correct cognition degree, they will neglect investment risks and carry out positive trading. As a result, actual remuneration from stock transactions is lower than the expected remuneration or even cannot make up for transaction cost. Shefrin and Statman (1985) discovered investors would sell lucrative sticks, but kept defective stocks. This is deterministic benefit of practicing profitability. Meanwhile, it is also an overconfidence behavior. Such overconfident investment behavior will often lead to investment loss. In the view of Tversky and Griffin (1992), when predictability of investment market is very low, seasoned investment experts have more overconfidence tendency than green hands. In addition, the number of transactions of overconfident investors is more than that of rational investors. Rational investors consider whether the transaction is worth between expected benefit and transaction cost, while overconfident investors blindly pursue unrealistic extravagant profits. Daniel, Hirshleifer and Subrahmanyam (1998) believed that apart from investors' overconfident which caused the market would have different reactions to new information, investors also generally had "biased self-attribution". Barber and Odean (2000) considered excessive investments would give rise to serious loss. They also found that between 1991 and 1996, mean annual return rate of retail investors with the most frequent transactions was 11.4%, but in the same period, mean annual return rate of the market was as high as 17.9%. Such contradictory phenomenon of the decrease in return rate with active investments is mainly caused by investors' overconfidence. Odean (2001) thought due to investors' overconfidence, they would firstly achieve the profits in investment portfolio, but would pay no attention to loss. Such handling way will make investors feel most of their decisions are correct, and few are incorrect.

III. Research conclusions and suggestions

In accordance with the above literature review, we can find that modern corporate finance has rigorous scientific basis and enterprise managers can gain rational methods to make decisions, but decision-makers' psychological factor is an important factor influencing decision-making behaviors according to researches of behavioral finance. There are many causes for overconfidence, while "motivation" is a primary factor. People overstate their ability in order to keep self-esteem and reduce anxiety and thus show overconfidence. Decision-making biases of enterprise manager due to overconfidence mainly come from control illusion, psychological behaviors of enterprise managers and overconfidence of enterprise managers.

Based on these research conclusions, we propose relevant constructive suggestions for managers to make decisions:

1. In traditional economic theories, behavioral analysis of decision makers is based on rational hypotheses. In other words, if economic persons are producers, the hypothesis is that they pursue the highest predict at the limited budgeting level; if they are decision makers, they make investment decisions rationally to earn normal profits under the hypothesis of rational utilization of information. However, whether such hypothesis behavior is feasible or rational in reality? It still remains to be discussed.

2. In behavioral economics theories, many parts deal with problems of behavioral economics with questionnaire survey and experiments and find decision-making behaviors of decision makers. It is not completely the same with the theory in economics, i.e. a rational investor will make decisions according to utility maximization. Most decision makers or investors do not regard keeping wealth utility maximization and the objective, but are influenced by unreasonable moods related to gain and loss. Economics considers investors' investment behaviors are rational, while behavioral economics believes investment behaviors of most investors are irrational.

3. Overconfidence is a basic tendency of human beings. To solve some decision-making errors caused by such mental phenomenon, overconfident enterprise managers should know optimistic situations may also fail and avoid fluke mind. Managers should develop the habit of recoding failures and the importance of learning from mistakes. During making decisions, enterprise managers should fully grasp usable information and avoid regarding noise as the basis of decision making. Meanwhile, it is also required to avoid decisions made by one person.

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