MINISTRY OF EDUCATION OF THE REPUBLIC OF BELARUS
EDUCATIONAL INSTITUTION
"EUPHROSYNE POLOTSKAYA STATE UNIVERSITY OF POLOTSK"

NIU LIBO

RESEARCH ON THE EFFECTIVENESS OF MERGERS AND ACQUISITIONS OF LISTED COMPANIES IN COUNTRY OF ASIA: THE STATE AND TRENDS OF DEVELOPMENT

Master's thesis
specialty 1-25 80 01 "Economics"

Research advisor
Matviyenka Aliaksandr
Master of Pedagogical Sciences

Accepted for defense
21 11 2022
Head of Department of Economics
PhD in Economics, Associate Professor
____________ I. Ziankova

Novopolotsk, 2022

TABLE OF CONTENTS

INTRODUCTION

In the context of high global economic volatility, increasing uncertainty and the dynamics of the external environment represent a threat to for development of unconsolidated companies that seek to conduct the most effective foreign economic and investment activities to ensure success on long-term. The great importance for the development of listed companies purchases of mergers and acquisitions (M&A), which are a tool for improving efficiency in an era of increasing competition for markets for produced by products, advanced technologies, human capital and factors that contribute to maximizing market value. In these circumstances, one of the most priority activities of listed companies are to conduct cross-border M&A, which allow them in the shortest possible time to solve the tasks set to achieve the most important goals of the company.

M&A of companies should be understood as a set of financial and legal relations arising in the process of merging several banking institutions or their shares in the capital by creating a single institution in order to increase its competitiveness based on obtaining competitive advantages in the medium and long term. M&A occur when interested parties see certain economic benefits for themselves. From the shareholders' point of view, the attractiveness of M&A (transactions) lies in the growth of the capitalization of the new company, this growth is often caused by the resulting synergistic effect of the transaction. However, about two-thirds of M&A are ultimately unprofitable, therefore, when planning such transactions, it is necessary to conduct a reasonable assessment of their effectiveness, taking into account the peculiarities of the functioning of oil and gas sector enterprises.

The positive experience of many western companies confirms the effectiveness of such transactions. The relevance of the topic of the master's thesis is that one of the acute economic problems at the present time is the recovery of the financial and economic activities of companies and the increase in their investment activity, including through such forms as M&A.

In recent years, Chinese scholars have made extensive discussions on the performance of China's listed companies from multiple perspectives (such as ownership structure, equity incentive, separation and integration of chairman and general manager, etc.), deepened the understanding of the performance problems of listed companies in China.

The practice of listed companies shows that M&A have a direct and important impact on the performance of listed companies in China. Therefore, it is necessary to discuss the performance of listed companies from the perspective of M&A.

The global M&A market experienced a roller-coaster ride in 2020. M&A activity nearly stalled in the early days of the Covid-19 outbreak, but rebounded in the second half of the year, with deal value increasing by more than 30% in both the third and fourth quarters of 2020.

In addition, the median transaction multiple (enterprise value/EBITDA) increased to 14 from 13 times in 2019, helped by the impact of fast-growing sectors such as high-tech, telecom, digital media and pharmaceuticals.

Government stimulus policies, persistently low interest rates, soaring household savings rates, record amounts of private equity funds available for investment and abundant debt financing have all contributed to the buoyancy of asset prices.

Faced with the increasingly fierce competition, M&A practitioners should firstly re-examine the strategy and plan the road map. Secondly, broaden the idea of M&A, including corporate venture capital, partnership and minority equity investment into the strategic scope. Finally, further digitize the M&A process.

Under the influence of Covid-19, there are three major trends in the global M&A market, namely, the increasingly urgent need for divestiture of assets, the "double increase" of scope and scale transactions and the localization of supply chain.

We expect that the global M&A market will continue to heat up in 2021, and companies will need to reevaluate their M&A strategies, embrace emerging M&A approaches, gain market insights and seize the opportunity.

Most of the existing methods of economic evaluation of the effectiveness of M&A transactions based on the calculation of the potential synergistic effect of restructuring are based on determining the market price of shares of merging enterprises and can be applied only to companies whose shares are listed on the stock market. However, in recent years, companies that are not listed on the stock market have been increasingly involved in restructuring processes through M&A, which makes it difficult to assess the synergistic effect of integration using existing tools.

GENERAL DESCRIPTION

Keywords: effectiveness, M&A, listed companies, methods for evaluating the effectiveness, international market, factors of mergers, ways to development the efficiency, economic potential, investment cooperation, Asian market.

The aim, objectives, object and subject matter of the research.

The aim of the study consists of analyze the status and trends of development in the effectiveness of M&A of listed companies in Asian countries.

To achieve this goal, the following objectives were set and solved:

– to study the theoretical aspects of the effectiveness of M&A of companies;

– to analyze the efficiency factors of M&A of listed companies in the Asian market;

– propose ways to development the efficiency of bargain by M&A of listed companies in country of Asia.

The object of the study is processes of M&A of companies.

The subject of the study is genesis and dynamics of the organizational structures, integration projects and practices effectiveness of M&A of companies, arising in the process of their implementation in the Asian countries.

The choice of the object and subject of the study is due to the relevance and practical significance of the issue of effectiveness of M&A in modern conditions.

Scientific novelty. In the current economic situation in the world, it is a very acute problem for international capital to overcome the crisis and get out of it with minimal possible losses. There is a need to search for effective models and methods of development of companies in a crisis, solving the problems of maintaining a presence in the market, ensuring uninterrupted production. One of the modern methods of solving the problem of survival for companies is the restructuring of ownership and M&A as one of the main elements of improving the efficiency of the use of the company's capital. One of the acute economic problems at present is the improvement of the financial and economic activities of enterprises and the increase of their investment activity, including through such forms as M&A.

When making strategic decisions on planned M&A, the company's management is faced with the need to assess the effectiveness of the planned choice of the absorbed (integrated) business entity, which is often a difficult task, while evaluating the effectiveness of the planned choice is understood as an assessment of the projected economic effect of this choice. The dissertation work is aimed at improving the processes of evaluation by industrial enterprises of planned decisions on M&A based on the analysis of integration assessment problems, known approaches to their solution, the development of conceptual foundations of evaluation and the development of a more advanced approach to evaluating the effectiveness of M&A.

Concepts (ideas), submitted to defense. The main provisions of this article include:

1. In the last few years, it has become difficult for companies to conduct successful transactions. Only pre-sale preparation of assets, study of buyers' interests, development of a good investment history and provision of information for conducting pre-investment research can improve the situation. Nevertheless, we can hope that the economy will continue to create conditions and opportunities for realizing the economic potential of M&A in the long term. The ability of the company to determine the most appropriate type of M&A, to identify the main goals pursued by the parties in the course of restructuring transactions, allow us to assess the effectiveness of such a transaction and its possible consequences with a sufficient degree of accuracy.

2. During the analysis of the effect of M&A of companies, it seems appropriate to take into account the inevitable overestimation of the company's value in terms of competition between potential buyers. The most widely used approach to evaluating the effectiveness of M&A is based on the assessment of discounted free cash flow. The economic benefits of a merger arise only when the market value of a company created as a result of a merger or acquisition is higher than the sum of the market values of the firms forming it before their merger. However, the economic benefits of a merger will arise only when the market value of the company created as a result of the merger becomes higher than the sum of the market values of the firms forming it before their merger.

3. For the successful implementation of a M&A transaction, it is necessary to focus on strategic planning, while an important characteristic of the transaction is the coincidence of the strategic goals of the buyer company, the compatibility of corporate cultures is also a key factor in the success of the transaction. One of the most important factors for the success of a merger or acquisition of companies is precisely the compatibility of the management style of the two merging companies. In order for the transaction to be successful, it is necessary to develop an optimal management motivation system to achieve the strategic goals of the planned merged company. It is also necessary to analyze and understand the main possible causes of dissatisfaction with management and its subsequent departure.

Personal contribution of a master student. The dissertation research is an independently completed scientific work, taking into account the achievements of national and foreign economic science on this issue. All the provisions covered in the manuscript and submitted for defense have scientific novelty and practical significance, developed by the author personally.

Information on the structure of a master's thesis. The work is presented on 70 pages of typewritten text and consists of an introduction, a general description of the work, three chapters, a conclusion and bibliography including 79 titles (including 1 the author's publication) and 5 appendixes, the text is illustrated with 9 figures and 5 tables. The volume occupied by figures, tables, bibliography and appendixes is 19 pages.

CHAPTER 1
THEORETICAL ASPECTS OF THE EFFECTIVENESS OF MERGERS AND ACQUISITIONS OF COMPANIES

1.1 Approaches of researchers to the problem of efficiency of mergers and acquisitions of companies

In beyond economic man, Lieberstein quoted Tolstoy's famous saying to explain: in enterprise production, the output is determined not only by the input and technical conditions of the enterprise, but also by an unknown factor, namely X factor, and the efficiency caused by this X factor is called "X efficiency". A situation in which existing resources or profit opportunities are not fully utilized due to reasons within the economic unit (including firms and households) is called "X inefficiency". In the absence of a clear definition of its nature, this theory is called "X efficiency theory".

The development of X efficiency theory was initially the result of intuition. This Stan Lai in Berkeley, when teaching, he found one of his aides and performance can be achieved by the tour guide is a week of hard work is different, he suddenly thought of to individual, enterprise or industry, the change of the performance and work efficiency are changing, as a result, he began to collect data, to show that there are three types of data is important.

One is that in manufacturing in many developed countries (UK, US, etc.) and developing countries (India, Indonesia, Thailand, etc.), significant changes in labor productivity can be achieved by changing the relationship between managers and workers, or by changing incentives, while capital and labor inputs remain the same. This shows that in addition to the traditional input factors such as labor input and capital, the force factors that determine output and labor productivity are greater [21].

Second, the data show that the gains in allocative efficiency from increased external competition are very small, typically less than a tenth of output. Why are valuations so low? The above estimates assume that the firm is efficient in purchasing and using input factors, so the firm will operate as its production or cost function. In other words, if the organizational structure of the firm does not change, generally speaking, the efficiency gains of the firm mainly come from the net marginal effect of price and output changes.

The third type of data is a response to Robert Mundell. Robert Mundell explained that the low value of allocative efficiency was due to the minimal loss of efficiency caused by market forces, and lamented that neither economists nor economics made sense. Mr. Mundell is calling on economists to reassess the way they allocate the benefits of efficiency. A. Rubinstein explains the low allocative efficiency benefit estimates from another perspective, that there may be a different allocative efficiency at work than he assumes, so he sets aside the allocative efficiency in the original study because the type of efficiency her studies is not known to economists (including himself) [16].

The debate on X efficiency mainly focuses on the basic assumptions and different literatures have different understandings of the assumptions (figure 1.1).

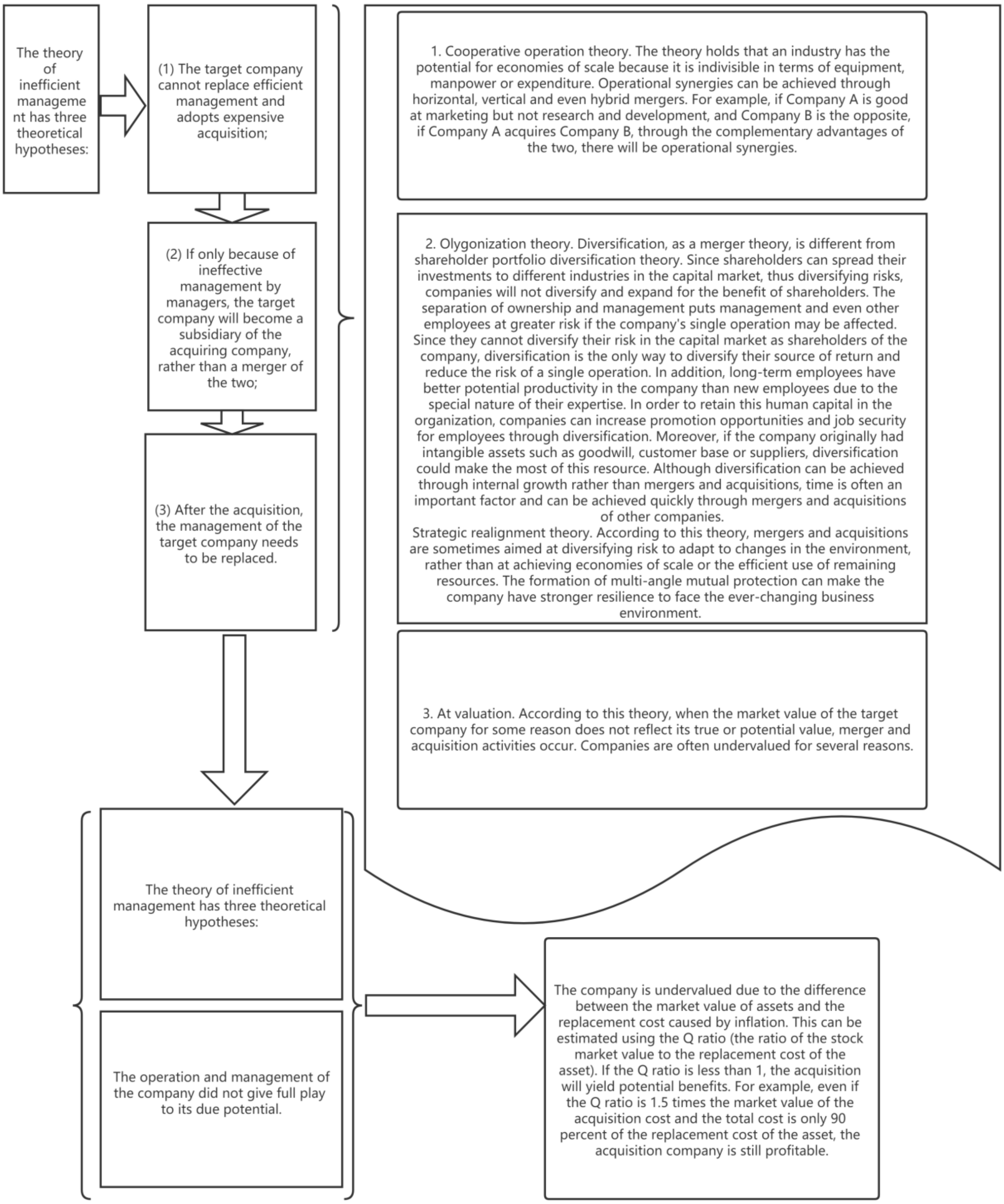


Figure 1.1. – The basic assumptions of X efficiency theory

Source: [16].

First of all, X efficiency theory focuses on the study of incomplete market and information asymmetry, which results in the benefit of monopoly power to sellers. It does not fully include the input elements of purchase barriers and sales of final products, as well as information barriers, so as to achieve mutually beneficial transactions.

Second, labor contracts may specify the hours and wages of workers and may have strict performance measures. But no contract can contain all the details needed to regulate worker behavior. As a result, workers are free to decide how best to do the job. Therefore, the production function of the enterprise will not be a simple conversion process of mechanical equipment and raw material equipment to finished products. It may or may not produce the maximum technically permissible output of an input.

Third, and this has already been hinted at in the first two points, is the effort bias of workers.

Fourth, H. Leibenstein is not interested in the definition of the rational concept of "behavior under a given constraint". He argued that individual behavior was sometimes perfectly rational, but sometimes it wasn't. He also pointed out that completely rational or incomplete maximization is at least as likely if it makes sense. He argues that rational behavior is behavior, that is, rational behavior is the result of certain behaviors. By experimenting with different behaviors, you might act in a perfectly rational way, otherwise you wouldn't be perfectly rational. These behaviors include realistically weighing the environment, avoiding knee-jerk actions, learning from experiences, being more sensitive to small changes in the environment, not putting off decisions because of difficulties, and making decisions based on costs and benefits rather than pleasing others. Thus, H. Leibenstein postulates that human behavior is "selectively rational": if perfect rationality is assigned a value of 1, some people would score 0.9, almost perfect rationality, while others might score 0.5 [27].

First, the basic unit of decision-making is not the firm, but the individual. A business is made up of several people. In traditional microeconomics, the firm is regarded as the basic decision-making unit, which assumes that the collective and the individuals that make up the collective are interdependent. A. Rubinstein argues that this assumption is wrong. The goals of an enterprise are different from those of an individual and the collective behavior of a group as an individual is different from, but dependent on, individual behavior. Therefore, individual should be regarded as the basic decision unit and the starting point of theoretical research.

Second, the individual is not perfectly rational, but selective rational. Traditional microeconomics assumes that people are perfectly rational, so maximization is the goal. A. Rubinstein points out that this assumption is also untrue, and that people do not always act on rational principles. In general, people have different degrees of rationality, can choose how to act rationally, this is the choice of rationality. The size of this rationality depends on the person's personality and the size of the personality depends on the size of the pressure. Choice rationality is the motive basis of individual behavior.

Third, the amount of effort is uncertain. Traditional microeconomics considers how much labor goes into production; not how much effort goes into every ten workers. A. Rubinstein points out that an employment contract between a company and an individual can specify only the hours of work, not the amount of work. Individuals are free to choose the level of effort. Factors that affect effort include traditional constraints (i.e., habitual effort), horizontal constraints (i.e., the impact of others' efforts on individuals) and vertical constraints (i.e., the impact of superiors on subordinates). The key to X efficiency is the scale of the effort.

Fourth, there is a degree of personal inertia. Inertia is the tendency of people to increase their effort without changing their life and work habits. The degree of inertia depends on the individual's degree of insensitivity (that is, the degree of response to a particular stimulus), the utility cost of the decision (that is, the cost of changing the inertia) and the state of the habit. The existence of emotion is the root cause of the low efficiency of X due to the low level of effort.

Fifth, effort entropy and X are inefficient. Entropy is originally a concept in thermodynamics. While the US economist G. Logan used entropy to measure dissonance between peers, A. Rubinstein borrowed the concept to describe the degree to which personal and corporate goals are out of sync. That is to say, in the case of poor management within the organization, the starting point of individual effort choice is not the organization's goal, but the individual's self-interest. This mismatch between individual behavior and corporate goals leads to X inefficiency, in other words, internal friction within the firm reduces economic efficiency. It can be seen from the above discussion that X efficiency theory emphasizes the degree of individual effort in an enterprise, which in turn depends on the internal management and coordination of the enterprise [16].

Due to the existence of individual choice rationality and inertia, as well as the incoordination between enterprises and individuals, enterprises often cannot take profit maximization as the goal. This is because in a modern business, ownership and management are separated. The operator's own interests, its behavior in the owner's view may be inefficient. In addition, due to the incoordination between the owner and the operator and between the operator and the worker within the enterprise, the entropy of effort is also abandoned, leading to low efficiency. Therefore, non-maximization is a common situation.

Second, the production function depends on the internal environment of the enterprise and the motivation of people. In the microeconomic production function, only the relationship between output and the number of factors of production is expressed. According to H. Leibenstein, since output depends not only on the number of factors of production, but also on coordination and effort within the firm, the production function depends on these factors as well.

Third, the proportion that the cost of input quantity increases with the proportion that the cost of output quantity increases has the most inevitable connection. The increased cost of production factors, in other words, does not necessarily result in an increase in proportional to the cost of production, it depends on the size of the X efficiency, namely the enterprise internal coordination degree and the degree of the efforts of the workers, if the enterprise to strengthen management and coordination of internal relations, increase the degree of the efforts of the workers, the elements of production costs can reduce the production cost.

Fourth, an increase in product prices may be accompanied by an increase in production costs [9]. This is because, in the case of monopoly, firms can determine high prices by their position in the number of lines. In this case, the enterprise lacks competitive pressure and the managers are unwilling to make efforts, which leads to the increase of effort entropy, the low teaching rate of X and the increase of production cost. This also proves the disadvantage of monopoly in improving X efficiency.

1.2 Methods for evaluating the effectiveness of bargain by mergers and acquisitions of listed companies

There are also great limitations in the study of M&A performance of listed companies using the operating performance comparison method.

The event study method measures the M&A performance by studying the stock price fluctuations before and after the M&A, but according to the actual situation of the securities market, this method has certain limitations. First of all, the key to the validity of event study is related to the occurrence of the event.

M&A are one of the main ways for enterprises to expand scale and cultivate market competitiveness. Different evaluation methods of M&A performance may lead to inconsistent research conclusions. Therefore, it is necessary to study which evaluation method can more accurately evaluate M&A performance. In this paper, several evaluation methods are compared to get a more accurate evaluation of M&A performance [10, 38].

1. Traditional M&A performance evaluation methods of listed companies and their limitations.

2. Operation performance comparison method. Operating performance comparison method, also known as accounting event study method, is generally used to evaluate the medium- and long-term performance changes of listed companies after the occurrence of M&A. This method uses the annual financial reports released by listed companies, takes the financial accounting related indicators as the basis, and takes the M&A announcement date as the cut-off point to compare and evaluate the operating performance indicators of companies before and after the M&A. On the one hand, it makes a vertical comparison of the changes in the business performance of the M&A companies themselves. At the same time, it compares the operating performance with other listed companies in the same industry that have not carried out M&A, and then determines whether the M&A have improved the operating performance of the listed companies.

3. Event study method. Event study method is to determine the impact of an event on the business performance of a listed company through in-depth study of the changes of the company's stock price after the occurrence of an event. The event study method is to study the stock price pairs of listed companies.

Determine the reaction degree and speed of the event, and determine the impact of the specific event on the business situation of the listed company. The event study method holds that the various influences of any event on the listed company will eventually be reflected in the stock price. The extraordinary returns of the listed company during a specific period can be used to measure the degree of influence of a specific event on the listed company.

4. Other methods of study. In addition to the research methods adopted by most of the above-mentioned scholars, some scholars try to use some financial indicators or non-financial indicators to directly measure the business performance of enterprises. The financial evaluation index mainly includes the rate of return of capital cost and the proportion of asset stripping and acquisition; non-financial evaluation indexes include product market share, the degree of realization of synergistic effect of M&A, enterprise research and development capability, etc. limitations of traditional performance evaluation methods [33].

Although the operating performance comparison method can make up for some defects in the capital market, the key to the effectiveness of the performance evaluation method is the authenticity of the financial reports published by the listed companies. At present, China's securities market management system, policies and regulations are not perfect, financial information fraud behavior still exists in many listed companies in the annual report. For example, China's relevant laws and regulations clearly stipulate that the merger and reorganization plan should be able to improve the performance of the restructured company. Therefore, some listed companies may whitest the financial indicators in order to obtain the conditions of merger and reorganization, so that the operating performance of listed companies after merger and reorganization "improves", but in fact restructuring.

The relevant information of health can be disclosed in the mature securities market, and the event has no impact on other concurrent events. However, in China's securities market, the information disclosure system of listed companies is not perfect, leading to the information of many listed companies is not fully disclosed. Secondly, the immaturity of China's securities market makes the investors in the market have a great deal of speculation, coupled with the existence of a large number of noisy transactions in the market, will have a great impact on the market expectations of specific events. In addition, the clustering of the information disclosure system of listed companies in China makes it more difficult to ensure that a specific event will not affect other concurrent events. Therefore, the event study method has great limitations when studying the M&A performance of listed companies in China [24].

Performance evaluation methods of EVA and MVA. EVA, or economic added value, is the difference obtained by deducting the cost of borrowed capital and the cost of self-owned capital from the capital income on the basis of residual income. If EVA is greater than zero, it indicates that the listed company has created wealth for shareholders. If EVA is less than zero, it indicates that the value of the company has been lost. If EVA is equal to zero, it indicates that the company's income is just making up for its cost of invested capital.

MVA is market added value, which is the discounted value of EVA, and is the total market value of the company's total assets minus the income amount of accumulated invested capital. In the evaluation of MVA.

Is the future profitability of the company. If MVA is greater than zero, it means that the capital invested by investors has increased in value and the company has created wealth. If the MVA is less than zero, it means that the capital invested by investors has not increased in value, but suffered losses. If MVA equals zero, the company is in breakeven status [37].

1. Calculation of EVA and MVA. By referring to relevant literature, the basic calculation formulas of EVA and MVA are as follows:

$$EVA = \textit{net operating profit after tax} - \textit{cost of capital}; \tag{1.1}$$

$$\begin{gathered} \textit{After-tax net operating profit} = \textit{profit before interest and tax} \times \\ \times \left(1 - \textit{Income tax rates}\right). \end{gathered} \tag{1.2}$$

Among them, after-tax net operating profit is the sum of after-tax net profit and after-tax financial expenses, that is, the net value of sales revenue minus all other costs other than financial expenses:

$$\textit{Cost of capital} = \textit{weighted average cost of capital ratio} \times \textit{total capital}; \tag{1.3}$$

$$MVA = \textit{Total Market Value} - \textit{Total Capital}. \tag{1.4}$$

Among them, the total capital is the sum of equity capital and debt capital, that is, the book value of all the capital invested by the company's investors; total market capitalization is the sum of equity market capitalization and debt market capitalization; total capital is the sum of the book value of equity and the book value of liabilities.

Thus, when the book value of the liabilities is equal to the market value, MVA is the difference between the market value and the book value of the equity.

2. Accounting adjustment of relevant data. Since some accounting data in financial statements are subjective in calculation, it is necessary to make certain adjustments to relevant accounting data in order to make EVA reflect the company's business performance more accurately [1].

Research fee adjustment. The expenses incurred in the research phase are directly included into the current profit and loss in the accounting standards for Chinese enterprises, which reduces the company's short-term performance. However, in the long run, the expenses in the research phase are also a long-term investment, so corresponding adjustments should be made. Capitalize the expenses incurred in the research phase of the company, adjust the net operating profit after tax increase, and then deduct the amortization amount of the research expenditure capitalized in the previous period.

Goodwill adjustment. The accounting treatment of goodwill is to amortize it over a number of future years and record it as profit and loss. But in fact, goodwill does not decrease with the passage of time, and the amortization of each accounting period increases the company's operating expenses, which cannot truly reflect the company's operating performance. Therefore, adjustments should be made in the calculation of EVA: the original after-tax net operating profit data in the financial statements should be added to the goodwill amortization of the current period [39].

Impairment Provisions. According to the principle of prudence, when the book value of the company's assets is lower than its market value, the impairment provision shall be drawn, recorded in the impairment loss of the assets and recognized as an expense. However, these impairment reserves are not the actual reduction of the company's assets, and the amount of reserves incurred in the current period is not a real cash expenditure, so it cannot truly reflect the company's operating performance in a certain accounting period. According to the EVA theory, appropriate adjustments should be made: the asset impairment reserve incurred in the current period should be returned to the net operating profit after tax, and the total ending capital should be increased.

Deferred taxes. Deferred tax is caused by temporary differences, because the accounting time of the enterprise is different from the tax law, including deferred income tax liabilities and deferred income tax assets. However, there is no tax expense in the increase of the deferred income tax liability in the current period. Therefore, accounting adjustment should be made in the calculation of EVA value: adjusting the increment of the deferred income tax asset in the current period to the net operating profit after tax, and adjusting the increment of the deferred income tax liability in the current period to the net operating profit after tax [43].

Financial expenses. According to China's accounting standards, the interest expense of an enterprise is included in the financial expense and deducted from the profit of the current period as the profit and loss of the current period. However, in the theory of EVA, the capital cost of an enterprise includes interest, so the operating profit of an enterprise in EVA should include interest expense. Therefore, when calculating EVA, financial expenses in financial statements should be adjusted: interest expense should be added back to operating profit, and after-tax interest expense should be added back to total capital.

Other adjustment items. EVA calculates the operating profit of an enterprise in a certain accounting period. Therefore, in addition to the above adjustment items, it is also necessary to adjust the non-operating income and expenditure, fair value change profit and loss and subsidy income. At the same time of adjusting the after-tax profit, it is also necessary to adjust the total capital of the enterprise [44].

3. Specific formula for EVA calculation. The specific calculation formula of EVA index can be obtained after adjusting the financial data.

The formula for calculating net operating profit after tax:

$$\begin{gathered} \textit{After-tax net operating profit} = \textit{operating profit} + (\textit{financial expenses} + \\ + \textit{the current period of the provision for impairment of assets} + \\ + \textit{non-operating expenses} + \textit{goodwill amortization of the current period} - \\ - \textit{non-operating income} - \textit{subsidy income} - \textit{fair value change profit} \\ \textit{and loss}) \times \left(1 - \textit{income tax rate}\right) + \textit{increase in current deferred income} \\ \textit{tax liabilities} - \textit{increase in current deferred income tax assets}. \end{gathered} \tag{1.5}$$

The calculation formula of cost of capital:

$$\textit{Cost of capital} = \textit{weighted average cost of capital ratio} \times \textit{total capital}; \tag{1.6}$$

$$\begin{gathered} \textit{Total capital} = \textit{equity capital} + \textit{debt capital} + \textit{capital adjustment} - \\ - \textit{bank deposits} - \textit{cash} - \textit{projects in progress}; \end{gathered} \tag{1.7}$$

$$\begin{gathered} \textit{Equity capital} = \textit{total equity of shareholders belonging} \\ \textit{to the parent company} + \textit{minority equity}; \end{gathered} \tag{1.8}$$

$$\begin{gathered} \textit{Debt capital} = \textit{average short} - \textit{term borrowings} + \textit{long-term} \\ \textit{borrowings} + \textit{long-term payables} + \textit{bonds payable}; \end{gathered} \tag{1.9}$$

$$\begin{aligned}&\textit{Capital adjustment amount} = (\textit{financial expense} + \textit{various asset}\\&\textit{impairment provisions accrued in the current period} + \textit{non-operating}\\&\textit{expenses} + \textit{goodwill amortization of the current period} -\\&- \textit{non-operating income} - \textit{subsidy income} - \textit{profit and loss on}\\&\textit{changes in fair value}) \times (1 - \textit{income tax rate});\end{aligned} \tag{1.10}$$

$$\begin{aligned}&\textit{Weighted average cost of capital ratio} = \textit{equity capital ratio} \times\\&\times \textit{equity capital cost ratio} + \textit{debt capital ratio} \times\\&\times (1 - \textit{income tax rate}) \times \textit{debt capital cost ratio};\end{aligned} \tag{1.11}$$

$$\textit{Equity capital ratio} = \frac{\textit{equity capital market value}}{\textit{total market value}}; \tag{1.12}$$

$$\textit{Debt capital ratio} = \frac{(1 - \textit{tax rate})\ \textit{debt capital}}{\textit{total market capitalization}}. \tag{1.13}$$

Evaluation of EVA and MVA.

Evaluation of EVA. EVA is a revolution in how modern companies are managed. EVA is a very effective performance evaluation index, an incentive mechanism for the compensation system of managers, and a comprehensive and reasonable framework for the company's financial management. It can have a significant impact on all the decisions of the company and change the company's culture [52].

1. EVA takes the cost of equity capital into account to make the calculated business performance more accurate. Our country current enterprise accounting standard does not confirm also does not measure the cost of equity capital, deduct the cost of debt capital from operating profit only, cannot reflect the management condition of the enterprise truly, still can make operator produces understanding error area: equity capital is free. EVA connects the operating performance of operators with the interests of shareholders, so that when operators make business decisions for the purpose of increasing EVA, they also increase the wealth of shareholders, avoiding the phenomenon of ignoring the interests of shareholders because of ignoring the cost of equity capital in traditional evaluation of enterprise performance.

2. To a certain extent, the influence of accounting information distortion is eliminated. For a long time, the financial accounting of enterprises has its specific treatment standards. But in the actual business, many times need the enterprise's financial accounting according to their own subjective understanding to deal with, or even to a certain accepted accounting principle to compromise. This leads to many people manipulating the enterprise. The phenomenon of profit, EVA is obtained after the adjustment of financial data, which more accurately evaluates the business

performance of the company in a specific accounting period and can overcome these influences.

3. EVA can be used as an indicator of the company's financial early warning system. When the traditional financial accounting index is used as the enterprise performance evaluation index, the enterprise operators may choose different accounting policies and restructure the capital structure due to the need of generating profits, but this cannot reflect the real business performance of the enterprise. EVA reduces this manipulation through a series of accounting adjustments that reflect more true corporate values. In addition, when an enterprise is in the stage of scale expansion, the problems existing in its operating conditions can be reflected in the EVA value earlier. Therefore, compared with the traditional profit index, EVA is obviously a better financial early warning index.

4. EVA takes into account the potential risk factors in the market and the risk factors contained in individual stocks, which can reflect the ability of the company's stock to withstand risks and can evaluate the risk changes caused by the company's entry into other industries due to M&A. The cost of equity capital can reflect this risk, and we can get the cost of equity capital ratio through the capital asset pricing model. According to the capital asset pricing model, the higher the beta value is, the higher the expected return rate of the company's stock will be, that is, the higher the cost of equity capital is, the greater the value of after-tax operating net profit will be, and the smaller the EVA value will be. Therefore, the calculated value of EVA changes in the opposite direction to the company's individual stock risk, which directly reflects the company's ability to resist risks.

5. Promote the long-term development of the enterprise. The traditional financial accounting treatment will be some of the long-term utility of the cost of the enterprise are included in the current profit and loss, which makes the current operating profit reduction, leading to enterprises are reluctant to invest a lot of money in research and development, hinder the long-term development of enterprises, this phenomenon is particularly serious in the field of high and new technology. However, the EVA evaluation system capitalizes the expenses incurred due to the long-term development of the enterprise, which will not affect the operating effect of the enterprise in the current period and promotes the investment of the enterprise in research and development.

6. EVA reflects the organic unity of the company's internal value and its external market value. Although EVA is obtained on the basis of financial accounting data, by making relevant accounting adjustments to the underlying financial data and taking into account the cost of equity capital, the tradition is largely avoided. The defects of the financial index method, more accurate evaluation of the company's internal value; in addition, EVA can reflect the company's external market value by adding market risk and individual stock risk [78].

Evaluation of MVA. MVA has obvious advantages in evaluating the value creation of shareholders and the long-term business performance of the company.

1. MVA can accurately measure the value created by a listed company for shareholders, and it is consistent with the company's production and operation goal – the maximization of shareholder wealth. The market is the final tester to judge the successful operation of a listed company. When the market value of a company is greater than the value of all the invested capital of shareholders, that is, when MVA is greater than zero, it indicates that the company has created value for its shareholders.

2. MVA can effectively explain the stock profitability of listed companies. Because MVA is based on the stock value of listed companies, taking the time value of money and various risk factors into comprehensive consideration, it is obtained. In addition, MVA also intuitively reflects the company's production and operation activities in the form of the company's total capital market value. Therefore, MVA is obviously predictive, which measures the future growth space of the company and is an effective index to evaluate the value of the company.

3. MVA can most effectively evaluate the long-term operating performance of the management department of a listed company. The total market value of a company includes the discounted value of the company's future long-term performance, while MVA is the difference between the total market value of a company and the total capital invested by investors. Therefore, MVA evaluates the resource utilization rate of the company's management department to a certain extent. Therefore, MVA can be used as an indicator to judge whether an investment project has realized value creation for the company, whether the company has created wealth for shareholders and other issues [73].

Performance evaluation indexes of M&A of listed companies based on EVA and MVA.

Through the above qualitative analysis of the traditional performance evaluation methods and the performance evaluation methods based on EVA and MVA, this paper believes that the combination of EVA and MVA for comprehensive analysis and evaluation can more truly reflect the business performance of listed companies.

The ratio of economic value added to equity obtained by dividing the economic value added by equity capital is to judge the impact of M&A on the value of M&A companies from the perspective of shareholders. This index can reflect the investment return of M&A activities on shareholders to a certain extent [60].

Choose equity economic value added rate and market value rate are two major evaluation indexes, EVA and MVA two auxiliary evaluation indexes before and after the comprehensive analysis of the listed company M&A performance changes, the change of capital appreciation, the change of enterprise value, etc. not only can evaluate the company's current performance situation, considering the potential risk of the company's future, EVA can also evaluate the potential returns that the company may bring to shareholders in the future. EVA can accurately evaluate the newly created wealth of the company, and guide the management to make reasonable daily business decisions and long-term strategic planning. It is the best indicator for internal performance evaluation of the company. MVA is the optimal external evaluation index, which can accurately measure the value created by a company for shareholders and evaluate the long-term business performance of an enterprise. The combined use of EVA and MVA will more accurately evaluate the performance of enterprises, which is the performance of enterprise performance evaluation indicators tend to improve. It can more accurately measure whether M&A of listed companies have brought benefits to the company and increased shareholder wealth.

1.3 Features of decision-making by mergers and acquisitions in listed companies

Acquisition of listed companies is essentially a stock exchange with the nature of stock exchange. Corporate acquisition usually involves three stakeholders, namely, the acquirer, the seller and the target company or the listed company. Because different countries have different attitudes towards the acquisition of listed companies, sometimes government agencies will be involved in some transaction relationships, thus becoming special subjects and participants in the acquisition of listed companies. However, the purpose of government intervention in the acquisition of listed companies is to evaluate the legality of the transaction behavior, rather than directly participate in the transaction, let alone gain benefits from it, so the government is not the direct subject of the acquisition of listed companies. Therefore, the acquisition behavior of listed companies belongs to the category of market behavior and has the following characteristics.

1. Object conditions. The acquisition object of a listed company is the stock issued by a listed company, that is, the stock issued by the company and held by investors, excluding the stock directly held by the company in its own name and the stock already issued by the company. The former is stock that a company retains or does not sell as part of its stock offering. The latter is the portion of a company that is not written off after the company has purchased shares. Since China current law adopts paid-in capital system, the company must be registered after all the shares issued by the company are issued. Therefore, our company law excludes company shares. At the same time, China only allows companies to buy their own shares for write-offs, and listed companies are banned from holding their own shares. Therefore, "tradable shares" purchased by listed companies refer to all kinds of stocks issued by listed companies. The classification of stocks in China is complicated. While accepting the traditional stock classification of foreign securities law, it also created some unique stock forms according to the special circumstances of our country's economy and society, such as A shares, B shares and H shares, tradable shares and non-tradable shares. The "tradable shares" in the acquisition system of listed companies in China refers to all kinds of stocks issued by listed companies, not limited to tradable shares [65].

The company's purchases do not include corporate bonds. Corporate bonds are the creditor's right certificates owned by bondholders according to law, and the corporate bond issuer promises to repay the principal and interest at maturity. Bondholders may demand repayment of principal and interest from the issuer when due, but they have no right to vote on the internal affairs of the issuer. Even if investors hold a large amount of corporate bonds, it is not enough to affect the ownership structure and decision-making power of the company. However, if an investor purchases company bonds that can be converted into shares of the company in the future, and a company bond holder applies for the conversion of its bonds into shares, such bond holders shall become shareholders and may directly participate in the affairs of the company. Therefore, convertible corporate bonds can also be regarded as special targets for corporate acquisitions.

2. Market conditions. The acquisition of listed companies must be completed by means of securities exchanges. A securities trading place is a place established according to law and approved for securities trading or trading. It can be divided into centralized trading place (i.e., stock exchange) and over-the-counter trading place. The former such as Shanghai and Shenzhen stock exchanges, the latter such as formerly operated STAQ and NET two trading systems and now legal operation of the securities registration and clearing company counter. Stock exchanges and over-the-counter trading venues have different operating rules, but both are legal venues for securities trading.

The acquisition of listed companies must be carried out through the stock exchange, which distinguishes the acquisition of listed companies from the transfer of shares. Some listed companies in our country are dependent on the traditional system, and their shareholding structure does not accord with the industrial policy or the national shareholding policy. In practice, there have been two ways to redetermine the equity. One is to transfer the shares of a listed company already held by a shareholder to other eligible institutions by way of transfer after approval. Second, the government takes inappropriate coercive means to transfer the shares held by a shareholder to other institutions. The latter has non-market characteristics and is gradually banned. According to the current practice, any share transfer involving the transfer of shares in the form of transfer should be registered with a securities registration and clearing institution, and such share transfer is also a transaction conducted through a securities exchange. In the transfer of shares in the form of transfer, the new shareholder usually does not need to pay the cost to the original shareholder, but as far as the right transfer itself is concerned, its legal effect is not different from that of the paid transfer [56].

3. Objective conditions. Whether the acquisition of listed companies should be for the purpose of controlling the listed companies, the academic circles have different views. Some scholars believe that if investors buy stocks for the purpose of controlling the listed company, their behavior is corporate acquisition. On the contrary, it belongs to stock trading and not listed company acquisition. We believe that this view only summarizes the commercial characteristics of the company's acquisition behavior, and cannot reflect the legal characteristics of the listed company's acquisition, and its conclusion is biased. On the one hand, listed company control is an elastic concept. The degree of equity dispersion of listed companies varies greatly, so the acquisition of a certain proportion of shares of listed companies does not necessarily form the control of the company, and it is difficult to determine whether it constitutes the acquisition of listed companies. For highly dispersed listed companies, holding a low proportion of shares is enough to control corporate affairs. On the contrary, if the equity of the listed company is relatively concentrated, those who hold less than 50% of the shares issued by the company cannot constitute the control of the listed company. In our view, commercial standards should not be substituted for legal standards. On the other hand, the "Securities Law" establishes statutory, rather than commercial, conditions for takeovers by listed companies. According to the "Securities Law", shareholders holding more than 5% of the company's shares, through the stock exchange to buy or sell a certain percentage of the listed company's shares, to be subject to the acquisition rules of the listed company. Holding 5% of the shares of a listed company usually does not constitute actual control over the listed company in business, but it is a listed company acquisition regulated by the "Securities Law". Acquiring the stocks of listed companies is not the same concept as acquiring the control rights of listed companies. Although the bulk purchase of the stocks of listed companies contains the potential purpose of acquiring the control rights of listed companies, it is still a special stock purchase behavior.

We believe that it is a gradual process from the acquisition of part of the shares of listed companies to the formation of relative control of listed companies, and then the formation of direct control. In the process, buying and selling behavior with multiple purposes, sometimes in order to obtain the interests of the dividend distribution of listed companies, sometimes is laying the groundwork for their corporate control, sometimes with other special purposes, but should not be all stock purchase behavior in the process of the interpreted as designed to gain control of acquisitions of listed companies, otherwise, it will misunderstand the acquisition rules and purposes of listed companies as determined by the "Securities Law" [34].

4. Rule conditions. The basic idea of the securities legal system is to protect the interests of the public investors. The monopoly and random control of the major shareholders on the company affairs will damage the interests of the small and medium investors. Countries, according to their economic development, are quite cautious about all kinds of asset transactions or property rights transactions based on the gradual acquisition of the control rights of listed companies.

Once the acquisition of a company becomes an economic monopoly, or it may reduce the degree of market competition, the state must intervene and regulate by administrative means, thus forming a series of special rules on the acquisition of listed companies. These special rules have two levels of legal effect [19]:

– the regional effect and rules of "Securities Law". According to the provisions of the "Securities Law", the major shareholders who hold more than 5% of the issued shares of the listed company must fulfill the obligation of information disclosure for each 5% increase or decrease in the shares of the company they hold, and are prohibited from continuing to purchase the company's shares within a certain period of time;

– extraterritorial effects and rules of "Securities Law". According to foreign anti-monopoly law rules, the acquisition of listed companies and the acquisition of more than a certain amount of money must be reviewed by a special state agency before it can be implemented. There is no clear regulation on the anti-monopoly examination of the acquisition of listed companies in China.

The acquisition system of listed companies is a special rule system aimed at protecting the interests of public investors and regulating the trading of listed companies by major shareholders. The trading of listed stocks by major shareholders is restricted and regulated by this rule system, whether it constitutes the control right of listed companies or not.

The application and selection of asset appraisal methods in enterprise merger and reorganization.

Application and analysis of income method. Estimation principle of income method.

So-called income method, is for enterprise future earnings, to analyze the enterprise to obtain the value of the future, for the conditional status of market trade and to predict the future-by-future earnings to understand the current value of the asset, use its preliminary conditions including three, first of all, the currency of asset returns can be evaluated measure, is the owner of the asset. The risks that people take for the gains can also be measured by money. The third is that the assessed asset life can be predicted.

Advantages and disadvantages of income method.

The advantages of this method are as follows: compared with other methods, it is very scientific, mature and has a strong theoretical basis. It can reflect the real situation of the enterprise and its ability to make profits in the future. However, it also has its disadvantages, that is, it is difficult to predict the future operating conditions of the enterprise.

Enterprise characteristics applicable to the selection of income method.

Current earnings, is refers to the enterprises appear appropriate profit and obtained the very good operation, will be able to use this estimate method, enterprises need to operating in good condition, forecast the future period of time with the development of space and the competition of the market, at the time of estimate, to understand the results of the assessment factors intervention is a fixed number of years of the earnings and earnings estimates. In the operation, if there are operational problems, it will have an impact on the estimation of the enterprise, so the income method needs to analyze the ability of assets to make profits and pay attention to the quantitative work of the net profit method [42].

Application and analysis of cost method. Estimation principle of cost method.

Cost method is for a period of time the transactions of the market in the past, through the analysis of the historical cost to a way of enterprise assets value, through the past market value, to understand the current enterprise in the market value of asset allocation is the main method to understand all kinds of losses arising from the enterprise assets, there will be deduct losses in the replacement cost. Such a method can be used only if the asset being assessed is in continuous use or is assumed to be in use, the data available for use and the losses that occur in the formation of such an asset are available.

Advantages and disadvantages of the cost method.

Advantages and disadvantages, very intuitive, is easy to understand, simple; however, the disadvantages of this estimation method are also obvious. It does not take into account the potential profitability of the enterprise in the future, and it also ignores the value of many intangible assets' resources of the enterprise, such as brand and reputation.

Characteristics of enterprises applicable to the cost method.

In general, the asset M&A of enterprises, companies in need of asset replacement, in addition to some operating situation is good, is some itself has no any in the market competition ability of enterprise, and its operating conditions is not good, no more good prospects for development, in such cases, the majority of enterprises will be selected using the cost method. The most direct methods of cost estimation are the direct method, the price index method and the economic efficiency method [51].

Application and analysis of marketing method. Estimation principle of market method.

Market method, also known as market price comparison method, is a method to determine the value of an appraised asset by comparing it with similar products in the existing market. The appraised asset will be adjusted at similar market prices. In the process of appraisal, the data needed are completely from the market, so this method is simple and effective. With the development and improvement of our economy, the market method has a very broad space for use, and it will become the main means of asset appraisal in the future. The premise of using this method is that, first of all, there must be an active market, in which many products are traded, and the same assets, as commodities, are easier to obtain at similar prices. Second, there should be transactions of comparable assets, that is, appropriate references. Because it is difficult to find the assets that are exactly the same as the evaluated commodities, it is necessary to adjust the relevant indexes of this reference. Whether some technical parameters can be obtained is the basis to decide whether this method can be used.

Advantages and disadvantages of marketing approach.

The advantage of this method is that it is simple and effective, but it is difficult to find the reference that is suitable to the target asset, which makes the motivation of enterprises and M&A enterprises have two sides. Due to the different control premium, it is difficult to achieve the expectation of enterprise M&A.

Enterprise characteristics applicable to the selective market method.

Generally, enterprises using this method are more suitable for using this method because of their bad operating conditions, and have been in a semi-loss or loss state, and have no ability to survive in the market competition with each other, and cannot see the corresponding prospects. Enterprises have no development and such enterprises are more suitable for using this method. Market methods are mainly divided into analogy, direct and price index methods. Although this method is simple, the assessed object is affected by many market factors, such as individual, in the process of transaction and regional. This kind of market price instability phenomenon, it is difficult to ensure that the evaluator is not affected by his subjective factors [61].

Comparison of basic methods of asset appraisal. Comparison between Cost Method and Revenue Method.

In the cost method, the asset appraisal value of the replacement enterprise is equal to the replacement cost minus the depreciation part (entity + function + economy). Because of its simplicity, it has a wide range of applications and is practical for some enterprises whose purpose is to compensate for the replacement of assets. More specifically, it can also be used for valuation operations where it is not easy to estimate future returns relative to specific assets.

Income method is a method of discounting future gains. Using the sum of the discounted value of earnings over the years as the valuation value is very suitable for estimating the overall value of an enterprise. An assessment of individual income funds and specific assets that can predict future earnings. Some real estate, or intangible assets can also be used [25].

The difference is that the cost approach considers the asset from the perspective of the contributor, in terms of its construction cost as a factor of production. It evaluates the cost. It is based on historical evidence, such as the real depreciation mentioned earlier, which is based on the age of the asset being valued. Functionality refers to the first-level index of its technical content. If some old assets and functions need to be compared to be evaluated, new assets with good functionality and excellent performance need to be used to determine their depreciation amount. These two evaluation methods stand from different angles, the evaluation results will be different. The permanent cost method evaluates a static value, while the income method evaluates a dynamic value.

Comparison between market method and cost method.

Because they all have the theoretical and practical significance to adhere to, the difference is that the cost method is based on the market to buy back the cost of similar assets to determine the value of the assessed assets. Market principle is a method that requires the transaction value of the same or similar assets in the market in order to determine their valuation. The cost method takes the buyer's point of view and determines the value the buyer needs to buy. Market method is mainly from the seller's point of view, based on the actual number of transactions obtained in the market to determine the valuation of value. The cost method is based on the new acquisition cost and determines the price after deducting all losses. The market method is to determine the value of the assets to be valued on the basis of adjustments to the price factors referenced in the market. Because there are different operating procedures, so, can produce the effect, will not be the same [67].

They are subject to different market constraints. Market law needs to be premised on developed markets. In its application process, the market conditions have a key influence on it, and the present value of the assessed assets is deeply restricted by the market conditions. Since the cost method considers the buyer's point of view, market conditions generally have little effect on market prices when referring to the cost method. The appraised value of an asset is only the independent value of the asset.

Comparison between market method and revenue method.

Market method is a method to estimate the value of the appraised assets by comparing some reference objects with the appraised assets by using the ideas of market comparison method and recoil method. Its value parameter is the ratio of enterprise value to reference index. The market method, the more general method of evaluation, leads to the book price, the reference enterprise comparison method, can be from the mature and fair transaction of the asset situation, and obtain some reference information the operation method is simple, and reflects the market conditions very well, so it is very easy to be accepted [23].

To sum up, the income method adopts the idea of income recovery, that is, the value of assets and future earnings as the present value. The present value of the assets of the evaluated enterprise is obtained by discounting the future earnings of the target enterprise and the risks that may be brought by obtaining these earnings. Generally speaking, the income of an enterprise is expressed through profit and cash flow.

Conclusions by chapter 1

This chapter mainly analyzes of empirical studies allows us to conclude that the distribution of the added value created by the transaction between the parties to the transaction is uneven. In the samples on which these studies were carried out, there are results according to which the shareholders of the target company benefit from the transaction, while in most of the analyzed samples the transaction turns out to be unprofitable for the shareholders of the acquiring company (in particular, this thesis is confirmed for transactions with public companies).

For Chinese companies in the research object of this article have more systematic and in-depth understanding of transnational M&A, this chapter on the history of Chinese enterprises transnational M&A system of comb, find successful experience and existing problems, in order to better guide the Chinese enterprises transnational M&A and practice to lay a solid foundation for the following research.

CHAPTER 2
ANALYSIS OF THE EFFICIENCY FACTORS OF MERGERS AND ACQUISITIONS OF LISTED COMPANIES IN THE ASIAN MARKET

2.1 Methods of mergers and acquisitions of listed companies

When enterprises carry out foreign M&A investment, they tend to pay more attention to the selection of investment targets, negotiation of investment price, design of transaction structure, etc. which are very critical links in the process of M&A. However, there is one link that is often ignored by the company planning to carry out M&A, that is, the selection and design of M&A subject. In fact, the choice of M&A subject to carry out M&A has a very significant impact on the company's M&A scale, M&A rhythm, post-merger management and matching capital operation actions.

At present, many listed companies are faced with the problems of small main business scale and low profitability. As listed companies, they are faced with the pressure of performance requirements from many stakeholders in the capital market. When carrying out external M&A, the management of the company has to consider the M&A risk: "Will the coming projects or teams be well integrated into the company platform and contribute to profits? What if the acquired company cannot form synergies with the listed company? What happens when the management of the acquired company loses its motivation? The company's market capitalization scale and financial strength can support the company to continue to develop M&A growth?" [26]. However, in fact, these problems can be solved through the selection of merger subject and structural design, and different main body selection and structural design will stimulate the follow-up of different capital operation actions, so as to improve the success rate of the company's M&A.

According to the results of the study of the patterns of M&A of listed companies, and in the service to provide clients with M&A to the study of M&A subject selection, summed up the investment in M&A of listed companies, on the choice of M&A subject at least four possible solutions [32]:

– to expand direct investment plays a central role in M&A of listed companies;

– the major shareholder establishes a subsidiary as the investment subject to carry out investment and merger, and the injection of supporting assets;

– industrial M&A fund is established by major shareholders as the investment subject for investment and merger;

– the listed company shall invest to establish an industrial M&A fund as the investment subject to carry out investment and merger, and inject supporting assets in the future.

These four options of M&A subject have their own advantages and disadvantages, which are summarized as follows [48].

Model 1: the listed company acts as the main investor to directly carry out investment and merger.

Advantages: can be directly by the listed company to carry out equity M&A, without using cash as payment consideration; profits can be reflected directly in listed company statement.

Disadvantages: when the market value of the enterprise is low, the dilution ratio of the equity is high; listed companies, as the main body, directly carry out M&A, which involves the decision-making process, corporate governance, confidentiality, risk tolerance, financial profit and loss and other factors of listed companies, which is more troublesome. After the M&A business profits did not release as expected, affecting the profits of listed companies.

Model 2: the major shareholder establishes a subsidiary as the investment subject to conduct investment and merger, which will be injected into the listed company when the subsidiary business matures.

Advantages: not directly diluting shares at the joint-stock company level; if the sub-business develops well in the future, the assets can be injected into the joint-stock company. Through this structure, a project "reservoir" is set up under the controlling shareholder, so that the company can selectively inject assets into the listed company according to the capital market cycle, the performance of the joint-stock company and the operating conditions of its sub-businesses, so as to have more initiative. Equity can be opened at the subsidiary level. For the management team of the merged enterprise, if it runs well in the future, it can inject assets into the listed company to realize equity appreciation or directly hold shares at the listed company level to achieve listing, which has a high incentive effect.

Disadvantages: limited scale, if the establishment of a wholly-owned subsidiary or a controlling subsidiary, the major shareholder will need to invest a large amount of money, if the non-controlling subsidiary, the major shareholder will lose control. The performance of the subsidiary or the project cannot be included in the consolidated statement of the joint-stock company, which makes it impossible to have a positive impact on the statement of the listed company after the merger. The company needs to set up a special M&A team to carry out project scanning, M&A negotiation, transaction structure design, etc. which requires a high level of investment and M&A ability, and talent reserve.

Model 3: industrial investment fund is established by major shareholders as the investment subject for investment and merger, which will be injected into listed companies after the sub-business matures.

In addition to the advantages listed in mode two, it also has the following advantages: major shareholders only need to invest a part of the capital to leverage more social capital or government capital to carry out industrial investment and merger. It can cooperate with professional investment management companies to solve the problems of M&A ability and post-investment management. Through the fund structure design, it can realize the joint decision with the fund manager, or grasp more decision-making rights.

Disadvantages: the major shareholder's brand power, reputation and influence are weak, and the amount of capital raised may be limited. The early stage needs the capital contribution of the major shareholders, and there are certain requirements for the capital contribution of the major shareholders.

Model 4: industrial investment funds are set up by listed companies as investment subjects for investment and merger, which will be injected into listed companies when the sub-businesses grow and mature.

In addition to the advantages of model 2 and model 3, it also has the following advantages: it can leverage more social capital and government capital by using the brand power, influence and reputation of listed companies, making it easier to raise funds. The funds of listed companies are relatively abundant, which makes it easy to start the fund. Do not dilute directly at the joint-stock company level. The performance of the invested subsidiary can be incorporated into the consolidated statement of the joint stock company through the shareholding ratio and structural design [53].

Because the capital market environment of China is very different from that of foreign countries, few major shareholders or actual controllers of listed companies are fund investors, so there are very few companies that can rely on the power of major shareholders to form the industry-finance interaction mode mentioned in the third model of listed companies. And with the constant development of private equity, and M&A market in China is mature, more and more listed companies choose to cooperate with private equity fund set up foreign investment and acquisition buyout funds, played by buy-out funds industry incubator role of listed companies, in strategic high-quality resources, to foster mature and then injected into the listed company.

2.2 Factors affecting the effectiveness of bargain by mergers and acquisitions of listed companies in the Asian market

This paper refers to the factor division in the evaluation method of international investment economic environment proposed by American economist R. Stambaugh. The institutional factors affecting cross-border M&A investment are divided into three categories: one is international economic institutional arrangements, including bilateral investment protection agreements signed by host countries, international tax treaties, trade barriers and attitudes towards foreign investment; the second is the economic system of the host country, which mainly includes the attitude of the host country to foreign investment, the degree of government's preparation for the economy, the degree of market regulation, the government's financial burden, the financial system, the degree of marketization and the stability of monetary policy. The third is the political and legal system, mainly including the host country government's degree of honesty, the degree of legal integrity, the degree of private property protection. The following is a detailed description of each variable.

Bilateral Investment Agreements (BIT): BIT influences the construction of the FDI policy environment by helping to improve the investment climate, in particular by enhancing the treatment of foreign investors and establishing dispute resolution mechanisms, thereby helping to reduce investor risk in signatory countries. We assume that the more bilateral investment protection agreements signed by host countries, the more cross-border M&A investment flows will be and vice versa. The value of variable BIT is the number of the bilateral investment protection agreement signed by the host country.

International Tax Treaty (D1T): By dividing tax rights, international tax treaty harmonizes tax interests between countries, avoids international double taxation, eliminates unreasonable burden of multinational taxpayers, and provides tax incentives for inducing investment direction. We assume that the more the host countries sign the international tax treaties, the more the cross-border M&A investment flows and vice versa. The value of the variable (DTT) is the number of bilateral or multilateral agreements on international taxation signed by the host country [6].

Trade Barriers (TR): in theory, cross-border M&A investment should flow to countries with high trade barriers. Therefore, we assume that the higher the trade barriers of the host country, the more cross-border M&A investment flows and vice versa. The maximum TR value of variable is 5 points, indicating the highest trade barrier; the lowest score is 1, indicating the lowest trade barrier.

Attitude towards foreign investment (FI): cross-border M&A investment should flow to countries that welcome foreign investment. Therefore, we assume that the more the host country welcomes foreign investment, the more the cross-border M&A investment flows and vice versa. The maximum value of variable FI is 5 points, indicating the lowest degree of welcome; the minimum score is 1, indicating that foreign investment is most welcome [41].

Government intervention (GI): excessive government intervention in the economy will hinder the operation of the market mechanism, affect the allocation efficiency of resources and increase the external transaction costs of enterprises. Therefore, we assume that the less the host government intervenes in the economy, the more cross-border M&A investment flows will be and vice versa. The highest value of the variable GI was 5 points, indicating the highest degree of government intervention. A score of 1 indicates the lowest level of government intervention.

Informal market (IM): the more developed the informal market in China, the worse the market transparency and the less standardized the transaction will be, and the higher the transaction cost of foreign-funded enterprises through the market will be. Therefore, we assume that the more developed the informal market of the host country is, the less cross-border M&A investment flows will be and vice versa. The maximum value of variable IM is 5 points, indicating the highest degree of informal market. A score of 1 indicates the lowest level of informal markets [77].

Government financial burden (FB): this indicator mainly reflects the change in the size of government expenditure. If the scale of government fiscal expenditure is too large, it will compete for resources with enterprises and increase the tax burden of enterprises. Therefore, we assume that the heavier the financial burden of the host country is, the less the investment inflow of cross-border M&A will be and vice versa. The highest value of variable IM is 5 points, indicating the highest financial burden of the government. The lowest score is 1, indicating the lowest financial and political burden of the government.

Financial control degree (BANK): the control of foreign banks will affect the financing efficiency of foreign-funded enterprises, the control of financial market will hinder foreign-funded enterprises to realize cross-border M&A through the financial market, and the control of financial instruments will affect foreign-funded enterprises to choose the appropriate payment arm. Therefore, we assume that the tighter the financial regulation in the host country, the less the cross-border M&A investment flows and vice versa. The highest value of variable BANK is 5 points, indicating the most stringent financial regulation. A minimum score of 1 indicates the loosest financial regulation [11].

Degree of marketization (WP): we use determinants of wage and price levels to measure degree of marketization. If wages and prices are completely determined by the relationship between supply and demand, the degree of marketization is high. If it is decided by the government or a government-authorized planning agency, the degree of marketization is low. We assume that cross-border M&A investment is willing to flow to countries with a high degree of marketization. The maximum value of this variable is 5 points, indicating the lowest degree of marketization. The lowest score is 1, indicating the highest degree of marketization.

Monetary Policy (MP): the monetary policy of the Central Bank of China will affect indicators such as prices, interest rates and exchange rates, and the changes of these indicators will undoubtedly increase investment risks and affect investment flows. Therefore, we assume that the more effective the monetary policy of the host country is, the more cross-border M&A investment flows will be and vice versa. The maximum value of variable MP is 5 points, indicating that the currency policy is the least effective. A score of 1 indicates that monetary policy is the most effective.

CPI: cross-border M&A investment tends to flow to countries with high levels of government corruption. Therefore, we assume that the more corruptible the host country's government is, the more cross-border M&A investment flows will be. The maximum value of the variable CPI is 10 points, indicating that the government has the highest degree of honesty. A score of 1 indicates the government is least corrupt [2].

Degree of legal perfection (RE): cross-border M&A investment tends to flow to countries with a higher degree of legal perfection. Therefore, we assume that the higher the degree of legal perfection of host country, the more cross-border M&A investment flows, the less they do. The maximum value of RE is 5 points, indicating the lowest degree of legal perfection. A minimum score of 1 indicates the highest degree of perfection of the law.

Private Property Protection (PR): the vast majority of cross-border M&A investments are private investments, which tend to flow to countries that protect private property (including intellectual property). Therefore, we assume that the higher the degree of private property protection in the host country, the more cross-border M&A investment flows will be. The maximum value of PR was 5 points, indicating the lowest degree of private property protection. The lowest score is 1, indicating the highest degree of protection of private property [20].

Mainly adopted GDP, namely economic scale, as the control variable. One of the reasons why GDP is selected as the control variable is that it can reflect the size of a country's market, the other reason is that GDP has a high correlation with other explanatory variables (see table 2.1-2.2).

Table 2.1. – Correlation coefficient matrix of explanatory variables

	LNGDP	BIT	DTT	TR	FI	GI	IM	FB	BANK	WP	MP	CPI	RE	PR
LNGDP	1	0.26	0.68	-0.15	0.12	-0.22	-0.45	0.30	-0.23	-0.13	-0.32	0.38	-0.21	-0.45
BIT	0.26	1	0.54	0.11	0.22	-0.03	-0.14	0.23	0.11	0.18	-0.13	0.03	0.18	-0.01
DTT	0.68	0.54	1	-0.29	-0.05	-0.17	-0.62	0.22	-0.38	-0.20	-0.45	0.56	-0.29	-0.56
TR	-0.15	0.11	-0.29	1	0.69	0.53	0.65	0.15	0.64	0.54	0.33	-0.58	0.69	0.67
FI	0.12	0.22	-0.05	0.69	1	0.27	0.47	0.20	0.69	0.71	0.35	-0.51	0.68	0.61
GI	-0.22	-0.03	-0.17	0.53	0.27	1	0.39	0.02	0.42	0.27	0.25	-0.25	0.44	0.39
IM	-0.45	-0.14	-0.62	0.65	0.47	0.39	1	-0.07	0.64	0.52	0.68	-0.86	0.69	0.86
FB	0.30	0.23	0.22	0.15	0.20	0.02	-0.07	1	0.09	0.25	-0.16	0.02	0.23	-0.04
BANK	-0.23	0.11	-0.38	0.64	0.69	0.42	0.64	0.09	1	0.67	0.56	-0.65	0.73	0.72
WP	-0.13	0.18	-0.20	0.54	0.71	0.27	0.52	0.25	0.67	1	0.45	-0.59	0.70	0.64
MP	-0.32	-0.13	-0.45	0.33	0.35	0.25	0.68	-0.16	0.56	0.45	1	-0.73	0.58	0.63
CPI	0.38	0.03	0.56	-0.58	-0.51	-0.25	-0.86	0.02	-0.65	-0.59	-0.73	1	-0.70	-0.88
RE	-0.21	0.18	-0.29	0.69	0.68	0.44	0.69	0.23	0.73	0.70	0.58	-0.70	1	0.78
PR	-0.45	-0.01	-0.56	0.67	0.61	0.39	0.86	-0.04	0.72	0.64	0.63	-0.88	0.78	1

Source: author's development based on data analysis [58].

Table 2.2. – Analysis results of international economic system

	LnY (1)	LnY (2)	LnY (3)	LnY (4)
Constant	-7.65* (-4.87)	-6.15* (-3.37)	-4.19* (-3.15)	-5.63* (-4.30)
Ln (GDP)	1.26* (9.08)	1.07* (6.04)	1.16* (11.23)	1.31* (12.28)
BIT	-0.001 (-0.12)	–	–	–
DTT	–	0.01** (1.73)	–	–
TR	–	–	-0.83* (-5.94)	–
Fl	–	–	–	-1.15* (-5.25)
The F value	43.92*	47.20*	93.89*	82.90*
R^2	0.65	0.66	0.80	0.78
The adjusted R^2	0.63	0.65	0.79	0.77
Number of samples	118	118	118	118

Note: the values in parentheses are T values; * and ** indicate significant at 1% and 5% levels, respectively.

Source: author's development based on data analysis [59].

Samples are selected from 118 countries and regions. Data of countries' absorption of cross-border M&A investment and explanatory variable bit. DTT are derived from UNCTAD database of cross-border M&A. Institutional variables were obtained from the heritage foundation publication index of economic freedom. GDP variables were obtained from the world development report. CPI variables are obtained from each issue of the global corruption report. In order to reduce the heteroscedasticity in the regression analysis, used the natural logarithm form for GDP and Y values, and the estimation model adopted OLS (ordinary least squares method).

As can be seen from table 2.2, the estimated value of the variable BIT coefficient is -0.001, but it fails to pass the significance level test, indicating that cannot draw a positive conclusion from it. In terms of attracting FDI, the role of BIT is relatively insignificant.

The estimated coefficient of variable DTT was positive as expected and passed the significance test at the level of 5%. This shows that the more international tax treaties a country or region signs, the more cross-border M&A investment flows to that country or region. The coefficient of DTT is estimated to be around 0.01, meaning that each bilateral ITA can attract about 1 percentage point of cross-border M&A investment [71].

The estimated TR coefficient in the model is negative and passes the significance test at the 1% level. This suggests that the lower the trade barriers, the higher the cross-border M&A investment flows, contrary to expectations. The traditional theory is that high trade barriers discourage the inflow of goods by imports. On the one hand, it objectively encourages TNCs to choose direct investment rather than export to enter the host country and on the other hand, it protects the products produced by TNCs in the host country from the influence of imports. In fact, international direct investment is often dominated by trade. High trade barriers prevent transnational corporations from expanding trade-related markets and direct investment, and limit their rational layout, and overall arrangement of production, and operation on a global scale. Just because of these reasons, the negative impact of trade barriers on cross-border M&A investment is greater than the positive impact.

The coefficient of variable FI was also consistent with expectations, with an estimated negative value, passing the significance test at the 1% level. This shows that the more welcome domestic enterprises are to foreign M&A, the more cross-border M&A investment flows. Cross-border M&A is a premise condition, must by the national regulatory framework to allow cross-border M&A, however, until most of the countries are actively pushing for direct access to international capital and investment liberalization to get further development, in many cases, the applicable Yu Xinshe investment liberalisation, also applies to cross-border M&A, but in many developing countries, foreign acquirer actually limited. Some countries adopt strict approval regimes for cross-border M&A, combined with mandatory joint venture requirements and majority ownership restrictions. Therefore, the influence of this policy variable on cross-border M&A investment is greater than other variables [36].

The influence of host country's economic system on cross-border M&A investment.

First, it analyzes the influence of host country government's economic intervention (GI) on cross-border M&A investment inflow. As can be seen from table 2.3, the estimated value of the variable GI coefficient is negative and passes the significance test at the 1% level, which is consistent with our previous expectations. This suggests that the less the government intervenes in the economy, the more cross-border M&A flows.

Table 2.3 – Analysis results of political and legal system

	LnY (1)	LnY (2)	LnY (3)
Constant	-7.14* (-5.20)	-2.50** (-1.66)	-2.06 (-1.28)
Ln (GDP)	1.06* (8.42)	1.13* (10.59)	0.97* (8.18)
CPI	0.35* (3.92)	–	–
RE	–	-1.18* (-5.62)	–
PR	–	–	-0.91* (-5.44)
The F value	65.03*	88.63*	85.69*
R^2	0.73	0.79	0.78
The adjusted R^2	0.72	0.78	0.77
Number of samples	118	118	118

Note: the values in parentheses are T values; * and ** indicate significant at 1% and 5% levels, respectively to sum up, the legal system of the host country also has an important impact on the inflow of cross-border M&A investment, which is manifested as the higher the degree of government incorruptness, private property protection and legal perfection of the host country, the higher the inflow of cross-border M&A investment.

Source: author's development based on data analysis [17].

The coefficient of the variable IM was also in line with expectations, with an estimated negative value, passing the significance test at the 1% level. This suggests that the more developed a country's informal market transactions are, the less transparent the market is.

The higher the market transaction costs, the less investment flows. The estimate of the variable Fb coefficient was -0.001, but it did not pass the significance level test, indicating that could not draw a positive conclusion from it. According to Musgrave and Rostow theory of spending growth, in the early stages of economic development, the public sector to provide social infrastructure for economic development, the government investment in the larger community as a proportion of the total investment, once the economy has reached maturity stage, the public spending will increase in infrastructure spending to education, health care, welfare spending, and that spending will grow much faster than anything else, and faster than GDP. It is for these reasons that the impact of fiscal expenditure scale on cross-border M&A investment is uncertain.

It can also be seen from table 2.3 that the estimated value of the coefficient of variable BANK is negative, passing the significance test at the 1% level. This is in line with expected results, suggesting that tighter financial regulation in a country leads to less cross-border M&A investment flows.

A degree of marketization implies not only fewer restrictions on domestic economic activity, but also fewer restrictions on foreign economic activity. The WP coefficient is estimated to be negative and passes the significance test at the 1% level. This is consistent with previous analysis, which shows that the more marketization, the more cross-border M&A investment flows.

Whether monetary policy is effective will affect the stability of a country's price, interest rate, exchange rate and other indicators, thus affecting the flow of cross-border M&A investment. The estimated value of the variable MP coefficient is negative and passes the significance test at the 1% level. This is consistent with previous analysis, namely, the more effective monetary policy is, the more cross-border M&A investment flows are, and the less cross-border M&A investment flows are.

To sum up, GI, IM, BANK, WP and MP all have significant influence on cross-border M&A investment among the variables that constitute the economic system factors of the host country. Cross-border M&A investment tends to flow to countries and regions with less government intervention in the economy, less informal market transactions, relatively loose financial and financial supervision, high degree of marketization and effective monetary policies. In developed countries, there are many efficient private enterprises and normal functioning companies controlling the market, because foreign enterprises can choose between cross-border M&A and new investment, which can explain why cross-border M&A has become the mainstream way of international direct investment in developed countries. However, in developing countries and countries in transition, this cannot be interpreted as a mainstreaming of international direct investment [12].

The influence of host country's political and legal systems on cross-border M&A investment. As can be seen from table 2.3, the coefficient of CPI, the variable of the degree of government incorruptibility, is estimated to be positive and passes the significance test at the 1% level. This is consistent with expected result that the higher the level of government incorruptibility, the greater the inflow of cross-border M&A investment.

The coefficient value of law perfection variable Re was calculated as negative value, which passed the significance test at the 1% level and was consistent with the previous analysis. This indicates that the higher the legal perfection of the host country is, the more cross-border M&A investment flows will be.

The estimated coefficient of the private property protection degree variable PR is negative and it passes the significance test at the 1% level. This is consistent with previous estimates that the higher the level of private property protection.

2.3 The evolution of bargain by mergers and acquisitions in the corporate form of doing business

When G. J. Stigler was awarded the Nobel Prize in economics in 1982, he once said: "There is hardly a large company in the United States that has not grown in some way or by M&A, and there is hardly a large company that has grown primarily through internal expansion" [4]. Indeed, the history of global business is, in a sense, a history of M&A. Since the first big wave in the late 19th and early 20th centuries, the world has experienced six big waves of M&A. Global cross-border M&A started in the third M&A wave around the 1950s. For Chinese enterprises, it is a noteworthy phenomenon that domestic M&A is basically synchronized with cross-border M&A [22]. In 1984, Baoding textile factory and Baoding knitting factory merged, and in 1984, Bank of China Group and China Resources Group jointly acquired Hong Kong Conway Investment Co. Ltd. marking a history of M&A at home and abroad by Chinese enterprises for nearly 30 years.

For Chinese companies in the research object of this article have more systematic and in-depth understanding of transnational M&A, this chapter on the history of Chinese enterprises transnational M&A system of comb, find successful experience and existing problems, in order to better guide the Chinese enterprises transnational M&A, and practice to lay a solid foundation for the following research.

The historical evolution of cross-border M&A of Chinese enterprises. Domestic scholars have conducted different studies and stages on the history of cross-border M&A of Chinese enterprises. Wu Qianqian divided the history of cross-border M&A

of Chinese enterprises into four stages based on the history and periodicity of cross-border M&A: the first stage (1980s-1996) is the sailing stage [18, 76], the second stage (1997-1999) is the return effect stage [5], the third stage (2001-2007) is the internationalization effect stage [8] and the fourth stage (2007 till now) is the post-financial crisis stage [55]. According to the key years in China's reform and opening up process, Ma Jianwei divided the cross-border M&A process of Chinese enterprises into four stages: the embryonic stage (1984-1992), the preparatory stage (1993-2001), the initial stage (2002-2006) and the growth stage (2007) [54]. On the basis of the existing research, the author divides the course of cross-border M&A of Chinese enterprises into three stages: the budding stage (1984-2001), the stagnating stage (2001-2007) and the active growth stage (2007-present). The main consideration is as follows [46]:

1. Although the first cross-border M&A case of Chinese enterprises appeared in 1984, the cross-border M&A of Chinese enterprises was still in the embryonic stage until 2001 due to the slow transformation of China's market economic system, reform of state-owned enterprises, unclear property rights and other historical problems.

2. In 2001, as China became the 143rd member of the WTO, Chinese enterprises began to step into the world and actively participated in overseas operations and cross-border M&A, but they also paid a heavy price in this process.

3. The outbreak of the US subprime mortgage crisis in 2007 and the subsequent euro.

Continued economic downturn in the region has brought good opportunities for Chinese enterprises to expand rapidly overseas. Therefore, cross-border M&A of Chinese enterprises at this stage showed a momentum of rapid growth.

Stage 1: sprout preparation stage (1984-2001). In 1984, Bank of China Group and China Resources Group jointly acquired Hong Kong Conley Investment Co. Ltd. as a symbol, Chinese enterprises embarked on the journey of cross-border M&A. At this stage, China's reform and opening up just started, the country was gradually shifting from the planned economy system to the market economy system, "going out" strategy timely put forward and gradually infiltrated into the business philosophy of enterprises. At this stage, Chinese enterprises' cross-border M&A show the characteristics of small scale, few times and limited destination. Taking 1992-2001 as an example, the annual transnational M&A of Chinese enterprises accounted for less than one percentage point of the share of world M&A during the same period, as shown in table 2.4 below.

Stage 2: staggering start stage (2001-2007). After China's accession to the WTO in 2001, Chinese enterprises have become more closely connected with the international market, and there are many cross-border M&A cases of "strong alliance" (see table 2.5), many of which have become classic success cases and failure lessons of cross-border M&A of Chinese enterprises.

Table 2.4. – The number of cross-border M&A of Chinese enterprises from 1992 to 2001

Year	The number of cross-border M&A of Chinese enterprises	World cross-border M&A	Proportion (%)
1992	573	79280	0.72
1993	485	83064	0.58
1994	307	127110	0.24
1995	249	186593	0.13
1996	451	227023	0.20
1997	799	304848	0.26
1998	1276	531648	0.24
1999	101	766044	0.01
2000	470	1143816	0.04
2001	452	593960	0.08

Source: author's development based on data analysis [46].

Lenovo made headlines in 2004 when it bought the PC business of Big Blue IBM for 1.75 billion US dollars (1.2 billion US dollars in cash plus a 19% stake in Lenovo worth about 500 million US dollars). As of October 2004, Lenovo entered the PC market, according to the latest research report released by market research firm Gartner [54].

However, the period also saw a number of failed cross-border M&A, which many Chinese companies saw as a warning of the future. In 2003, TCL bought the color TV business of France's Thomson and the mobile phone unit of France's Alcatel in an attempt to build a consumer electronics conglomerate with global operations. However, both mergers failed. In 2005, BenQ bought the handset business of Siemens, the veteran telecoms equipment maker, in an attempt to replicate the second "Sony Ericsson model". In the following years, however, BenQ Siemens continued to lose money and eventually had to go bankrupt.

Therefore, at this stage, Chinese enterprises faced the M&A opportunities and challenges brought by China's entry into the WTO, and started a mixed and faltering cross-border M&A beginning [62, 70].

Stage 3: aggressive growth (2007-present). In 2007, the outbreak of the subprime mortgage crisis in the United States triggered the global financial crisis. At the same time, the continued economic downturn in the euro zone caused by the European debt crisis has brought good opportunities for Chinese enterprises to make cross-border M&A. On the one hand, the foreign capital enterprise valuation on the low side, on the verge of bankruptcy, shareholders to sell strong appetite, relax restrictions on Chinese enterprises M&A, on the other hand, China's rapid economic growth is a growing demand for energy, mature technology, a vast market, these factors lead to Chinese companies since 2007 ushered in the rapid growth stage of cross-border M&A.

Table 2.5. – The number of cross-border M&A of Chinese enterprises from 2001 to 2006

The event	M&A subject	The target company	M&A, US dollars
2001.7	Shanghai construction	Hong Kong Construction Holdings Limited	200 million
2001.9	Holley group	Royal Philips in the US CDMA division	180 million
2002.1	CNOOC	RESORP, Spain	585 million
2002.4	CNPC	Devon Energy Group	216 million
2002.7	CNOOC	British Petroleum	1 billion
2003.2	Beijing Oriental	Hyundai Display Technology Co. Ltd	380 million
2003.3	CNOOC	British Gas	1.23 billion
2004.10	Shanghai automotive industry corporation	SSANGYONG of South Korea	500 million
2004.12	LENOVO group LTD	IBM's PC business	1.75 billion
2005.6	HAIER America	Maytag Corporation of America	1.28 billion
2005.7	Nanjing automobile	Rover Motor Company of England	87 million
2005.10	CPC international	Kazakhstan PK Oil Company	4.18 billion
2006.1	CNOOC	Nigerian Petroleum Corporation	2.268 billion
2006.6	China Mobile	Phoenix satellite TV	1.278 billion
2006.8	China Construction Bank	Bank of America (Asia)	9.71 billion
2006.12	CITIC Group	Karazenbas Oil Field, Kazakhstan	1.91 billion

Source: author's development based on data analysis [46].

In a relatively short period of time, the evolution of the private equity (PE) model has effectively created an engine for M&A, and is now considered by many in the industry as a perpetual source of deal-making capital that can be counted on to fuel deal volumes, irrespective of market challenges. As our analysis shows, just prior to the Covid-19 pandemic, PE had doubled from levels at the beginning of the global financial crisis of 2007-2008. As of June 2022, global PE dry powder stood at 2.3 trillion US dollars – three times more than the amount in 2007 (figure 2.1).

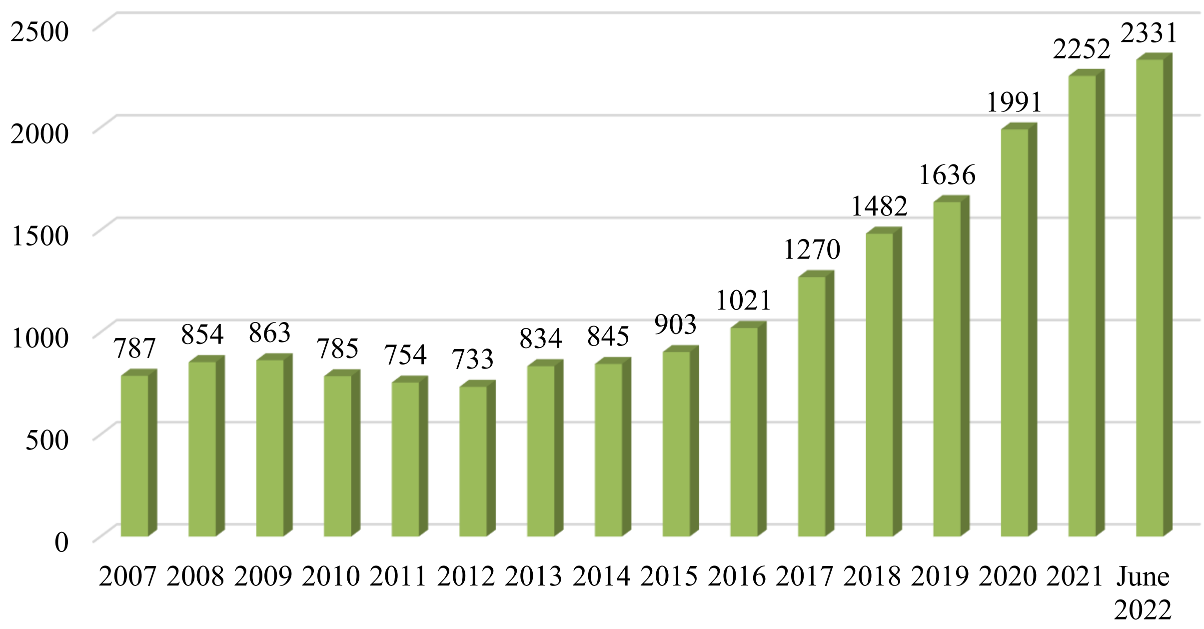


Figure 2.1. – Global private equity dry powder from 2007 to 2022, billion US dollars

Source: author's development based on data analysis [29].

PE's share of M&A has increased from approximately one-third of total deal value five years ago to almost half today. Although PE investment has grown, rising inflation and interest rates have made it significantly harder to generate returns. We expect PEs to make greater use of cloud technologies and data-driven insights to both speed up and better inform their deal processes, and to broaden their investment profile in new sectors and asset classes in their search for returns.

Chinese enterprises' cross-border M&A involved 18 primary industries. In terms of industry distribution, energy industry and manufacturing industry ranked first and second, with 41 and 38 transaction cases respectively, accounting for 25% and 23%, respectively, as shown in figure 2.2 below.

The sectoral distribution of cross-border M&A by Chinese companies shows that the main aim is to secure international strategic resources (such as PetroChina's 1.63 billion US dollars acquisition of BHP Billiton's Browse Australian liquefied natural gas project), brands (such as Weichai Power's purchase of a 25% stake in German industrial forklift giant Kaio Group for 738 million euros), technologies (such as Pony Pundum and Indian media giant Reliance), media's (3200 US dollars purchase of the famed Digital company), Haier's (737 million US dollars purchase of a stake in Fisher and Paykel Appliances, a New Zealand maker of kitchen and washing equipment) and other relatively scarce resources. Target companies are mostly developed countries in Europe and the United States.

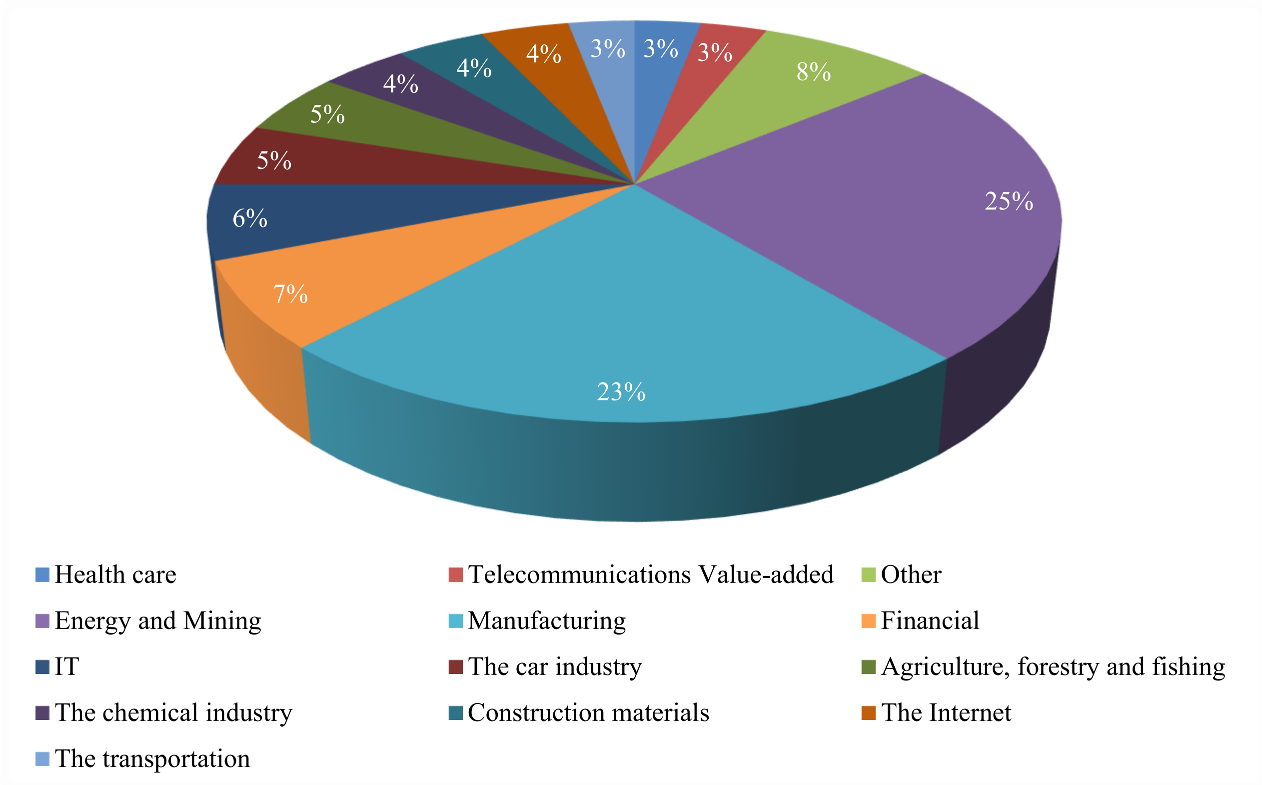


Figure 2.2. – Industry distribution of cross-border M&A by Chinese enterprises

Source: author's development based on data analysis [29, 64].

From the perspective of target countries of cross-border M&A, after initially taking developing countries as the target countries of cross-border M&A, Chinese enterprises have begun to target major developed countries and regions such as Europe, the United States and Australia. The reason is closely related to the target of transnational M&A of Chinese enterprises. For example, the number of cross-border M&A is in the top three countries. In the United States, Australia and Germany, 20, 18 and 13 deals were completed, respectively. The top three countries in terms of total transaction value were the United States, the United Kingdom and Portugal, with 5.858 billion US dollars, 5.817 billion US dollars and 5.694 billion US dollars respectively [50]. According to data from Clearing research center and China innovation investment, according to the top ten cross-border M&A cases completed by Chinese enterprises, the seven main subjects of M&A are state-owned mega-enterprises such as Sinopec, CNOOC and China Minmetals.

Conclusions by chapter 2

To sum up, in the international economic institutional arrangements, international tax agreements, international trade barriers and attitudes towards foreign investment all have an important impact on cross-border M&A investment inflows.

The more international tax treaties signed, the lower the international trade barriers, the higher the welcome degree of foreign investment, and the more cross-border M&A investment flows, while the impact of bilateral investment protection agreements on cross-border M&A investment flows is not obvious.

As market headwinds pick up speed, the second half of 2022 is providing an opportunity for dealmakers to reassess strategy and act boldly. PE has fuelled the growth in the private credit market over the past few years, and private capital for financing deals is now outstripping traditional lending sources. This development is accelerating the disintermediation of banks as the primary financing source for secondary buyouts. As traditional lending sources seek to limit their exposure to some riskier sectors, we expect this will only increase the role of credit funds, owing to their greater appetite for risk and their ability to offer more flexibility around financing structures.

CHAPTER 3
WAYS TO DEVELOPMENT THE EFFICIENCY OF BARGAIN BY MERGERS AND ACQUISITIONS OF LISTED COMPANIES IN COUNTRY OF ASIA

3.1 Trends the Asian market of mergers and acquisitions of listed companies

In the past decade, there have been two remarkable development trends in the world economy, one is economic globalization, the other is the M&A of transnational corporations.

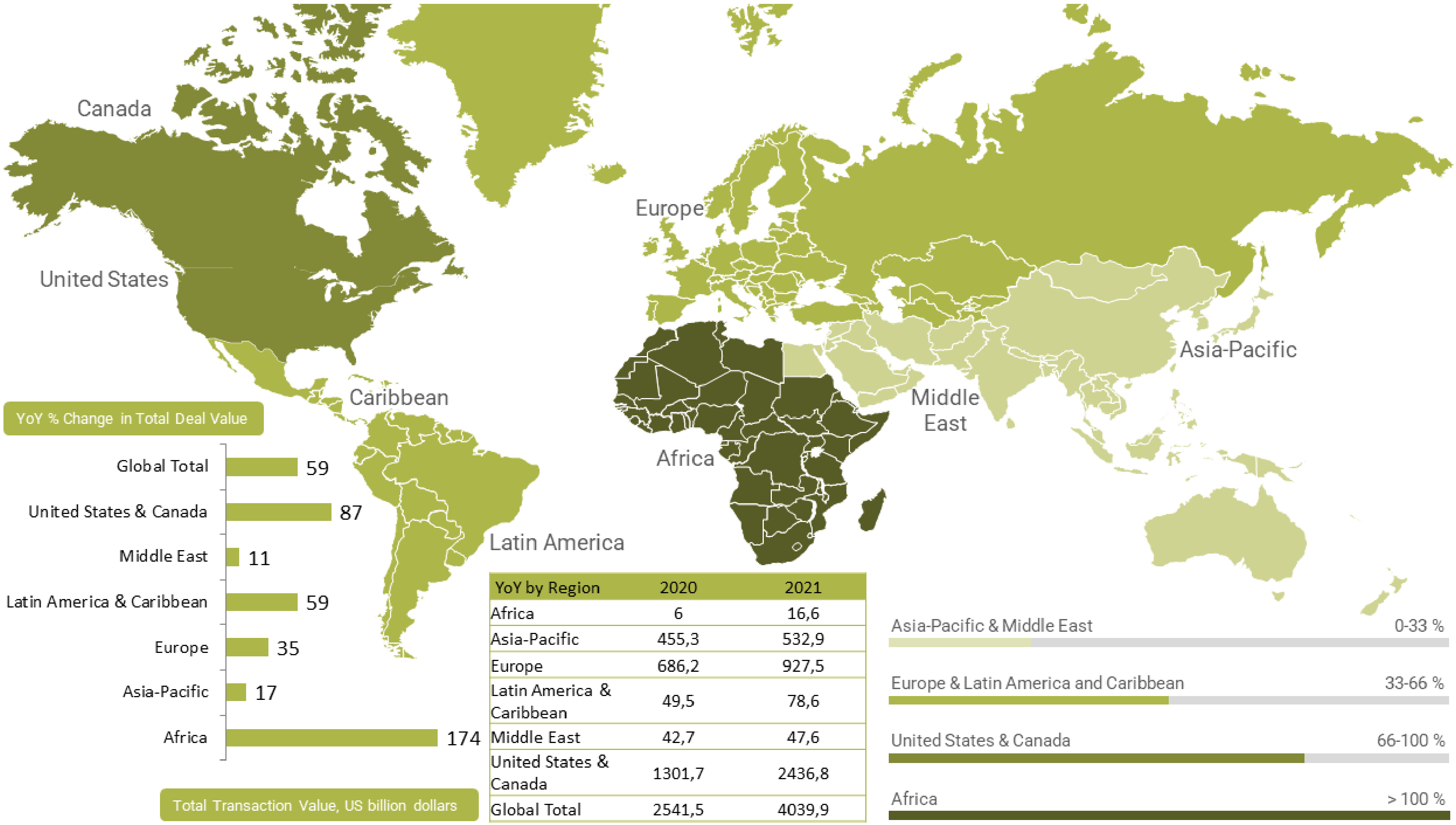
Especially in recent years, facing the challenges of economic globalization, information revolution and knowledge economy as well as the new pattern of international market, multinational corporations have rapidly expanded their M&A activities from domestic to foreign countries.

In order to implement the global business strategy and strengthen its competitive advantage and strategic position in the international market, the transnational M&A has obviously exceeded the transnational creation, and then triggered a global M&A wave. This new trend is having and will have a profound impact on national economies (figure 3.1).

Continued economic downturn in the region has brought good opportunities for Chinese enterprises to expand rapidly overseas (figure 3.2). Therefore, cross-border M&A of Chinese enterprises at this stage showed a momentum of rapid growth [28].

Global M&A hit new highs in 2021 – breaking prior records by a long shot. The number of announced deals exceeded 62000 globally in 2021, up an unprecedented 24% from 2020. Publicly disclosed deal values reached all-time highs of 5.1 trillion US dollars – including 130 megadeals with a deal value greater than 5 billion US dollars – a whopping 57% higher than in 2020 and smashing the previous record of 4.2 trillion US dollars set in 2007. The often-frenzied M&A activity in 2021 was fuelled by intense demand for technology, and for digital and data-driven assets, and the pent-up deal-making demand from 2020 that was unleashed.

The record levels of deal-making in 2021 were evident across all three regions, reflecting the strong bounce-back in the global economy. Europe, the Middle East and Africa (EMEA) showed the greatest growth in deal volumes over the prior year, with an increase of 34%, followed by the Americas with 22%, and Asia-Pacific with 17%. Although the volume of deals in 2021 was approximately the same across the three regions, deal value was more heavily weighted towards the Americas, with over 50% of deal values and approximately 60% of megadeals [30].



YoY by Region	2020	2021
Africa	6	16,6
Asia-Pacific	455,3	532,9
Europe	686,2	927,5
Latin America & Caribbean	49,5	78,6
Middle East	42,7	47,6
United States & Canada	1301,7	2436,8
Global Total	2541,5	4039,9

Figure 3.1. – Global M&A activity by 2022

Source: author's development based on data analysis [28].

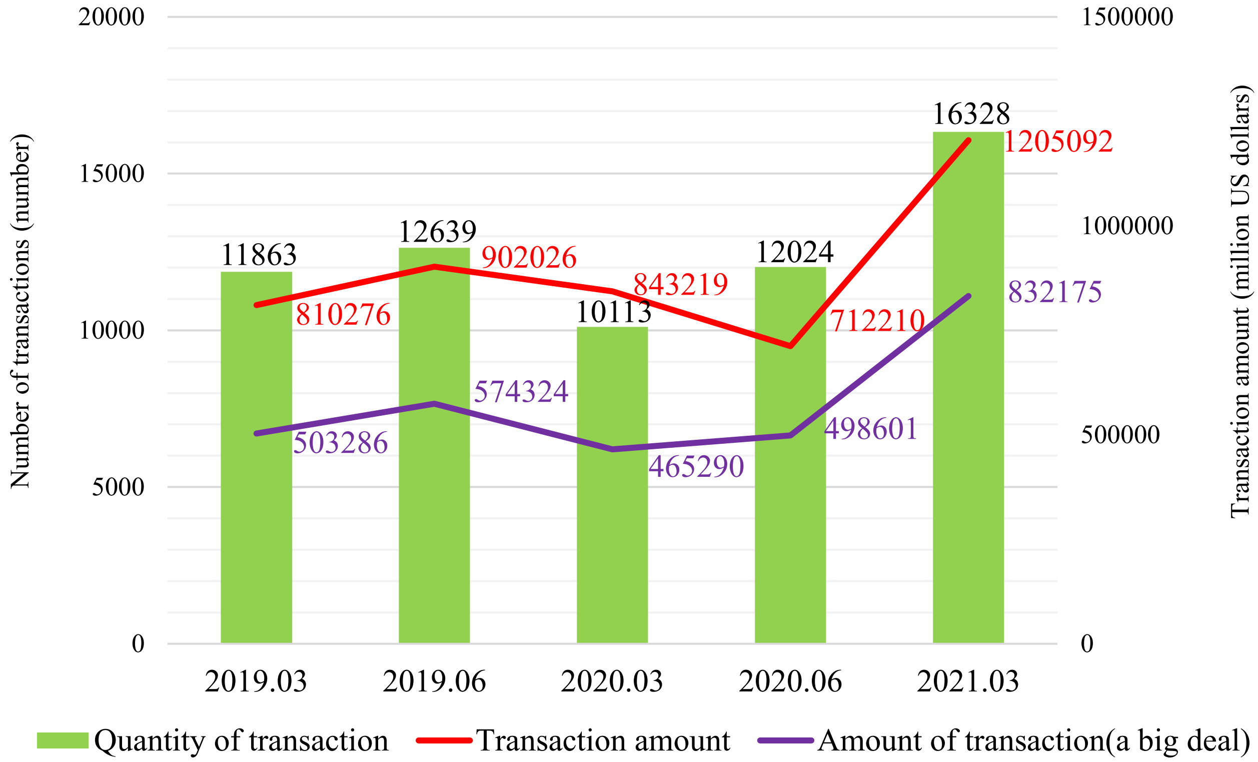


Figure 3.2. – The total volume of transactions in the world by 2019-2021

Source: author's development based on data analysis [30].

We expect that the record will not be broken in 2022, but all the signs are also pointed to be another year of M&A, an optimistic mood for the economy, adequate trading project reserves, abundant capital and the desire for new technologies in all industries. However, the market faces more and more challenges, and in the past decade, low operating costs, lower regulation and higher taxes and lower interest rates have helped companies achieve year-on-year earnings growth, pushing the multi-market stock market to a more and more historical high, and a wide range of stimulus efforts. But now, thanks to the new outbreak, the capital market benefits have turned into the first-time companies have been under pressure for the first time in a decade. Higher interest rates, inflation, increased taxes and tighter regulation could lead to structural or financial barriers to construction or funding for the 2022 deal, or the extension of trading time. The continued impact of the new pandemic on the world has made the financial markets more volatile, further exacerbating the global supply chain and higher levels of fiscal debt. Trading participants should focus on market changes, alert to these changes and have a greater impact but business leaders seem to be unafraid of these pressures from the macro economy. The 25th annual global CEO survey, released in January 2022 by PWC, has been found for two consecutive years that 77% of CEOs expect global economic growth to improve in the coming year. In addition, more than half of the CEOs said they had confidence in the extra I for 12 months, with the confidence of the top CEOs from private equity funds (67%) and technology companies (64%), which were the highest in terms of M&A in 2021 [15].

By all accounts, the factors that contributed to the record year in 2021 will continue to have an impact in 2022. Valuations in the global M&A market are also expected to remain elevated, led by intense competition among corporations, private equity funds and SPACs. Private equity funds are gradually expanding their share of M&A, with nearly 40% of deals in 2021 involving them, compared with 30% over the past five years. On the corporate side, we expect the strategic shift towards digital, innovative and disruptive innovation business models to continue to drive its M&A decisions. Market changes require boards around the world to be more value-minded, and CEOs will need to rebalance their portfolios for long-term growth and profitability, possibly focusing more on divestitures than in the past.

Outlook. Overall, optimistic about the year ahead, with trading volumes and valuations continuing to reflect market dynamism and abundant capital. On the one hand, with the urgent need for new technologies in all industries, competition among investors for target companies will be fierce. Companies will try to maintain a competitive edge and reinvest by shedding distressed assets from global markets.

On the other hand, dealmakers must pay close attention to unexpected or unexpected disturbances, including financial market volatility and macroeconomic headwinds. As pressure mounts, CEOs and institutional investors need robust M&A value creation plans more than ever [30].

Technology-focused deals continued to dominate the landscape, as companies sought to acquire technology capabilities and transform their business models. The robust SPAC IPO (initial public offering) market in late 2020 and early 2021, combined with a resurgence in SPAC IPOs in late 2021, means that there remain almost 500 SPACs yet to announce a merger that will need to close a deal by late 2022 or early 2023 (figure 3.3). As such we expect SPACs will continue to play a significant role in M&A in 2022, as they continue to compete against corporates and PEs for sought-after assets [30]. Private equity funds are increasingly influential in M&A. In addition to achieving innovation in 2021. Alternative assets – large private equity funds may target assets in alternative markets, e.g., in addition to the amount raised, it also achieved a record amount of investment. Late 2021 global insurance and asset management, especially private wealth.

Private equity funds, with 2.3 trillion US dollars in ammunition, up 14% from the start of the year, have traditionally shunning riskier ventures suggesting that 2022 will see more M&A activity [45]. However, fierce competition will continue to starve early-stage startups of mature business models. But with innovation pushing up multiples, that puts more pressure on the return on the investment of the private equity funds, meaning that the pace has increased and the cost has decreased. This means that financial investors are more than ever in need of rich operational management experience in types of companies with increasing interest.

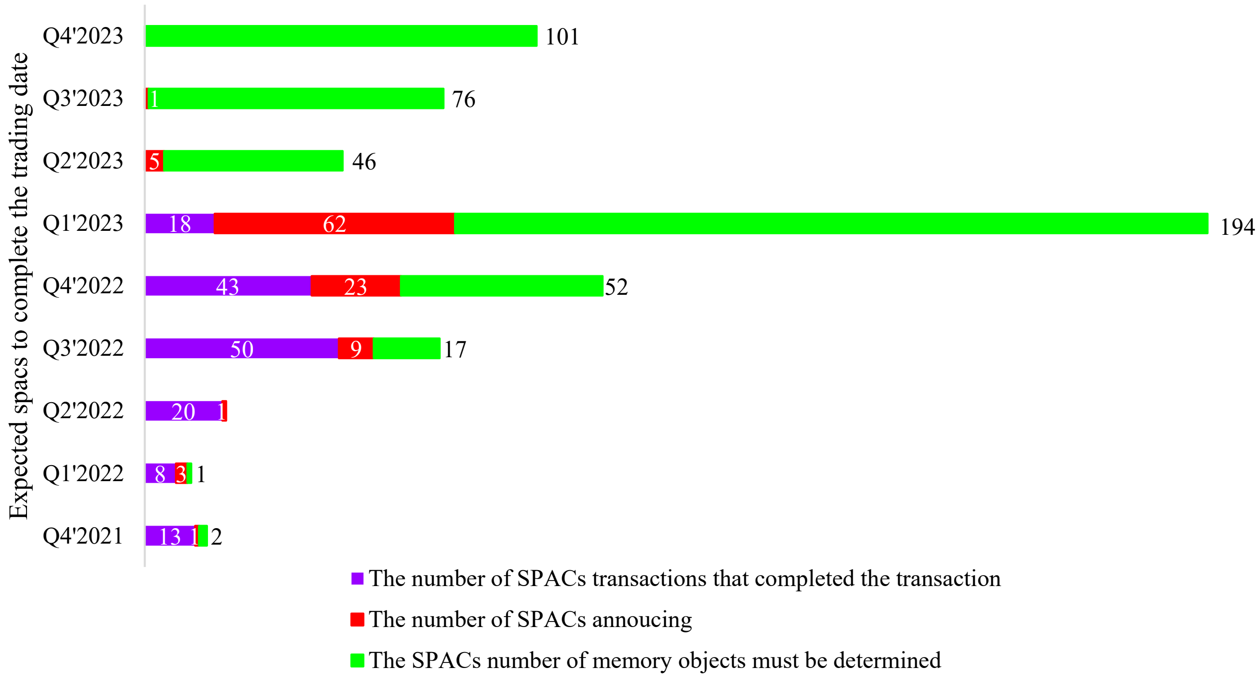


Figure 3.3. – SPACs listing analysis from 2019 to 2021, expected completion date of SPACs merger transaction 4Q2021-4Q2023

Source: author's development based on data analysis [31].

Greater focus on responsible investing (ESG) and greater focus on value creation, investors may be interested in private equity fund assets.

The average return on a private equity fund will attract more investor interest and also gain more money for M&A activity in 2022. Expected private equity funds to make funds hold investments longer than the standard five to seven years – for example, through adoption a variety of different investment strategies to deal with: extend the duration of other fund restructuring transactions. This could be a private tomb equity funds offer more time especially in an environment where multiples are likely to contract in the future. Larger, more complex deals – typically between 1 billion US dollars and 5 billion US dollars – to overcome high valuations.

Is the best choice for private equity funds. There is growing interest in larger and more complex transactions. For example, the Blackstone Group, the Carlyle Group and Hellman & Friedman have 30 billion US dollars in revenues that they use in every aspect of their operations – from how to screen potential investments to monitoring purchased Medline, a major United States medical supplies company, advent and managed a successful exit with portfolio performance, value creation and management [40].

Divestitures, spin-offs and agile regulatory scrutiny pose obstacles Efficient operations and abundant capital helped many countries tighten the regulatory environment at the start of the coronavirus pandemic, which could give dealmakers a boost in 2022. It has done better than its smaller, undercapitalised rivals. So, people can come to adversely affect, especially those that cause antitrust or foreign direct investment (FDI) [7].

Expect more consolidation in the market, with companies using M&A to secure regulated deals. In America the justice department seems to be taking a tougher line on mergers die advantage. Instead, several recent rulings on antitrust issues have halted deals, including those of IBM, Daimler, GM Changan and GM Qingqi [14].

Some large mature companies have recently announced spin-offs or asset sales in Europe. Antitrust investigations are underway against several American tech giants.

To separate parts of their business to focus on their core business. Several factors are at play in the Asia-Pacific region, with China implementing antitrust, data security and industry-specific regulations. Driving this fundamental repositioning of global boardrooms shareholder activism drives regulation. Japan is investigating big tech firms in the smartphone operating system market.

Corporate boards conduct strategic portfolio reviews and divest underperforming or non-core dominant positions. In addition, protectionism is on the rise, for example in relation to semiconductor technology [13].

Business CEOs are also increasingly focusing on agility – policies toward changing customer lines can also make it difficult to get approval for certain deals and can lead to markets.

Ability to respond quickly to and business model interruptions. In some cases, bigger firms are focusing more on domestic deals and less on cross-border M&A activity.

Financial and operational agility, and a focus on industry-specific dynamics appear to be more important than the traditional benefits of scale effects and collectivization, which could trigger more divestitures in 2022.

Supply chain optimization ESG influence increases, companies continue to use M&A to build agility and resilience against current negative factors. As investors use ESG criteria to assess risk and identify value creation opportunities, supply chains have been an area of particular interest. Expect ESG factors to be increasingly factored into M&A decisions and strategies in 2022.

For example, in the there will be more vertically integrated deals, up to secure key raw materials or zero in PWC's 2021 Global private equity fund responsible investment survey. Security of supply of components, down to control how products are distributed. Many found that more than half of the respondents had abandoned a partnership or investment for ESG reasons.

Companies facing raw material or labor shortages, port blockades, container shortages, especially as companies and private equity funds increasingly commit to reducing carbon emissions.

Companies in the manufacturing, pharmaceutical and medical device industries are now focusing on the green energy transition in anticipation of more money flowing into it, creating opportunities for M&A.

Offshore or nearshore outsourcing opportunities to shorten delivery times and build supply chains are estimated only in carbon-heavy industries and also in those developing new technologies.

More also expect investor appetite for technologies focused on supply chain processes and also expect to see an increase in M&A in industries transitioning to new business models, there's a lot of interest from companies, especially big data companies. Including major oil and gas companies – turning to investments in renewable energy and radon energy, as well as the tech industry, is innovating around energy storage or energy to create solutions for a more sustainable circular economy.

In addition to ESG, strong commodity prices, adequate capital supply and demand for chemicals – as the chemical industry recovers from heavy demand and supply chain disruptions during the pandemic.

Supply chain security concerns will also affect the recovery of M&A across the industry in the short to medium term, with M&A activity accelerating in the second half of 2021 and on track to pick up in 2022.

Consolidation in upstream natural gas will continue, chemical companies will seek stable supplies of raw materials around their production bases through targeted acquisitions, while infrastructure funds will continue to invest heavily in power and utilities, oil and gas midstream assets, and renewable energy.

Global M&A trends in energy, utilities and resources mining and metals – focused on continued industry consolidation [3].

Due to the global energy transition, oilfield services and refinery M&A activity has been limited, and natural gas as an excessive fuel, prices may be gradually rising "EDGE is now the main focus of trading activity in the energy, utilities and resources sectors power and utilities, as the market becomes more competitive, investors need to expect it to stay that way for some time to come".

The consumer market is expected to remain strong in M&A activity in 2022 as companies transform in response to changing consumer preferences (figure 3.4).

1500 consumer market M&A transactions from private equity funds increased in 2021. 1000 private equity funds accounted for about 35% of the transaction volume and 47% of the transaction volume, compared with the previous five years.

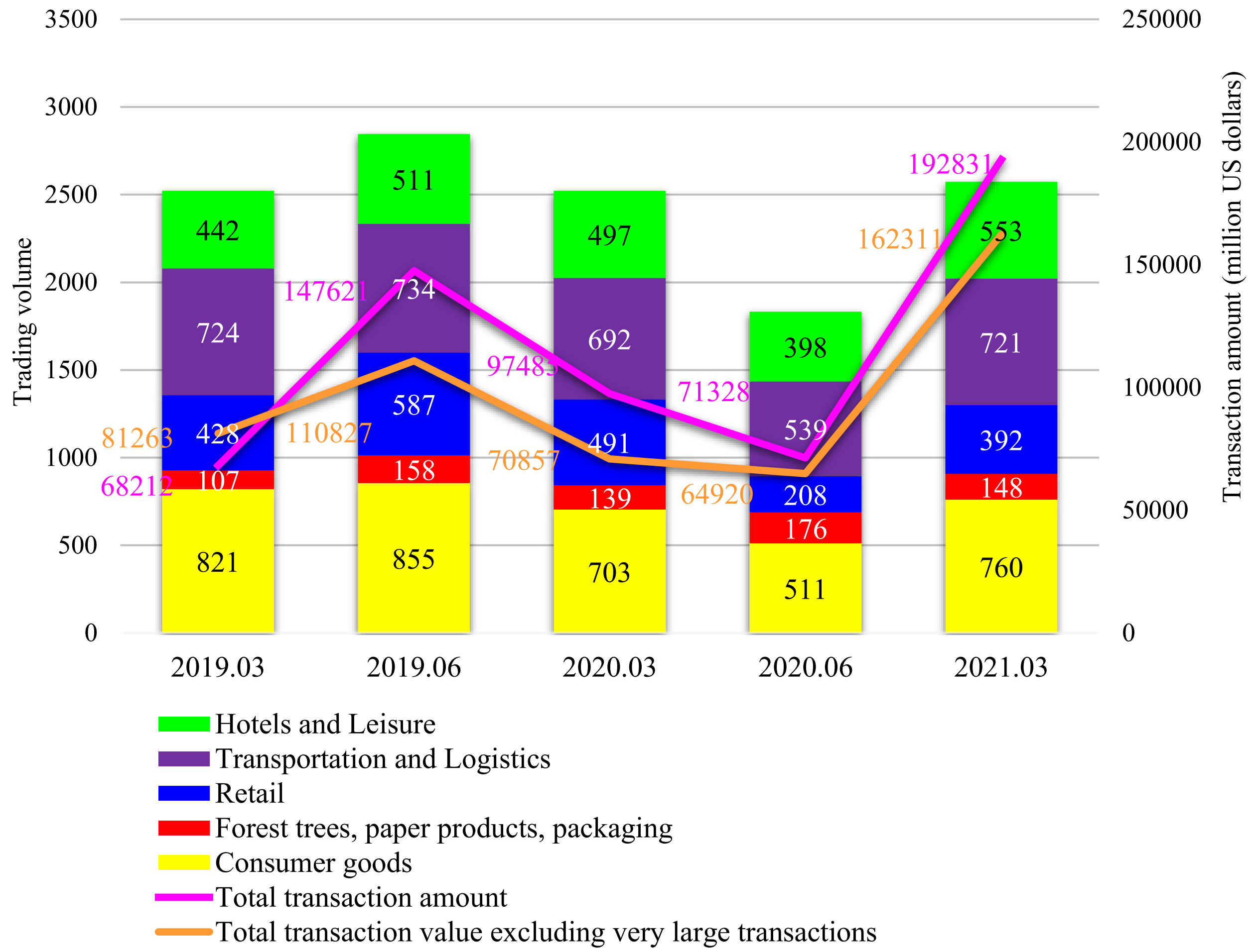


Figure 3.4. – Number and value of transactions in the consumer market from 2019 to 2021

Source: author's development based on data analysis [31].

Activity will flourish and the way consumers spend is being influenced by lifestyle changes. Whether in the corporate portfolio optimization or private equity related.

Note that changes in consumer preferences will become the dominant consumer market M&A in 2022.

The consumer market saw an increase in M&A deals from private equity funds, which accounted for about 35% of transactions and 47% of transactions in 2021, a marked increase compared to the average of 24% and 35% in the previous five years.

With the increase in the number of vaccinations, consumers are ushering in a new normal in the post-pandemic era. The recovery in consumer demand has led to increasing consumer spending and a wider range of products and services. Dealmaking activity in the consumer sector is set to boom in 2022, as consumers' spending patterns are being shaped by lifestyle changes. Changing consumer preferences will be the single most important catalyst dominating consumer M&A activity in 2022, both in terms of corporate portfolio optimization and private equity funds' focus.

Covid-19 related restrictions continue to affect several of the hardest-hit sub-industries, including hospitality and leisure. But with the easing of restrictions, consumer confidence is expected to return, as is pent-up demand. However, the evolution of the coronavirus in the coming months, expectations of slower GDP growth in parts of the world, higher product prices due to inflation and persistent supply-chain bottlenecks could pose operational challenges for some companies [35].

M&A activity is expected to remain strong in 2022 as companies transition to changing consumer preferences. The key themes driving M&A – health and beauty, especially online beauty retail, remain attractive as spin-offs and spin-offs are used as complementary business models or as a way to enter new geographic markets.

Focus on supply chain and logistics virtual reality for a growing interest in virtual reality for consumer-facing companies' online platforms and e-commerce offer opportunities to further shape the landscape. Virtual showrooms, fashion shows and fittings offer the potential to sell more physical goods.

The outlook for M&A in the consumer market in 2022 remains strong, helped by continued corporate innovation M&A hot spots and digitizing businesses in 2022 to respond to changing customer preferences and emerging business models home and garden business (such as home furnishings, home decor, garden and outdoor equipment). An expected increase in the spin-off and restructuring of some consumer sub-industries will further boost convergence and home storage solutions received a boost during the pandemic due to a boom in the consumer environment. Demand is likely to be stronger in 2022, with Dawei hybrid working model expected to further create demand for home office space and consumers will continue to spend on home improvements.

Casual wear (including athleisure) has become one of the hottest segments in fashion. In the consumer market, dealers face exciting new opportunities. Enterprise and private placement field, has attracted the interest of corporate and private equity fund investors, as homework's will be busy in 2022 using M&A deals to reshape its asset portfolio, as constant people who do work are more likely to choose comfortable clothes over informal office clothes. Changing consumer preferences have created an appetite for new products and services, and entirely new business models [75]. In energy, utilities and resources, ESG is a core topic across the industry, and transaction activity shows that companies are gradually optimizing their asset structure through consolidation.

In 2021, the number and value of deals in the energy, utilities and resources sectors rose 8% and 67%, respectively, from the previous year. Highlights by geography and industry include (Figure 3.5).

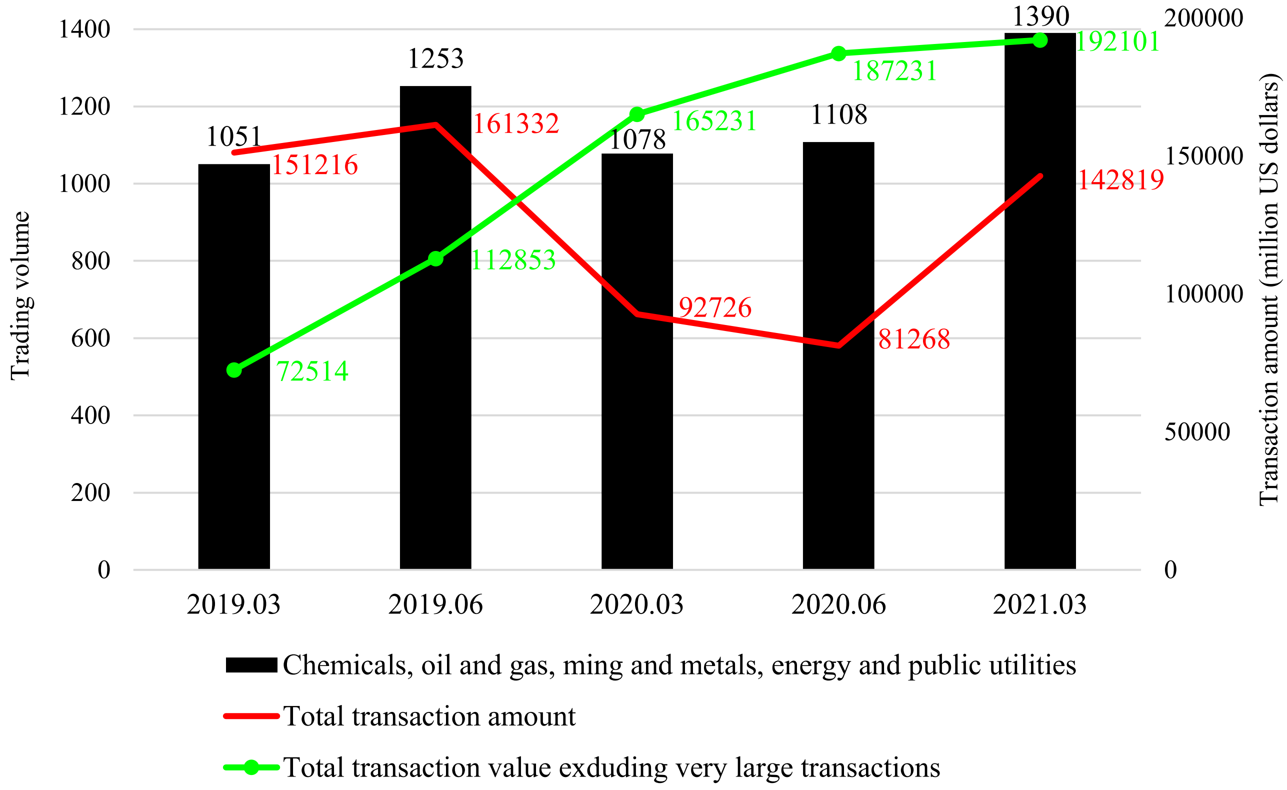


Figure 3.5. – Volume and value of energy, utilities and resources transactions in 2019-2021

Source: author's development based on data analysis [31].

The Americas remained the leading region for M&A, despite the volume ratio in 2021.

It fell 1% in 2020, largely due to an 11% drop in mining and metals trading. In terms of deal value, the Americas saw a 66% increase in deal value in 2021 from the previous year, with the number of mega deals disclosed doubling, particularly for gold mining, upstream oil and gas, and specialty chemicals assets.

Asia-Pacific's share of global related M&A increased in 2021 (figure 3.6), with transaction volume up 9% from the previous year and accounting for 35% of global deal volume, 32% higher than the previous five-year average. The value of transactions was 56% higher than the same period last year, accounting for 30% of global transactions and 22% higher than the previous five-year average [29].

Volumes in Middle East picked up, rising year-on-year. 23%, mainly due to renewed activity in the chemicals and power and utilities sectors. The value of deals in the region was up 81% from the previous year, driven by significant deals in some upstream oil, gas and distribution assets [47].

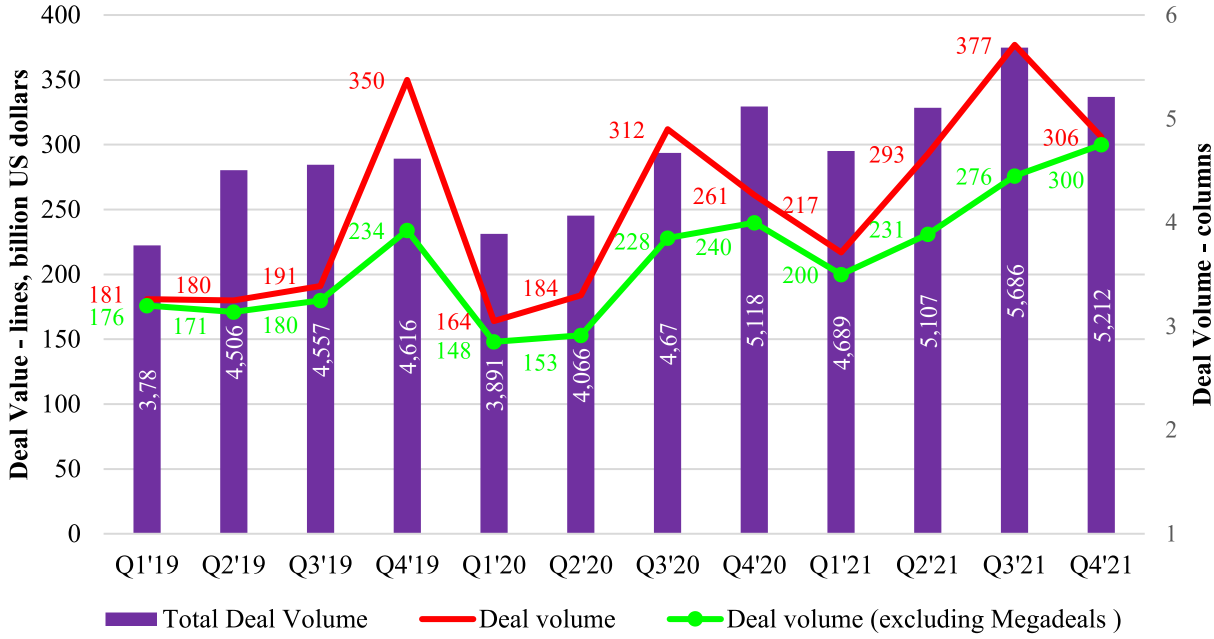


Figure 3.6. – Deal volumes and values in the Asia-Pacific by 2019-2021

Source: author's development based on data analysis [29].

And environmental, social and governance (ESG) related to the M&A activity is becoming mature, this is mainly due to part of the industry's leading enterprises to the transformation of their own ESG has taken a more active development strategy: looking back at the past few years, dominated by ESG of M&A (such as disposal of carbon-intensive assets) usually is largely considered to be tools of the regulatory and shareholder request. But today more and more companies are using ESG risk management as part of their overall strategy and see ESG as an opportunity to unlock value. As companies continue to reshape their portfolios to capture opportunities in high-growth markets such as energy transition, carbon reduction and decarbonisation, PWC expects M&A activity to remain high in the longer term.

3.2 Proposals and directions for development the efficiency of bargain by mergers and acquisitions of listed companies in country of Asia

Under a number of new policies, flickering, following the trend and blind cross-border M&A, more and more difficult to move forward, and industrial M&A have been rising.

Several factors are at play in the Asia-Pacific region, with China implementing antitrust, data security and industry-specific regulations (appendixes A–E). Driving this fundamental repositioning of global boardrooms shareholder activism drives regulation.

Corporate boards conduct strategic portfolio reviews and divest underperforming or non-core dominant positions. In addition, protectionism is on the rise, for example in relation to semiconductor technology [63, 66].

Business CEOs are also increasingly focusing on agility – policies toward changing customer lines can also make it difficult to get approval for certain deals and can lead to markets.

Ability to respond quickly to and business model interruptions. In some cases, bigger firms are focusing more on domestic deals and less on cross-border M&A activity.

Financial and operational agility and a focus on industry-specific dynamics appear to be more important than the traditional benefits of scale effects and collectivization, which could trigger more divestitures in 2022.

Supply chain optimization ESG influence increases, companies continue to use M&A to build agility and resilience against current negative factors. As investors use ESG criteria to assess risk and identify value creation opportunities, supply chains have been an area of particular interest. Expect ESG factors to be increasingly factored into M&A decisions and strategies in 2022.

For example, in the there will be more vertically integrated deals, up to secure key raw materials or zero in PWC's 2021 Global Private Equity Fund Responsible Investment survey. Security of supply of components, down to control how products are distributed. Many found that more than half of the respondents had abandoned a partnership or investment for ESG reasons [31].

Companies facing raw material or labor shortages, port blockades, container shortages, especially as companies and private equity funds increasingly commit to reducing carbon emissions.

Companies in the manufacturing, pharmaceutical and medical device industries are now focusing on the green energy transition in anticipation of more money flowing into it, creating opportunities for M&A.

Offshore or nearshore outsourcing opportunities to shorten delivery times and build supply chains are estimated only in carbon-heavy industries and also in those developing new technologies.

More also expect investor appetite for technologies focused on supply chain processes and also expect to see an increase in M&A in industries transitioning to new business models, there's a lot of interest from companies, especially big data companies. Including major oil and gas companies – turning to investments in renewable energy and radon energy, as well as the tech industry, is innovating around energy storage or energy to create solutions for a more sustainable circular economy.

In addition to ESG, strong commodity prices, adequate capital supply and demand for chemicals – as the chemical industry recovers from heavy demand and supply chain disruptions during the pandemic.

Supply chain security concerns will also affect the recovery of M&A across the industry in the short to medium term, with M&A activity accelerating in the second half of 2021 and on track to pick up in 2022.

Consolidation in upstream natural gas will continue, chemical companies will seek stable supplies of raw materials around their production bases through targeted acquisitions, while infrastructure funds will continue to invest heavily in power and utilities, oil and gas midstream assets, and renewable energy.

M&A for the purpose of vertical integration and industrial integration have begun to increase, and benign merger and reorganization environment in A-share market is gradually forming.

After all, in a mature capital market, merger and reorganization is an effective way for a company to develop in an extensional way. By extending the value chain or business scope of an enterprise through merger and reorganization, the industry competitiveness and profitability of an enterprise can be improved.

More cross-border M&A in emerging industries. Enterprises form new development power through the extensional M&A of new technologies and new products. The diversified M&A from the traditional industry leader to the emerging industry will be the new development trend.

Cross-border acquisitions have increased significantly. According to the measures for the administration of overseas investment issued by the National Development and Reform Commission (NDRC), the "small path" system has been abolished, which means that any overseas acquisition or bidding project with a Chinese investment of 300 million US dollars or above will no longer need to submit project information report to the NDRC before carrying out substantive work abroad [49].

This will enable the early stage of overseas investment projects to be promoted more quickly, and the transaction cost will be reduced. With the establishment and promotion of the "One Belt and One Road" strategy at the national level, overseas acquisition will also be significantly enhanced [74].

For listed companies, M&A decision should be based on the long-term interests of enterprises, abandon short-sighted behavior, and do a good job of feasibility study, in the M&A activities and after the M&A, should strengthen the integration between the targets company’s and give full play to the advantages of both sides.

In addition, in the implementation of hybrid M&A before prudent decision-making, can not blindly diversified expansion, blindly into the so-called emerging industries.

For governments at all levels, do not intervene in the M&A activities of listed companies, otherwise it is not conducive to the long-term development of listed companies.

As for the securities supervision department, it is necessary to improve the regulation on the qualification of rights offering of listed companies.

For a long time, the China securities regulatory commission has imposed strict restrictions on the eligibility of listed companies for rights offering.

Although the original intention of China securities regulatory commission is to protect the interests of investors, it is inevitable for many listed companies to conduct performance manipulation and speculation through M&A when only the return on equity is used to measure corporate performance [57, 68, 69].

Therefore, China securities regulatory commission should take better measures to determine the qualification of listed companies for rights offering, so as to reduce the profit manipulation motive of listed companies.

Chen Xiaoyue proposed to expand the evaluation scope of the performance of listed companies, changing the original single profit index to multiple indicators including profit amount and profit structure [72].

We think this might be a viable approach. At the same time, the China securities regulatory commission should also formulate effective measures to crack down on and restrict vicious speculation in the M&A activities of listed companies. In addition, the shareholding structure of listed companies has some rationality for their M&A decisions.

In a word, the principle of holding large shares implemented in the restructuring of M&A in Asia conforms to objective laws, effectively motivates and restricts the operators, avoids the problem of mechanism weakening in the earlier M&A in Asia, and comprehensively improves the business performance of enterprises.

This principle has achieved remarkable results in the current stage of implementation. How to maintain and expand this effect, we think it is necessary to establish an effective operator selection mechanism.

Only in this way can it make sense to hold large shares. Without the guarantee of the excellent human capital of the operator, no matter how good the supervision and restraint mechanism are, the improvement of enterprise performance can not be changed.

After view, on the other hand, its authority for such a view is very firmly, and most of the shares in Asian M&A to open trading, it makes it hard for the larger Asian M&A by replacement of operators, the transfer of shares stock market mechanism of "voting with their feet" constraint for the operator can't be formed. Obviously, the establishment of operator survival of the fittest mechanism is a major issue that must be considered after the operator holds large shares.

Dealmakers are adapting to a new business climate – one where short-term volatility in financial markets, inflationary pressures, rapidly rising interest rates, supply chain disruptions and geopolitical tensions all appear to be developing into longer-term trends. As a result, charting a strategic reset of M&A priorities and approaches will be essential in order to unlock future growth.

Now is not the time to sit things out. To the contrary, we believe that is the time for true leaders and best-in-class dealmakers to make bold moves and set the stage for the next five years, winning the targets that matter most to their business or portfolio and using M&A to pursue opportunities that can deliver value in a challenging economy.

There's no doubt that dealmakers now face a higher bar for success. Gone are the days when returns were generated simply through the passage of time. We remain optimistic that the need for both speed and agility to navigate the current challenges will ensure M&A remains a strategic priority, helping companies to transform, grow and build a new foundation for their future success.

Conclusions by chapter 3

PE firms face challenges from rising costs and interest rates, contracting public market multiples and falling consumer confidence. PEs will need to focus on ever more sophisticated value creation strategies such as digital transformation and cloud re-platforming, along with a laser-like focus on dealing with inflationary cost increases to generate returns.

As stability is restored in the Asia-Pacific, the M&A market will become more and more active. The world has not yet fully overcome the negative effects of the coronavirus pandemic, but there is a surge in new, larger deals. The important role of the ESG has introduced its own rules and criteria for a deeper assessment of assets and placement of capital of companies. The surge in new SPACs in search of the right moment and target for acquisitions, as well as new technologies and the shift to online processes, enable transactions to be completed with less time and resources, portend even more activity in the M&A market for listed companies in the coming years.

CONCLUSION

A comprehensive study of the problems effectiveness of M&A of listed allowed us to draw the following conclusions and formulate recommendations for the practical use of the results.

1. The analysis of empirical studies allows us to conclude that the distribution of the added value created by the transaction between the parties to the transaction is uneven. In the samples on which these studies were carried out, there are results according to which the shareholders of the target company benefit from the transaction, while in most of the analyzed samples the transaction turns out to be unprofitable for the shareholders of the acquiring company (in particular, this thesis is confirmed for transactions with public companies). In such cases, the acquiring company pays the shareholders of the target company for the acquired block of shares an amount exceeding its investment value for the acquiring company. That is, the payment exceeds the sum of the fair value of the acquired block of shares and the cumulative synergies that form the economic effect (value added) from the transaction. A biased estimate of the expected premium (or indicative expected premium, if used as part of the formation of the negotiating position of the parties to the transaction) is one of the key factors in the economic inefficiency of M&A transactions for the shareholders of the acquiring company.

2. The features of decision-making in the field of M&A in listed companies include: a surge of new SPACs, which are leaders in concluding mega-deals, namely, they account for 90% of concluded deals; active participation of private investors using own and borrowed funds, which led to an increase in the share of transactions involving PE from 27% to 38% (from 2019 to 2021), the increasing importance of ESG leads to re-evaluation of strategies and deeper analysis in M&A deals. Since M&A provides the opportunity to get the desired result, whether it is entering a new market or acquiring technologies in the shortest possible time, which implies the growth of the M&A industry and its optimistic forecast for the coming years. Particularly affected are those areas that can be considered essential and vital, such as healthcare and pharmaceuticals. Active actions are also expected in areas that can quickly and effectively adapt to the new world conditions [1-A].

3. As stability is restored in the Asia-Pacific, the M&A market will become more and more active. The world has not yet fully overcome the negative effects of the coronavirus pandemic, but there is a surge in new, larger deals. The important role of the ESG has introduced its own rules and criteria for a deeper assessment of assets and placement of capital of companies. The surge in new SPACs in search of the right moment and target for acquisitions, as well as new technologies and the shift to online

processes, enable transactions to be completed with less time and resources, portend even more activity in the M&A market for listed companies in the coming years.

In a word, the principle of holding large shares implemented in the restructuring of M&A in Asia conforms to objective laws, effectively motivates and restricts the operators, avoids the problem of mechanism weakening in the earlier M&A in Asia, and comprehensively improves the business performance of enterprises. This principle has achieved remarkable results in the current stage of implementation. How to maintain and expand this effect, we think it is necessary to establish an effective operator selection mechanism. Only in this way can it make sense to hold large shares. Without the guarantee of the excellent human capital of the operator, no matter how good the supervision and restraint mechanism are, the improvement of enterprise performance cannot be changed. After view, on the other hand, its authority for such a view is very firmly, and most of the shares in Asian M&A to open trading, it makes it hard for the larger Asian M&A by replacement of operators, the transfer of shares stock market mechanism of "voting with their feet" constraint for the operator can't be formed. Obviously, the establishment of operator survival of the fittest mechanism is a major issue that must be considered after the operator holds large shares.

BIBLIOGRAPHY

References

1. Agrawal, A. The post-merger performance puzzle / A. Agrawal, J. F. Jaffe // Advances in Mergers and Acquisitions. – 2000. – Vol. 1. – P. 7–41.

2. Akbulut, M. E. Do Overvaluation-Driven Stock Acquisitions Really Benefit Acquirer Shareholders / M. E. Akbulut // Journal of Financial and Quantitative Analysis. – 2013. – Vol. 48 (4). – P. 1025–1055.

3. Alexandridis, G. Value Creation from M&As: New Evidence / G. Alexandridis, N. Antypas, N. Travlos // Journal of Corporate Finance. – 2017. – Vol. 45 (C). – P. 632–650.

4. Alexandridis, G. Gains from Mergers and Acquisitions Around the World: New Evidence / G. Alexandridis, D. Petmezas, N. G. Travlos // Financial Management. – 2010. – Vol. 39 (4). – P. 1671–1695.

5. Andrade, G. New Evidence and Perspectives on Mergers / G. Andrade, M. Mitchell, E. Stafford // The Journal of Economic Perspectives. – 2001. – Vol. 15 (2). – P. 103–120.

6. Asquith, P. Merger Bids, Uncertainty and Stockholder Returns / P. Asquith // Journal of Financial Economics. – 1983. – Vol. 11 (1-4). – P. 51–83.

7. Babina, A. Mergers and acquisitions as a tool for attracting foreign investment / A. Babina // Bank Bulletin. – 2018. – No. 7. – P. 36–47.

8. Beltratti, A. Is M&A different during a crisis? Evidence from the European banking sector / A. Beltratti, G. Paladino // Journal of Banking & Finance. – 2013. – Vol. 37, No. 12. – P. 5394–5405.

9. Braley, R. Principles of corporate finance / R. Braley, S. Myers. – N.-Y.: Olymp-Business, 2018. – 1008 p.

10. Bruner, R. Does M&A Pay? A Review of the Evidence for the Decision-Maker / R. Bruner // Journal of Applied Finance. – 2002. – Vol. 12. – P. 48–68.

11. Capron, L. Acquisitions of Private vs. Public Firms: Private Information, Target Selection and Acquirer Returns / L. Capron, J-C. Shen // Strategic Management. – 2007. – Vol. 28 (9). – P. 891–911.

12. Caves, R. Mergers, Takeovers, and Economic Efficiency / R. Caves // International Journal of Industrial Organization. – 1989. – No. 1. – P. 151–174.

13. Chang, S. Takeovers of Privately Held Targets, Methods of Payment and Bidder Returns / S. Chang // The Journal of Finance. – 2002. – Vol. 53 (2). – P. 773–784.

14. Chari, A. The Value of Control in Emerging Markets / A. Chari, P. P. Ouimet, L. L. Tesar // Review of Financial Studies. – 2010. – Vol. 23 (4). – P. 1741–1770.

15. Davidenko, A. A. Economic efficiency of mergers and acquisitions for the parties to the transaction / A. A. Davidenko // Innovations and investments. – 2021. – No 8. – P. 71–78.

16. Deans, G. To victory through fusion. How to turn industry consolidation to your advantage / G. Dinz, F. Kruger, S. Seizel. – London: Business Books, 2004. – 252 p.

17. Draper, P. Acquisitions: Private versus Public / P. Draper, K. Paudyal // European Financial Management. – 2006. – Vol. 12 (1). – P. 57–80.

18. Eckbo, B. E. Horizontal Mergers, Collusion and Stockholder Wealth / B. E. Eckbo // Journal of Financial Economics. – 1983. – Vol 11 (1-4). – P. 241–273.

19. Eckbo, B. E. Information Disclosure, Method of Payment, and Takeover Premiums: Public and Private Tender Offers in France / B. E. Eckbo, H. Langohr // Journal of Financial Economics. – 1989. – Vol. 24 (2). – P. 363–403.

20. Eckbo, B. Are Stock-financed Takeovers Opportunistic? / B. Eckbo, T. Makaew, K. Thorburn // Journal of Financial Economics. – 2018. – Vol. 118 (3). – P. 443–465.

21. Ellis, K. M. Transfer Effects in Large Acquisitions: How Size-specific Experience Matters / K. M. Ellis [et al.] // Academy of Management Journal. – 2011. – Vol. 54 (6). – P. 1261–1276.

22. Erel. I. Determinants of Cross-Border Mergers and Acquisitions / I. Erel, R. C. Liao, M. S. Weisbach // The Journal of Finance. – 2012. – Vol. 67 (3). – P. 1045–1082.

23. Faccio, M. Returns to Acquirers of Listed and Unlisted Targets / M. Faccio, J. J. McConnell, D. Stolin // Journal of Financial and Quantitative Analysis. – 2006. – Vol. 41 (1). – P. 197–220.

24. Faffa, R. Merger and acquisition research in the Asia-Pacific region: A review of the evidence and future directions / R. Faffa, Sh. Prasadhb, S. Shams // Research in International Business and Finance. – 2019. – Vol. 50. – P. 267–278.

25. Fan, J. P. H. On the Patterns and Wealth Effects of Vertical Mergers / J. P. H. Fan, V. Goyal // The Journal of Business. – 2006. – Vol. 79 (2). – P. 877–902.

26. Fu, F. Acquisitions Driven by Stock Overvaluation: Are they Good Deals? / F. Fu, L. Lin, M. S. Officer // Journal of Financial Economics. – 2013. – Vol. 109 (1). – P. 24–39.

27. Galpin, T. J. The Complete Guide to Mergers and Acquisitions / T. J. Galpin, M. Handon. – N.-Y.: Oxford, 2018. – 240 p.

28. Global M&A By the Numbers: 2021 Recap [Electronic resource]. – Access mode: https://www.spglobal.com/marketintelligence/en/news-insights/blog/global-ma-by-the-numbers-2021-recap. – Access date: 22.09.2022.

29. Global M&A Industry Trends: 2022 Mid-year Update [Electronic resource]. – Access mode: https://www.pwc.com/gx/en/services/deals/trends.html. – Access date: 13.10.2022.

30. Global M&A Industry Trends: 2022 Outlook [Electronic resource]. – Access mode: https://www.pwc.co.nz/services/mergers-acquisitions-valuations/trends.html. – Access date: 17.09.2022.

31. Global M&A Report 2022 [Electronic resource]. – Access mode: https://www.bain.com/globalassets/noindex/2022/bain_report_global_m_and_a-report-2022.pdf. – Access date: 13.09.2022.

32. Goncharova, N. S. Trends and prospects for the development of the market of mergers and acquisitions abroad / N. S. Goncharova // Synergy of Sciences. – 2020. – No. 43. – P. 23–31.

33. Jansen, I. Ph. How to Predict the Market's Reaction When You Announce an Acquisition / I. Ph. Jansen, N. V. Stuart // Corporate Accounting & Finance. – 2014. – Vol. 25 (2). – P. 43–49.

34. Jensen, M. The Market for Corporate Control: The Scientific Evidence / M. Jensen, R. Ruback // Journal of Financial Economics. – 1983. – Vol. 11. – P. 5–50.

35. Kooli, Ch. Impact of Covid-19 on Mergers, Acquisitions & Corporate Restructurings / Ch. Kooli, M. L. Son // Businesses. – 2021. – Vol. 1. – P. 102–114.

36. Loughran, T. Do Long-Term Shareholders Benefit from Corporate Acquisitions? / T. Loughran, A. M. Vijh // The Journal of Finance. – 1997. – Vol. 52 (5). – P. 1765–1790.

37. Madunts, K. A. Evaluation of the effectiveness of mergers and acquisitions of companies / K. A. Madunts // Actual research. – 2020. – No. 24 (27). – P. 81–84.

38. Maksimovich, V. Post-merger Restructuring and the Boundaries of the Firm / V. Maksimovic, G. Phillips, N. R. Prabhala // Journal of Financial Economics. – 2011. – Vol. 102 (2). – P. 317–343.

39. Martynova, M. A Century of Corporate Takeovers: What Have We Learned and Where do We Stand? / M. Martynova, L. Renneboog // Journal of Banking & Finance. – 2008. – Vol. 32 (10). – P. 2148–2177.

40. Martynova, M. The Performance of the European Market for Corporate Control: Evidence from the Fifth Takeover Wave / M. Martynova, L. Renneboog // European Financial Management. – 2011. – Vol. 17 (2). – P. 208–260.

41. Mitchell, M. Managerial Decisions and Long-Term Stock Price Performance / M. Mitchell, E. Stafford // Journal of Business. – 2000. – Vol. 73 (3). – P. 287–329.

42. Moeller, S. B. Firm Size and the Gains from Acquisition / S. B. Moeller, R. Stulz // Journal of Financial Economics. – 2004. – Vol. 73. – P. 201–278.

43. Moeller, S. B. Wealth Destruction on a Massive Scale? A Study of Acquiring-Firm Returns in the Recent Merger Wave / S. B. Moeller, F. Schlingemann, R. Stulz // Journal of Finance. – 2005. – Vol. 60. P. 757–782.

44. Myers, S. C. Corporate Financing and Investment Decisions when Firms Have Information that Investors do not Have / S. C. Myers, N. S. Majluf // Journal of Financial Economics. – 1984. – Vol. 13 (2). – P. 187–221.

45. M&A Statistics [Electronic resource]. – Access mode: imaa-institute.org/statistics-mergers-acquisitions.html – Access date: 03.09.2022.

46. Netter, J. M. Implications of Data Screens on Merger and Acquisition Analysis: A Large Sample Study of Mergers and Acquisitions from 1992 to 2009 / J. M. Netter, M. A. Stegemoller, M. B. Wintoki // Review of Financial Studies. – 2011. – Vol. 24 (7). – P. 2316–2357.

47. Pantsulaya, L. V. World market of mergers and acquisitions: current trends and development prospects / L. V. Pantsulaya // Topical issues of modern economics. – 2022. – No. 5. – P. 125–128.

48. Renneboog, L. Failure and Success in Mergers and Acquisitions / L. Renneboog, C. Vansteenkiste // Journal of Corporate Finance. – 2019. – Vol. 58 (C). – P. 650–699.

49. Rimer, M. Yu. Economic essence of mergers and acquisitions / M. Yu. Rimer // Economics and Modern Management: Theory and Practice. – 2017. – No. 41. – P. 2–10.

50. Skripnyuk, D. F. Modern trends in the global market for mergers and acquisitions / D. F. Skripnyuk, Y. Zeng // Horizons of the economy. – 2022. – No. 1 (67). – P. 137–145.

51. Steger, U. Why Merger and Acquisition (M&A) Waves Reoccur – The Vicious Circle from Pressure to Failure / U. Steger, C. Kummer // Strategic Management Review. – 2008. – Vol. 2, No 1. – P. 44–63.

52. Van Horn, J. K. Fundamentals of financial management / J. K. Van Horn, J. M. Vakhovich. – N.-Y.: Oxford, 2008. – 1232 p.

53. Weidenbaum, M. Takeovers and Stockholders: Winners and Losers / M. Weidenbaum, S. Vogt // California Management Review. – 1987. – Vol. 29. – P. 157–168.

54. Yilmaz, I. S. Global Merger and Acquisition (M&A) activity: 1992–2011 / I. S. Yilmaz, B. Tanyeri // Finance Research Letters. – 2016. – Vol. 17 (C). – P. 110–117.

55. 戴相龙。世界变局下的并购市场 / 戴相龙 // 产权导刊。– 2021。– 第1 期。– 页 30–31。

56. 康荣平。对中国企业跨国并购若干因素的思考 / 康荣平 // 国际经济合作。– 2010。– 第 11 期。– 页 27–29。

57. 李新功。中国通货膨胀的内外因素与传导机制及解决方案分析 / 李新功 // 河南金融管理干部学院学报。– 2008。– 第 4 期。– 页 92–98。

58. 李倩倩。国际营销领域研究综述：多视角的评析 / 李倩倩, 薛求知 // 华东经济管理。– 2014。– 第 28(3)期。– 页 147–151。

59. 李宇姣。并购研究：从代理观到行为观 / 李宇姣 // 湖北经济学院学报(人文社会科学版)。– 2022。– 第 19(8)期。– 页 60–64。

60. 刘华。进出口贸易与通货膨胀的国际传导—基于中国数据的实证检验 / 刘华, 卢孔标 // 金融与经济。– 2007。– 第 10 期。– 页 13–16, 12。

61. 柳清。国际贸易与企业生产率关系研究 / 柳清, 李军伟 // 价格月刊。 – 2022。– 第 9 期。– 页 44–51。

62. 马崇明。对未来中国经济现代化进程相关指标的预测与分析 / 马崇明 // 统计与决策。– 2005。– 第 13 期。– 页 52–55。

63. 徐静。中国股票与外汇市场相关性分析 / 徐静, 郭松睿 // 商业研究。 – 2013。– 第 8 期。– 页 144–150。

64. 薛安伟。后全球化背景下中国企业跨国并购新动机 / 薛安伟 // 世界经济研究。– 2020。– 第 2 期。– 页 97–105, 137。

65. 薛迎春。中国货币市场失衡与国际储备波动联系—基于 1994 年～2004

年的实证分析 / 薛迎春 // 上海经济研究。– 2007。– 第 10 期。– 页 47–51。

66. 夏添。人民币汇率与通货膨胀关系的实证分析 / 夏添 // 经济论坛。– 2015。– 第 4 期。– 页 4–9。

67. 唐海燕。进出口贸易与经济增长：作用机制与风险度量 / 唐海燕 // 华东师范大学学报(哲学社会科学版)。– 2008。– 第 40(6)期。– 页 104–116。

68. 吴春明。进出口贸易对我国国内通货膨胀的影响 / 吴春明 // 商场现代化。– 2006。– 第 3 期。– 页 13。

69. 胡圣伟。中国企业跨国并购合法性获取的案例研究 / 胡圣伟, 王辉 // 现代商业。– 2021。– 第 36 期。– 页 52–55。

70. 贾博宇。我国进出口贸易对通货膨胀的影响路径及应对策略 / 贾博宇 // 经济纵横。– 2014。– 第 9 期。– 页 32–34。

71. 蒋秋颖。中国金融发展和经济增长关系的实证研究 / 蒋秋颖 // 商业文化。– 2021。– 第 34 期。– 页 31–32。

72. 邱娟。中国进出口贸易对人民币汇率的影响分析 / 邱娟, 林萌, 王波 // 科技和产业。– 2020。– 第 20(5)期。– 页 1–7, 14。

73. 张韬。浅议国际并购浪潮中的中小企业发展的战略选择 / 张韬 // 商场现代化。– 2007。– 第 7 期。– 页 176–177。

74. 程惠芳。中国上市公司跨国并购的财富效应分析 / 程惠芳, 张孔宇 // 世界经济。– 2006。– 第 12 期。– 页 74–80。

75. 程珊珊。进出口贸易对国内通货膨胀的影响 / 程珊珊 // 合作经济与科技。– 2017。– 第 15 期。– 页 112–113。

76. 陈志宏。跨国并购中企业应注意的问题和政府角色 / 陈志宏 // 世界经济研究。– 2006。– 第 11 期。– 页 72–77。

77. 于硕。论通货膨胀与通货紧缩的异同 / 于硕, 王晶 // 商场现代化。– 2014。– 第 29 期。– 页 166–167。

78. 杨婷婷。企业并购动机的理论分析 / 杨婷婷, 周芳 // 中国市场。– 2013。– 第 38 期。– 页 65–66。

Author's publications

1-A. 马特维延科 亚历山大 (Matviyenka Aliaksandr) 论亚洲国家上市公司并购的有效性 / 马特维延科 亚历山大 (Matviyenka Aliaksandr), 牛立波 (Niu Libo) // Сборник материалов Белорусско-Китайского молодежного инновационного форума «Новые горизонты – 2022» (论文集 第四届中白青年创新论坛 新地平线 2022), г. Минск, 10-11 ноября 2022 г. / Белорусский национальный технический университет, Институт Конфуция по науке и технике БНТУ, Научно-технологический парк БНТУ «Политехник». – Минск: БНТУ, 2022.

APPENDIXES

APPENDIX A

Stock transactions of China's listed companies from 2017 to 2021

Indicators	2021	2020	2019	2018	2017
Number of domestic listed companies (A and B shares) (home)	4615	4154	3777	3584	3485
Number of listed shares (each)		4233	3857	3666	3567
Number of A-shares (one)		4140	3760	3567	3467
Number of B shares (one)		93	97	99	100
Total issued share capital (100 million shares)	70694	65526	61740	57581.03	53746.67
Issued share capital of A shares (100 million shares)		65173.71	61428	57290.35	53461.94
B shares issued share capital (100 million shares)		305.47	292	291.08	284.74
Outstanding share capital (100 million shares)	60755	56375	52487.62	49047.57	45044.87
Outstanding share capital of A shares (100 million shares)		56072.58	52197	48758.19	44761.43
B shares outstanding share capital (100 million shares)		280.92	291	289.38	283.45
Total market value of shares (100 million yuan)	916088	796487	593075	434924.03	567086.08
Total value of A stock market price (100 million yuan)		796024.47	591623	433547.91	565254.86
B Total stock market price (100 million yuan)		1213.7	1311	1376.13	1831.21
Outstanding market value of shares (100 million yuan)	751556	643096	483327	353794.2	449298.15
Outstanding market value of A shares (100 million yuan)		642395.81	482158	352428.06	447476.33
Circulating market value of B shares (100 million yuan)		1209.49	1304	1366.14	1821.82
Transaction amount of shares (100 million yuan)	2579734	2068252.52	1274158.8	901739.4	1124625.11
Transaction amount of A shares (100 million yuan)		2067631.86	1273572	901103.16	1123647.88
Transaction amount of B shares (100 million yuan)		620.66	587	636.24	977.23
Total number of shares traded (100 million shares)	187426	167451.86	126624.29	82037.25	87780.84
Number of A shares traded (100 million shares)		167323.96	126509	81926.96	87628.57
Number of B shares traded (100 million shares)		127.9	116	110.3	152.27
The Shanghai Composite index is the highest		3474.9	3288.5	3587	3450.5
The Shanghai Composite index is the lowest		2646.8	2440.9	2449.2	3016.5
The Shanghai Composite index closed	3639.8	3473.1	3050.1	2493.9	3307.2
The Shenzhen Composite index was the highest		2340.9	1799.1	1966.2	2054
The Shenzhen Composite index was the lowest		1553	1231.8	1212.2	1753.5
The Shenzhen Composite Index closed	2530.1	2329.4	1723	1267.9	1899.3

APPENDIX B

Number of listed companies in China from 2017 to 2021

Indicators	2021	2020	2019	2018	2017
Number of domestic listed companies (A and B shares) (home)	4615	4154	3777	3584	3485
Number of domestic listed companies on SSE (A and B shares) (companies)		1800	1572	1450	1396
Number of domestic listed companies in Shenzhen Stock Exchange (A and B shares) (companies)		2354	2205	2134	2089
Number of domestic listed companies with only A-share issuance (companies)		4140	3760	3567	3467
Number of domestic listed companies issuing A and H shares (companies)					
Number of domestic listed companies issuing A and B shares (companies)		82	80	82	82
Number of domestic listed companies that only issue B shares (companies)	90	93	97	99	100

APPENDIX C

Scale and composition of China's social financing from 2017 to 2021

Indicators	2021	2020	2019	2018	2017
Scale of social financing (100 million yuan)	313407	347917	256735	224920	261536
RMB loans social financing scale (100 million yuan)	199403	200310	168835	156712	138432
Foreign currency loans (equivalent to RMB) Scale of social financing (100 million RMB)	1715	1450	-1275	-4201	18
Scale of social financing of entrusted loans (100 million yuan)	-1696	-3954	-9396	-16062	7994
The financing of the trust loan society (the million yuan)	-20074	-11020	-3467	-6975	22232
Undiscounted bank acceptance bills Scale of social financing (100 million yuan)	-4916	1746	-4757	-6343	5364
Scale of social financing of corporate bonds (100 million RMB)	32866	43748	33384	26318	6244
Scale of domestic equity social financing of non-financial enterprises (RMB 100 million)	12133	8923	3479	3606	8759

APPENDIX D

Distribution of China's industrial investment from 2017 to 2021, 10 000 US dollars

Indicators	2021	2020	2019	2018	2017
Amount of foreign direct investment actually utilized	17348000	14436926	13813462	13496600	13103500
Amount of foreign direct investment actually utilized in agriculture, forestry, animal husbandry and fishery		57567	56183	80131	107492
Amount of foreign direct investment actually utilized in mining industry		66394	219044	122841	130198
Amount of foreign direct investment actually utilized in manufacturing		3099695	3537022	4117421	3350619
Actual utilization of foreign direct investment in the production and supply of electricity, gas and water		311375	352398	442390	352132
Amount of foreign direct investment actually utilized in the construction industry		181887	121551	148809	261940
Amount of foreign direct investment actually utilized in transportation, storage and postal services		499859	453316	472737	558803
Amount of foreign direct investment actually utilized in information transmission, computer services and software industry		1643102	1468232	1166127	2091861
Amount of foreign direct investment actually utilized in wholesale and retail trade		1184445	904982	976689	1147808
Amount of foreign direct investment actually utilized in accommodation and catering industry		82415	97180	90107	41914
Amount of foreign direct investment actually utilized in the financial industry		648240	713206	870366	792119
Amount of foreign direct investment actually utilized in real estate		2033057	2347188	2246740	1685559
Amount of foreign direct investment actually utilized in leasing and business services		2656159	2207283	1887459	1673855
Amount of foreign direct investment actually utilized in scientific research, technical services and geological exploration industry		1793997	1116831	681298	684373
Amount of foreign direct investment actually utilized in water conservancy, environment and public facilities management industry		56758	52242	47408	56951
Amount of foreign direct investment actually utilized in resident services and other services		30766	54218	56166	56723
Amount of foreign direct investment actually utilized in education		28061	22248	7420	7747
Health, social security and social welfare industries actually use foreign direct investment		23547	27186	30178	30516
Amount of foreign direct investment actually utilized in culture, sports and entertainment		39602	62986	52290	69846
Public administration and social organizations are actually using foreign direct investment			166	12	3057

APPENDIX E

Conditions of China's securities market from 2017 to 2021

Indicators	2021	2020	2019	2018	2017
Number of domestic listed companies (A and B shares) (home)	4615	4154	3777	3584	3485
Number of domestic listed foreign capital stock companies (B shares) (companies)	90	93	97	99	100
Number of overseas listed companies (H shares) (companies)	323	291	294	267	252
Total issued share capital (100 million shares)	70694	65526	61740	57581.03	53746.67
Outstanding share capital (100 million shares)	60755	56375	52487.62	49047.57	45044.87
Total market value of shares (100 million yuan)	916088	796487	593075	434924.03	567086.08
Outstanding market value of shares (100 million yuan)	751556	643096	483327	353794.2	449298.15
Stock trading volume (100 million shares)	187426	167451.86	126624.29	82037.25	87780.84
Transaction amount of shares (100 million yuan)	2579734	2068252.52	1274158.8	901739.4	1124625.11
Shanghai Composite Index (close)	3639.8	3473.1	3050.1	2493.9	3307.2
Shenzhen Composite Index (close)	2530.1	2329.4	1723	1267.9	1899.3
Shanghai Average P/E ratio (%)	20.9	16.1	15.6	12.5	16.3
Shenzhen Average P/E ratio (%)	33	33.5	35.6	20	36.2
Average turnover rate in Shanghai (%)	223	258.5	193.9	150.9	180.5
Average turnover rate in Shenzhen (%)	523.4	555.9	454.9	356.9	412.9
Issuance of Treasury bonds (100 million yuan)			83715	77063	82243
Bond transaction volume (100 million yuan)	3790124	3075974.26	2473724	2405453.7	2687635.66
Spot transaction amount of Treasury bonds (100 million yuan)	289275	201785.82	83530.2	63821.94	55441.79
Transaction amount of Treasury bond repurchase (100 million yuan)	3501926	2874188.44	2390194	2341631.76	2632193.87
Number of securities investment funds (only)	9152	7258	6111	5580	4848
Securities investment fund size (100 million yuan)	218244	169974.29	136937.42	128961.33	110182
Transaction amount of securities investment fund (100 million yuan)	183100	136238.63	91679.38	102705	98052
Total futures trading Volume (ten thousand lots)	726924	602735	392157	301070	307106
Total futures turnover (100 million yuan)	5807071	4373005	2905856	2108057	1878951