

A NEW SYSTEM FOR EVALUATING M&A EFFICIENCY IN CONTEXT OF DIGITAL ECONOMY

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Abstract: The M&A behavior will increasingly focus on more energy saving, less carbon dioxide emissions and faster technological progress in industry and enterprise Under the background of low carbon economy. It increases the value of both M&A enterprises in order to improve the M & A efficiency of resource allocation. Therefore, M & A value judgement standards will be established in the low carbon environmental efficiency improvement and achieve economic benefit, environmental benefit and society benefit. This paper further presents a new standard and a new evaluation index system of the low carbon acquisition efficiency evaluation to promote the low-carbon M & A development in-depth.

Keywords: Low carbon economy; Enterprise M&A; Efficiency evaluation

1 INTRODUCTION

At present, China's M&A market is constantly experiencing a wave of mergers and acquisitions, and overseas M&A is even more flourishing. The characteristics of the subject based M&A era are obvious, and the marketization process of M&A is accelerating. China's capital market will enter a new era of M&A from this. Mergers and acquisitions have become an important means for China to optimize its industrial structure and promote the growth and strengthening of listed companies. Therefore, research on the performance of mergers and acquisitions has become a hot topic in the academic community. Whether mergers and acquisitions can bring about improvements in company performance and resource reallocation efficiency has been extensively studied by scholars both domestically and internationally, but the conclusions are inconsistent. Some domestic scholars have even come up with the paradox of merger and acquisition performance. Throughout the existing research literature, the research background is the M&A efficiency evaluation system established under China's extensive economic development model, which contradicts the current requirements for the development of the digital economy. At present, China is shifting from extensive economic growth characterized by high energy consumption, high emissions, and low technological content to a low-carbon development path marked by energy conservation, emission reduction, and enhancing independent innovation capabilities. With the implementation of China's digital economy development policies, the merger and acquisition efficiency evaluated according to the original standards will be greatly reduced in the digital economy era, and the original merger and acquisition efficiency evaluation standards are no longer applicable. Establishing a new benchmark and evaluation system for merger and acquisition efficiency that meets the requirements of digital economy development is a novel topic. This article reviews domestic and foreign literature and proposes a new benchmark and evaluation system for the efficiency of mergers and acquisitions in the digital economy era, in order to guide enterprises to continuously improve their low-carbon merger and acquisition efficiency[1].

2 THE ORIGINAL EVALUATION CRITERIA FOR MERGER AND ACQUISITION EFFICIENCY

Neoclassical economics believes that the goal of economic mergers and acquisitions is to overcome the scarcity of resources and improve the efficiency of resource allocation. The efficiency standard actually lies in balancing the interests of multiple stakeholders in mergers and acquisitions. The motivation for mergers and acquisitions is actually reflected in the control transactions between the main and target company shareholders, while the efficiency of mergers and acquisitions is reflected in the premium or wealth effect of the total income of both parties before and after the merger. If the wealth effect or total acquisition premium of the shareholders of both parties after the merger is greater than zero, it achieves an improvement in resource allocation efficiency, and the merger enhances the efficiency of the enterprise; If the acquisition premium after the merger is zero, it means that the profit of one party in the merger is exactly equal to the loss of the other party, and the efficiency of resource allocation has not been improved; If the acquisition premium after the merger is less than zero, the merger will actually reduce the efficiency of resource allocation for both parties, indicating a lack of efficiency in the company's merger and acquisition[2].

This efficiency standard is limited to the changes in interests brought by mergers and acquisitions to both parties, lacking an evaluation of the gains and losses of other stakeholders in mergers and acquisitions. Its basic premise is that there are no externalities in control transactions, but in reality, mergers and acquisitions involve a balance of interests among multiple parties. Corporate mergers and acquisitions may have positive or even negative externalities on other stakeholders in various forms. Therefore, it is necessary to study a more general evaluation benchmark for merger and acquisition efficiency, which is the stakeholder evaluation standard: the evaluation of merger and acquisition efficiency should not only consider the efficiency improvement of both parties' enterprises, but also examine the welfare changes

of the government, employees, residents, and other enterprises. This efficiency evaluation standard is based on a comprehensive evaluation of the welfare changes of multiple stakeholders, with the core idea of achieving Pareto optimality as the evaluation [3]. It has general significance and is widely recognized by Western and domestic scholars.

3 THE ORIGINAL M&A EFFICIENCY EVALUATION SYSTEM

With the deepening development of merger and acquisition practices, the efficiency evaluation system for mergers and acquisitions is becoming increasingly perfect. Currently, a relatively scientific, reasonable, and applicable efficiency evaluation system has been formed, including elements such as subject, object, goal, principle, method, and indicator, forming a comprehensive evaluation system that is interdependent and interrelated.

The subject of M&A efficiency evaluation involves multiple interests as equity dispersion, mutual participation, and strategic cooperation develop, including the wealth effect evaluation that investors are concerned about, the enterprise profitability and social contribution evaluation that the government, as the owner of state-owned assets, is concerned about, the evaluation of business performance by resource providers, and the management performance evaluation of business managers[4]. The object of M&A efficiency evaluation is the object of M&A subject evaluation, and different levels of interest subjects have different evaluation objects. Therefore, it is necessary to design evaluation index systems for different interest subjects. The current mainstream evaluation approach is to evaluate the performance changes of enterprises after mergers and acquisitions from a financial perspective, specifically reflected in the improvement of evaluation indicators.

The evaluation objective is the result that the evaluation subject hopes to achieve, determined based on the interests and needs of different evaluation subjects, but the basic objective is the same, which is to provide the evaluation subject with information on the performance improvement status of the acquired enterprise, in order to regulate the merger and acquisition behavior of the enterprise, formulate merger and acquisition strategies and decisions, improve management methods, and promote the improvement of merger and acquisition efficiency. The evaluation principle is the basic requirement for evaluating the efficiency of corporate mergers and acquisitions, and is the fundamental criterion and behavioral norm for the evaluation process. Only by following certain basic principles can a scientifically reasonable evaluation system be designed. The basic principles that the current evaluation system adheres to include scientificity, completeness, impartiality, authenticity, and operability. With the adjustment of the national economic development strategy and the promotion of digital economy construction, the evaluation principles will further reflect the requirements of digital economy construction[5]. Evaluation methods are the means and methods to achieve evaluation goals and complete evaluation work, and are specific measures for efficiency evaluation. Scientific evaluation methods are crucial for achieving evaluation objectives, and with the development of merger and acquisition practices, evaluation methods are constantly being improved and perfected. The research methods used are mainly divided into three categories, namely financial evaluation, stock evaluation, and other evaluations (such as case study method). Currently, financial evaluation and stock evaluation are the most widely used classic methods.

Evaluation indicators are specific indicators that reflect the evaluation object, and the rational design of a scientific evaluation indicator system is the key to efficiency evaluation. A set of scientific evaluation indicators should meet basic requirements, including broad applicability, consideration of both short-term and long-term interests, clear hierarchy and reasonable structure, and low evaluation cost. Select different research indicators for different evaluation methods. The event study method mainly focuses on evaluating short-term efficiency, usually selecting cumulative abnormal return indicators based on the company's stock price changes. For accounting research methods, the main focus is on evaluating medium and long-term indicators, including a five aspect indicator system, namely profitability, debt paying ability, operational ability, development ability, and social contribution ability.

4 LIMITATIONS OF THE ORIGINAL M&A EFFICIENCY EVALUATION SYSTEM

Looking at the current evaluation criteria and evaluation system for merger and acquisition efficiency, they are relatively complete and applicable, directly guiding the rapid development of China's merger and acquisition market, which echoes the continuous wave of mergers and acquisitions in China's merger and acquisition market. However, the original efficiency evaluation system for mergers and acquisitions was established under the extensive economic development model. While mergers and acquisitions optimize industrial structure adjustment and improve the quality of listed companies, we have paid a huge price: resources have been exhausted and trapped in bottlenecks, the environment has been severely damaged, and economic development is no longer sustainable. It is urgent to completely transform the mode of economic growth. Nowadays, the international community has entered the era of "digital economy", and China has clearly defined the direction of digital economy development. The low-carbon pilot program has been included in the 12th Five Year Plan. In 2010, China determined to carry out pilot work in low-carbon provinces, regions, and cities[6]. Currently, China is shifting from extensive economic growth characterized by high energy consumption, high emissions, and low technological content to a low-carbon development path marked by energy conservation, emission reduction, and enhancing independent innovation capabilities, vigorously promoting an intensive economic growth mode. With the implementation of China's digital economy development policies, there have been significant changes in the benchmark and evaluation system for M&A efficiency. The M&A efficiency evaluated according to the original standards will be greatly reduced in the digital economy era, and the original M&A efficiency evaluation standards are no longer applicable. From existing literature, there is currently no literature on the evaluation

of merger and acquisition efficiency from the perspective of the digital economy, which is a gap in the research field of merger and acquisition efficiency. It is necessary to establish a new benchmark and evaluation framework for low-carbon merger and acquisition efficiency as soon as possible.

5 THE DEVELOPMENT OF THE DIGITAL ECONOMY POSES NEW REQUIREMENTS FOR EVALUATING THE EFFICIENCY OF CORPORATE MERGERS AND ACQUISITIONS

The digital economy is becoming a new trend in the development of the international community and will be the largest economic and environmental revolution faced by global economies in the 21st century. The digital economy will create a new set of game rules, and businesses will reshuffle under new standards. Chinese enterprises are facing challenges from domestic and international digital economy policies and regulations. Proactively implementing low-carbon M&A strategies is an effective way to optimize stock and improve resource reallocation efficiency[7].

With the development of the digital economy, the market environment and environmental regulations faced by corporate mergers and acquisitions will undergo fundamental changes. Environmental constraints have increasingly high requirements for green management of enterprises, requiring them to continuously improve energy and environmental efficiency, innovate clean production technologies, and develop from high carbon dependence to proactive low-carbon or even decarbonization business models, ensuring that enterprises achieve a harmonious unity of environmental efficiency, economic efficiency, and social efficiency, and completely changing the previous extensive business model that only pursues economic benefits and ignores environmental efficiency and social efficiency.

6 A NEW BENCHMARK FOR EVALUATING MERGER AND ACQUISITION EFFICIENCY IN THE DIGITAL ECONOMY

At present, research on the efficiency of corporate mergers and acquisitions focuses on evaluating the economic benefits of the acquiring companies, emphasizing economies of scale while neglecting environmental and social benefits, resulting in evaluation results deviating from the low-carbon socio-economic development goals. In the process of digital economy transformation, traditional efficiency benchmarks for mergers and acquisitions are no longer suitable for the inherent requirements of digital economy development. While pursuing the improvement of merger and acquisition economic efficiency, enterprises must pay attention to energy conservation and emission reduction, and accelerate technological progress. Therefore, it is necessary to establish a new benchmark for evaluating the efficiency of mergers and acquisitions that meets the inherent requirements of digital economy development and is guided by national low-carbon policies, in order to ensure the objectivity and authenticity of enterprise merger and acquisition efficiency evaluation and achieve the strategic goal of sustainable development under the constraints of the digital economy[8].

Therefore, the new benchmark for evaluating the efficiency of low-carbon mergers and acquisitions should be: if a company can effectively reduce energy input and carbon emissions through mergers and acquisitions, or if mergers and acquisitions guided by the digital economy increasingly focus on industries and companies that are more energy-efficient, emit less carbon dioxide, and have faster technological progress, and continuously increase the value of both parties' companies, then it is considered that mergers and acquisitions have achieved an improvement in resource allocation efficiency.

7 CONSTRUCTION OF A NEW EFFICIENCY EVALUATION SYSTEM FOR MERGERS AND ACQUISITIONS IN THE DIGITAL ECONOMY

Based on the new benchmark idea for evaluating merger and acquisition efficiency, the evaluation system for merger and acquisition efficiency should be adjusted accordingly. Low carbon factors should be embedded in the efficiency evaluation system, and environmental and social benefits should be emphasized at the strategic level. "Low emissions, low energy consumption, low pollution, and high efficiency" should be taken as the low-carbon merger and acquisition orientation, low-carbon technology innovation should be taken as the core, and ecological innovation, green operation, and low-carbon management should be carried out[9]. Therefore, evaluating the value effect of low-carbon mergers and acquisitions must take into account the environmental and ecological benefits of both parties, improve the low-carbon core competitiveness of the acquiring enterprise, maximize the long-term value of the acquiring enterprise, achieve green and sustainable development, and realize the strategic goal of integrating economic benefits, environmental benefits, and social benefits.

8 CONCLUSION AND RESEARCH PROSPECTS

Mergers and acquisitions are an eternal theme in the capital market, and low-carbon M&A strategies are an inevitable choice for M&A companies driven by the digital economy to achieve economic, environmental, and social benefits. As energy conservation, emission reduction, and enhancing independent innovation capabilities become key conditions for the sustainable development of enterprises in the future, the value judgment standards of the M&A market are about to change. In the context of the digital economy, corporate mergers and acquisitions will increasingly focus on industries and enterprises that are more energy-efficient, emit less carbon dioxide, and make faster technological progress, continuously increasing the value of both parties to achieve improved resource allocation efficiency in

mergers and acquisitions. Corresponding to the new benchmark for evaluating merger and acquisition efficiency, the efficiency evaluation index system of the merger and acquisition market will be a unified system of digital economic benefits, low-carbon environmental benefits, and low-carbon social benefits [10].

The evaluation of low-carbon merger and acquisition efficiency will be a new perspective, and the construction and improvement of its evaluation index system, as well as the optimization of empirical model selection, will create a new field of low-carbon merger and acquisition efficiency evaluation. Subsequent research will gradually unfold.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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