

The Application of EVA Value Management in State-owned Enterprises

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Abstract: Based on the current problems existing in Chinese state-owned enterprises implement EVA value management system of the overall assessment, based on the EVA in the implementation principles and countermeasures of state-owned enterprises as the research object, using quantitative analysis and qualitative analysis, comparative analysis and empirical analysis on the method of combining system carding and EVA theory research results at home and abroad are summarized, the essence, connotation and denotation, and from the theory of EVA theory origin, background, etc, the value of EVA management system and calculation model and so on has carried on the theory discussion. On this basis, this paper systematically reviews and analyzes the process of state-owned enterprises' implementation of EVA value management, and makes an empirical analysis of typical enterprises' implementation of EVA value management from the perspectives of international and domestic practical effects and existing problems, and puts forward the experience for reference and lessons to be learned. Thus, put forward the our country state-owned enterprise EVA value management Suggestions and the countermeasure to deepen the EVA value management, construct with EVA as the core of state-owned enterprise value management model, the model contains two "chain" ("system chain "and" value chain ") and pattern of four children (in the performance of EVA as the core, value management, incentive mode and concept model), for the application of EVA in the state-owned enterprises to provide a certain theoretical and practical support.

1. Overview of EVA value management theory

1.1 Definition of EVA

EVA is a new enterprise performance evaluation index developed in the 1990s, which is getting more and more attention and favor from the business community. As early as more than 200 years ago, Adam Smith elaborated on EVA (economic profit) when he discussed capital profit. At that time, economic profit was restricted by economic conditions. After that, many economists made more and more clear research and judgment on economic profit. It was not until the establishment of sternist financial consulting company in 1982 that the concept of economic added value was first put forward. In 1994, EVA became a registered trademark and was formally established. With the efforts of sternst company, a comprehensive economic value-added value management system is gradually formed, which mainly includes four aspects: assessment system, management system, incentive system and concept system. Sternst company calls it "4M system". [1]

It can be seen from the above formula that EVA can be used to measure whether the operating profit of an enterprise is sufficient to compensate for the total capital cost invested. $EVA > 0$ indicates that the company's managers have created value for shareholders in the operation, and shareholders have obtained a value higher than the minimum risk reward required by their capital investment. $EVA < 0$ indicates that the company manager does not create the minimum compensation required for equity capital. Although in this case, the income statement may show that the profit is positive or negative, however, since $EVA < 0$ indicates that the company manager does not create real profit, but destroys the value of shareholders. $EVA = 0$, indicating that the company's managers only created the minimum contribution remuneration required by shareholders.

1.2 Theoretical basis of EVA

1.2.1 Principal-agent theory

As one of the basic characteristics of modern enterprises, the direct cause of principal-agent relationship lies in the separation of ownership and management. The idea can be traced back to Adam Smith in his famous book *The Wealth of Nations*: “the managers of the corporation, using other people's money rather than their own, cannot be expected to have the same consciousness as the partners of the private firm in running the business... Therefore, there will always be more or less negligence and extravagance in the management of these enterprises. Burleigh -- means (1932) put forward the proposition of separation of ownership and control in modern enterprise and private property, breaking through the traditional hypothesis of enterprise profit maximization, which is called means proposition, which is the theoretical background of principal-agent relationship. The essence of the principal-agent relationship is that the principal has to bear the risk for the consequences of the agent's behavior, which is caused by asymmetric information and incomplete contract. [2] Therefore, principal-agent theory is also known as information economics. Its first research field is to conduct economic analysis under the condition of incomplete information, and study the information cost and optimal information search. The second is economic analysis under the condition of asymmetric information.

1.2.2 Stakeholder theory

Stakeholder theory, short for “enterprise stakeholder theory”, refers to the focus on business entities and those institutions or organizations that influence or are affected by corporate decisions (Jones, Wicks, 1999). How to understand stakeholder is the key of stakeholder theory. So far, although there are nearly 30 kinds of definitions of stakeholders, there is no uniform one. The concept of “stakeholder” was first put forward in the 1960s. According to the research group of Stanford university (1963), the definition of stakeholder is: there are some interest groups for an enterprise, without their support, the enterprise cannot survive. People begin to realize that the purpose of enterprises is not only to serve the shareholders, but also there are a lot of interest groups related to the survival of enterprises. In the 1980s, Freeman, an American economist, defined a stakeholder as a person who can influence the realization of an organization's goals or who can be influenced by the process by which the organization achieves its goals.

2. Case analysis of EVA value management in state-owned enterprises

2.1 Cases of Tsingtao beer company implementing EVA value management

2.1.1 Background of EVA value management

Qingdao beer co., LTD. (hereinafter referred to as Qingdao beer) formerly state-owned Qingdao brewery, founded in 1903, is China's oldest beer factory, complete the restructuring in 1993, and in the same year in July and August in the stock exchange of Hong Kong and Shanghai stock exchange, the public offering the H shares and A shares, to raise funds is 1.6 billion yuan RMB. As the largest beer production enterprise in China, it has basically completed its strategic layout in the Chinese market after the merger in the latter years of the 20th century, and has become the national leading beer group covering 17 provinces and cities, with 48 beer production enterprises and 3 malting plants. The company ranks the first in the domestic beer industry in terms of scale and market share. Its products cover the major markets in the economically developed regions of China and are sold to more than 40 countries and regions in the world. The brand value of the company jumps to the top of the national beer industry. [4]

Faced with the severe market situation, the dilemma of increasing production but not increasing income, and the multiple pressures of the huge group organization system and thinning profits, it is urgent to integrate existing resources and have sufficient Tsingtao beer management mode. At the end of 2001, Tsingtao beer decided to adopt the management restructuring plan with EVA as the core proposed by Stern Stewart, an American management consulting company, to establish a more

scientific and reasonable management system with objectives and incentive and restraint mechanism.

2.1.2 Preparation before EVA implementation

The introduction of EVA in Tsingtao beer means to change the company's management mechanism throughout the company, carry out a management restructuring, reorganize the business process based on the EVA value platform, and carry out a flat organizational restructuring of the company, so as to completely change the existing management system and mode of Tsingtao beer. In order to successfully implement value management with EVA as the core and lay a foundation for promoting enterprise value reform, a series of preparatory works of Tsingtao beer include:

The first step is to form the identification of EVA value management among employees. The introduction of EVA in Tsingtao beer is ostensibly the introduction of a new performance evaluation method, but in essence it is the introduction of a new value and management concept. In order to implement EVA, it is necessary to change the concept of employees. Tsingtao beer's approach is: first of all, to reach a consensus among senior managers, fully aware of the importance of introducing EVA; At the same time, stretch company was invited to provide systematic training to employees, so that employees' concepts could be changed from the pursuit of accounting profit maximization to capital appreciation maximization, and new concepts could be understood and recognized.

The second step is to implement the asset ownership system. [5] Tsingtao brewery will re-evaluate all the assets, implement the rights and responsibilities of use according to the asset ownership of the internal operating units, formulate the asset return index, and establish a set of asset management system for the purpose of capital appreciation.

The third step is to establish the corresponding accounting responsibility system in accordance with the asset ownership system, establish accounting (responsibility) centers of different levels within the company, and link the assessment of each accounting (responsibility) center with its work performance through information processing and feedback, so as to realize the assessment and control of each accounting (responsibility) center.

Fourth, straighten out the internal financial operation system. On the basis of full investigation, the financial department of the company clarifies and clarifies as far as possible the property rights relations among the headquarters, subsidiaries, branches and business divisions, the settlement relations between funds and products and the cooperative relations.

Fifth step, strengthen the financial foundation work, unify the accounting policy. Standardize the financial behavior of each business unit, improve the internal control system, strengthen the financial management, make the internal business information more accurate, true, comparable, and as far as possible for the group's various business units to implement a unified accounting policy.

2.1.3 Implementation process

1) Establish the target management system with EVA as the center. EVA application means to change the existing management mechanism and behavior of the company within the whole company. It is most important to find the breakthrough point and key points. Tsingtao beer started from the financial department and required the whole financial system to make financial statements in accordance with the EVA model. At the end of the year, Tsingtao beer used these indicators to evaluate its performance, which changed the chaotic situation of many ways to express financial goals in the past years. EVA has established a communication channel between the decision-making department and the operation department, changed the situation of prejudice and mutual distrust between departments, especially between the operation department and the financial department, and provided a unified standard for the staff of each operation department to communicate with each other, that is, how to increase EVA to make all management decisions more effective. [6]

2) EVA is linked to the annual salary system. The traditional annual salary system is a purely profit-centered assessment method, which ignores the input of capital cost and greatly reduces its fairness. EVA centered incentive system can make up for this loophole, make managers pay more attention to capital utilization, and strive to achieve the goal of increasing shareholder value. The

goal of the incentive plan is “expected EVA added value” every year. And the bonus is not capped. Such an allocation mechanism not only considers the scientific and reasonable setting of assessment objectives, but also guarantees the link between managers' interests and shareholders' interests. Moreover, this incentive bonus is 100% from the surplus value created by the manager, and the shareholders do not need to pay extra, so there is no cost to the shareholders. Managers who want bigger bonuses must first meet the residual value allocated to shareholders. After the introduction of EVA concept and assessment method, Tsingtao beer changed its focus from efficiency to capital appreciation. For Tsingtao beer, the direct change is the improvement of asset liquidity and capital turnover.[7]

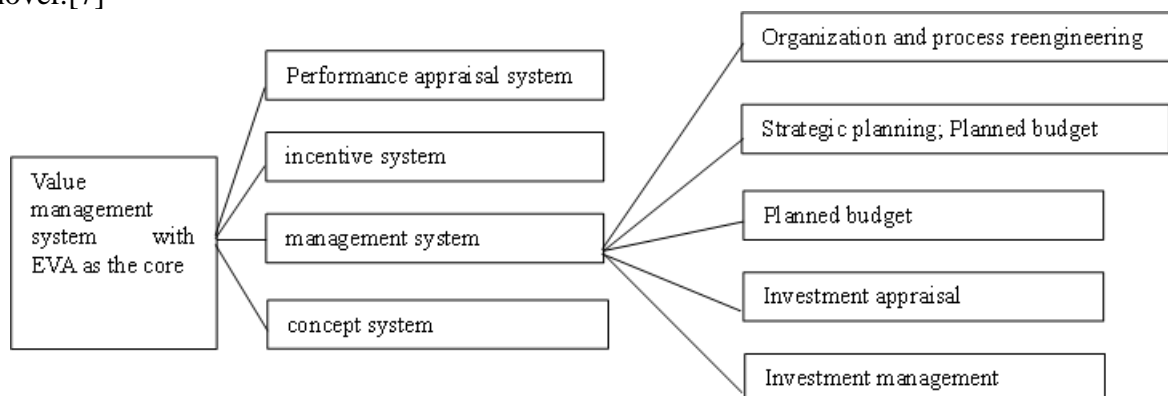


Fig.1 Tsingtao beer based on economic added value of the overall planning of value management

3. The main causes of the problems existing in the pilot implementation of EVA value management in state-owned enterprises

3.1 The limitations of EVA value management system affect the extensive implementation of EVA

EVA system is a set of value-added-oriented performance evaluation, incentive and management system, which has its own scope and conditions, such as developed capital market, professional managers, effective corporate governance structure and so on. [8] At present, China's capital market is still immature, and the survival foundation and operation of state-owned enterprises have many incompatibilities with the effective implementation of EVA. Therefore, the applicability of EVA must be fully considered when selecting EVA value management.

1) Industry factors

Since EVA can well measure whether assets are effectively utilized, it is more effective for some industries or enterprises that are relatively stable and have a large proportion of tangible assets. However, as analyzed above, EVA is not applicable in some special industries and enterprises. Because of EVA and other performance evaluation index, the expression of more historical information, its prospective is poor, therefore, for those who has a good prospect of industries and enterprises are not applicable, typically those high growth enterprises, these enterprises have longer payback period, showed the huge losses in the short term, but the market for its high expectations, so EVA cannot express company in creating value information, only tell investors and managers the enterprise not only failed to create real value, but also doing a lot of damage value. Similarly, EVA also does not apply to the government-backed investment companies, such as one investment group according to the government of our city planning, the company a lot of capital investment in undersea tunnel, center for the performing arts and sports center project, those projects take up financing volume is big, long return period, use the EVA analysis could be dangerous enterprise, but this kind of enterprise's growth is not necessarily bad.

EVA does not apply to changes in commodity prices also lead to strong volatility of the industry, such as during last year's steel industry, due to raw material purchase prices and crisis, as well as the influence of the steel price ups and downs, in the first half of the performance of the full wavered, industry-wide losses in the second half and EVA is unable to analyze the value creation or damage it.

Enterprises in such industries, such as the implementation of EVA, need certain technical means to solve, relatively difficult.

2) Strategic factors

EVA mainly measures the cash flow generated by the company and the effectiveness of the use of assets. Although these are the main drivers of corporate value, they are not the most important strategic factors at all times. Enterprise management behavior is a strong viability and coherence comparison activity, investment company as described earlier, if the EVA value management system analysis, the company's investment model is risky, as a result, the company shall, first of all, the pursuit of the effectiveness of the cash amount of filling and assets, so that it would not tunnel under construction at the same time, also constructs the sports center, because it is too high to its capital chain request, but if not, historical opportunity will be missed, will have this kind of development opportunities is hard to get. Again such as start practice EVA Tsingtao company, in 2001-2003 period, the company is very flexible in terms of finance, the main energy on the integration of the domestic market, because to get market share is the key to the long-term development of the future can, therefore, many people use EVA index analysis it is concluded that during this period of ale for value creation ability is limited, but it did not interfere with Tsingtao company gradually grow into the domestic market leader at the same time, also created a large number of shareholder wealth, more attractive to the multinational corporation to invest like AB company cooperation.

3) Responsibility factor

EVA method is based on the premise of rational man hypothesis, it assumes that the enterprise has the ability of insight into the future, an operator can capture market information, timely and fully find all can produce positive EVA and implementation of projects, which is fully straighten out the principal-agent relationship and trust as the prerequisite, the reality is far behind China's state-owned enterprise managers market, operator's management ability and moral level is uneven, and also restricted by the appointed department, therefore, EVA still cannot avoid its prospective is weak, the short-term management behavior lack of control weaknesses. [9]

3.2 China's macro environment is not conducive to the implementation of EVA

The successful application of EVA value management system in foreign countries shows that there should be certain conditions to cooperate and guarantee the positive effect of EVA, such as perfect market mechanism, effective manager talent market, perfect corporate governance structure and performance-oriented performance evaluation index.

1) The market mechanism is not perfect, especially the capital market is not mature, is the biggest obstacle of the effective implementation of the EVA market mechanism that the market competition mechanism, including product market, manager market and capital market, etc., from the point of basic conditions of EVA, perfect the capital market is one of the key factors, in perfect capital markets, the company's shares can be freely traded in the stock market, stock prices and bond yields signal can reflect the change of the corporate performance, make the enterprise's market value is consistent with the actual value. In this way, investors have the initiative to invest capital in those valuable enterprises, and obtain expected and excess returns, so as to show the effect of the

In addition, information asymmetry is still a difficulty of regulators, the enterprise management in order to make more money, might take means of accounting fraud false results, for the calculation of EVA on accounting adjustment of the required amount of financial information obtained with great difficulty, due to the increased cost of using EVA as well as the data is not real. [10]

2) The manager market system and credit system have not been formed, which is not conducive to the effective allocation of human resources

Markets are an efficient way of allocating resources. Excellent market management talents are bound to emerge in the market and grow in the market competition. At present, China's manager market is still in its infancy. For state-owned enterprises, their senior management personnel are still appointed by their superiors, which is not suitable for the dominant position of state-owned

enterprises in the market competition. Who is responsible for the logic of the appeal, according to the who appointed under the rules of the game, the business operators to consider most often can meet the requirements of the competent department, at the same time, because the standard is not only for examination and assessment of government performance evaluation, but too much reference for the government evaluation system, makes the enterprise management personnel pursue achievements about psychological often enterprise operating decisions, and when calculating the index of EVA inevitably involves accounting adjustment, it is greatly test to managers staff ethics, possible for performance and the phenomenon of accounting fraud, managers in our country under the premise of market system and credit system has not been perfect, The cost of accounting fraud by managers and their grass-roots employees is not high, which will bring great obstacles to the implementation of EVA.

4. Conclusion

Compared with traditional target appraisal system, economic value added as the core to build the new performance appraisal system, will greatly improve the traditional method of examination, the assessment process more standardized, the assessment result more scientific, more targeted improvement measures, to achieve the value of state-owned assets and state-owned enterprises bigger and stronger goal. This paper holds that, given that state-owned enterprises are rooted in the socialist society with Chinese characteristics, their reform and development process has been led by the government, and their internal corporate governance structure and external talent market system are not sound, therefore, the implementation of EVA value system should be led by the state assets management department. Because on the one hand, the state-owned assets supervision and administration commission of the state council after the establishment, and actively promote and improve the assessment method of state-owned enterprise operators, and since 2006 in the part of the central enterprises to carry out pilot EVA appraisal, the new evaluation system has been accepted by the masses of central enterprises, promote the resistance of the smaller and smaller, and have the authority and guidance.

References

- [1] Du shengli. Evaluation of business performance [M]. Beijing: economic science press.2019
- [2] Wang qingfang, zhou zijian. Theoretical discussion on EVA value evaluation and performance evaluation. Contemporary finance and economics.2011.10:75 - 78
- [3] Hu jianjun, liu youli. Analysis of evaluating enterprise value by eva-eva method [J]. Journal of Guizhou institute of aeronautical industry management, 2014 (9) :29 - 31
- [4] Wang wei, Chen qiang, Yang conghuai. On EVA evaluation method [J]. Journal of Anhui vocational and technical college of commerce and business, 2015 (1) :28 - 32
- [5] Wang yanni, wang bo. Comparative analysis of EVA and existing indicators [J]. Modern management science, 2004 (7) :48 - 49
- [6] Duan ailing.EVA and enterprise value assessment [J]. Enterprise reform and management, 2003 (8) :12 - 13
- [7] Liu li, song zhiyi. New method to measure business performance -- Eva and revised Eva [J]. Accounting research, 1999 (1): 30 - 36
- [8] Qiao hua, zhang shuangquan. Correlation between company value and economic added value: an empirical study of Chinese listed companies [J]. World economy, 2001 (1): 42 - 45
- [9] Huang ruifen, song xiaomeng. Application status and prospect analysis of EVA to measure the value of Chinese listed companies [J]. Journal of ocean university of China,2006 (4): 20 - 25
- [10] Gan linjun. Research review on economic value added [J]. China chief accountant, 2007 (8): 52 - 54