

Combination of Artificial Intelligence with Mergers and Acquisitions

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Abstract. Companies in charge of mergers and acquisitions (M&A), relying solely on a large number of manual calculations to analyze mergers and acquisitions has become a history, data analysis has completely changed the way mergers and acquisitions, artificial intelligence analysis to a new level. Make decisions smarter and faster throughout the life cycle. Artificial intelligence comes with its own risks as well as convenience. This paper uses case study to describe how AI is used in mergers and acquisitions, and how AI can facilitate mergers and acquisitions to the next level, and analyzes the pros and cons. This paper believes that artificial intelligence should be constrained by perfecting legal structure and meticulous legal provisions, so that its convenience can be maximized and its own information security can be fully maintained.

Keywords: mergers and acquisitions; artificial intelligence.

1. Introduction

The development of artificial intelligence (AI) has not only entered people's daily life, but also closely linked with business [1]. Many enterprises combine AI intelligence technology with business, witness the advantages of AI intelligence in business applications, and easily achieve goals that are not easy to achieve. AI intelligence has now become a powerful weapon in the field of competition in all walks of life and has become a core tool for some of the industry's leading ride-hailing platforms, for example, identifying the best delivery routes, appraising drivers, and even helping detect fraud in the transaction. In different fields such as mass retailing and consumer finance, some long-established players are now transitioning to prepare for an AI-based future [2]. With its mobile app and vast data store, Starbucks can accurately track customers' purchasing preferences, which can speed up service times especially during busy times [3]. Burberry, a leading British fashion brand, has used big data and artificial intelligence to improve its performance and increase customer satisfaction [4].

Salespeople can use mobile apps to look up the items you've browsed, so they can better match your preferences when they go online. As the basic technology of the 21st century, the current artificial intelligence technology, with perfect functions, has also reached the mature Internet of society and the market, and various traditional industries have achieved leap-forward upgrades under the blessing of artificial intelligence.

2. Disadvantages of the Traditional Analysis of Work

As we all know, the traditional analysis works are time-consuming and labor-intensive, and requires a lot of human judgment. A humble misjudgment may bring the risk of acquisition and acquisition failure. No other event is more difficult, traumatic, challenging, risky and chaotic for an organization. Traditional analysis works often rely on some traditional data analysis software, such as EXCEL, SPSS, etc., which bring extreme workload and difficulty. In fact, statistical analysis has been in a continuous state of progress, and beyond the traditional statistical methods [5]. Traditional statistical and analytical works rely on the human process of collecting and analyzing data, even though the relevant analytical software can provide statistical techniques. As a matter of fact, the investment of a large number of human resources not only brings higher human resource costs, but

also increases the overall error rate. Because a lot of times, people have a higher error rate than machines or artificial intelligence. This error rate can be fatal in mergers and acquisitions. The repeated checking of data cannot avoid this error rate effectively, also increase the workload and work pressure. This is a huge hurdle for anyone working in statistics. The research shows that the traditional analysis works face a dilemma of timeliness [6]. In many cases, data analysis requires more timeliness. Especially under the influence of market competition mechanism, the process of enterprise merger and acquisition inevitably needs strong timeliness. Because of the inefficient data statistics and analysis process, enterprises will lose the best opportunity for mergers and acquisitions. And the economic loss that this brings is hard to estimate. Traditional analysis works have low efficiency, which also represents a worse timeliness. Due to higher error rate and lower work efficiency, traditional analysis works are difficult to ensure both timeliness and accuracy at the same time. It can even be said that the traditional analysis works can neither guarantee the accuracy nor the timeliness. This flaw must be improved, or the whole analysis process will be vulnerable. And those enterprises which have mastered more advanced analytical methods will be in a competitive position in the market merger and acquisition process. The rigor of traditional analysis works is also one of the major drawbacks, because local data and analysis often affect the authority and persuasiveness of analysis results [7]. Traditional analysis works can only analyze individual indicators or part of the indicators, but they are difficult to form a high degree of comprehensive analysis. In this case, the traditional analysis works are not able to reach a satisfactory conclusion. The calculation of traditional statistical works is often based on historical data, that is, historical financial analysis statements. These data often lack credibility and are difficult to talk about current and future market conditions. In particular, traditional analysis works can only analyze certain aspects, but they are difficult to establish a comprehensive analysis of the correlation. This makes it difficult for traditional analytical data to provide effective reference for decision making. And if other factors change, the traditional analysis may even be completely wrong. This kind of data result which is not in accordance with the fact seriously will inevitably bring huge decision risk. In the process of enterprise merger and acquisition, the defects of traditional analysis works will be more prominent, and may lead to the failure of merger and acquisition.

3. How AI Improves the Traditional Work

Mergers and acquisitions are becoming more and more popular among companies because of the increasing competition. When two companies assist each other to form a company, it is called a merger. The purchase of a weak company by a strong company is called an acquisition. Mergers and acquisitions have a large number of complex steps: Acquisition Strategy, Acquisition Criteria, Searching for Target, Acquisition Planning, Valuing and Evaluating, Negotiation, Due Diligence, Purchase and Sales Contract, Financing and Implementation. With the advent of AI, it helps companies get rid of the complex process of traditional acquisition and acquisition, saving time. So that both companies as soon as possible to get tax, financial, resource advantages, so as to improve the competitiveness.

3.1 Diligence

In the last decades, the process of Due Diligence in Mergers and Acquisitions transactions has played a vital role in the transaction success. This process can either break or make an M&A deal. The combination of Artificial Intelligence and M&A has made this process very time effective and has aided in furnishing cost-effective services to the customer. It has automated the manual & complicated process of examining thousands of documents. You can dive deep into the data to find out what's really going on--before it's too late [8]. Due diligence (Prudence investigation) is a kind of risk management, which aims to enable the buyer to discover risks in advance and judge the nature, extent, impact, and consequences of risks. The seller usually has a good understanding of these risks and obligations, while the buyer does not. Therefore, the buyer must remedy the information

imbalance between the buyer and the seller by performing due diligence. Due diligence can promote or break merger and acquisition activities [9]. AI is taking M&A analysis to the next level, which makes the due diligence not only more efficient but also deep enough.

In Gartner's Group's recent survey, the average time to complete M&A transactions has soared by about 30% in the past decade, which is precisely because of the effect of the combination of M&A and AI [10]. As we all know, traditional analysis work is time-consuming and labor-intensive and requires a lot of human judgment. To some extent, this requires experienced people to take on repetitive work, and a humble misjudgment may bring the risk of acquisition and acquisition failure. Before AI appeared, lawyers reviewed 50-100 documents per hour. But with the help of AI, it can reach 3000 copies per hour [11]. This efficiency improvement is amazing. Deloitte's acquisition analysis platform iDeal is currently using artificial intelligence and machine learning to organize and mark a large amount of data in the front end. Now, iDeal can complete most of the work with little or no participation. Better still, when humans make corrections, the adjusted results will be fed back to the system, so that it can learn from mistakes and become more accurate and reliable over time. iDeal will soon be able to use natural language generation and other AI technologies to analyze M&A data and create reports further improving speed, accuracy, and efficiency. Deloitte is currently developing an M&A market perception platform, which will change the way we monitor market trends and transaction insights. Sensing tools will accelerate the active and strategic identification of emerging risks and value creation opportunities, enable buyers to identify trading opportunities more quickly, and stay ahead of competitors. Not only that, but the improvement of document reading efficiency is also a disguised way to save the buyer's company. If the lawyer reviews the documents on an hourly basis, different efficiency will lead to a huge gap in expenditure. Therefore, compared with manually looking up documents, having the help of AI not only improves efficiency but also allows lawyers to do the same work at a lower cost [12]. Due diligence can dive deep into the data to find out what's going on--before it's too late [13]. Use targeted analysis and artificial intelligence to solve problems that may have a significant impact on M&A transaction decisions and valuation [14]. Many times, manual analysis of surface data will tell a misleading story [15]. In most failed M&A transactions, it is often because the practitioners are too introverted to complete the interview process and cannot master the correct first-hand information. AI can analyze enough data to judge the authenticity of the data [16]. With its ability to analyze micro details and associate them with macro decisions, AI can quickly and deeply analyze the value drivers of the target company and related value creation opportunities and risks, providing valuable insights at every step. For example, what are the company's specific customers? How the profit margin will change in future development and the risks that may be encountered? This will help the buyer company better reveal the true story behind the numbers.

3.2 Negotiation

It takes a lot of time for people to calculate and analyze the risks and prices of mergers and acquisitions. When the whole team is focused on the calculation of one project, it may miss a more appropriate goal. The emergence of AI allows the whole team to make the most favorable judgment in the shortest time. With quicker and deeper insights, bidders can decide whether to pursue a target or move onto another target [17].

3.3 Post-Merger

Integration: Perfect integration is the real completion of a mergers and acquisitions. Buyers are turning to analytics to help identify potential synergy opportunities, risks and hurdles to prepare for integration and post-deal execution.

In most M&A transactions, AI analytics can provide rapid and in-depth analysis of the value drivers of the target company and the associated value creation opportunities and risks, providing valuable insights at every step of the way. Take M&A analytics to the next level - making processes smarter and more efficient through AI.

First of all, get there faster. In M&A, insights are most useful when they are generated in time to affect decision making [18]. For example, the acquisition of the German company Mannesmann by the UK company Vodafone in 2000 was valued at \$183 billion [19]. Secondly, enhance the value of data. Combining with 3rd party or external public data, can have an equally important impact in other phases of the M&A lifecycle, such as integration and post-integration [20]. The last but not the least, go deeper and get real insights. With the ability to analyze micro-level details and correlate them to macro-level decisions.

4. The Disadvantages and How to Improve the AI in M&A

Even though AI brings obvious benefits to M&A, it is obvious that it still has its main weakness, it's not without a set of risks, just like every coin has two sides. First of all, creating difficulty [21]. Cyber security risk is inevitable with the implementation of any type of new technology, especially in M&A activities, because once the system data or materials are exposed to competitors, it will not only lead to the disclosure of the seller's company's secrets but also affect the buyer's long-term strategic deployment of M&A activities [22]. However, since it is far more difficult to establish a perfect and confidential system than expected, many hackers will take advantage of system vulnerabilities to steal confidential information in business and even tamper with contracts. Secondly, replacing human jobs [23]. While marveling at the super ability and efficiency of artificial intelligence, humans are also facing a huge impact of artificial intelligence on the traditional social division of labor. With the continuous improvement of deep learning, artificial intelligence has been able to simply understand and judge sounds, words, images, etc., so it can replace much simple recognition and judgment work. For example, nowadays, telemarketing is often called by robots, even they can make appropriate recommendations based on personal preferences more accurately through data analysis. More and more people are worried that lawyers will lose their jobs shortly because the machine has completed the work manually completed by the contract lawyer team [24]. IBM's Watson computer software can already work as a legal adviser with 90% accuracy in 30 seconds. Compared with human lawyers who have only 70% accuracy [25]. The speed and accuracy gaps make the AI lawyers look superior. There may even be some people who think that AI has no emotion in the work and that they tend to deal with some things more fairly than humans. It will create a better society over time. The last but not the least, It takes a lot of time and money to keep the AI running [26].

5. Contribution - Legal Advice

According to CB Insights, there have been more than 1000 AI acquisitions since 2010. The epidemic situation reduced this number to 159 in 2020 [27]. However, there are signs of a return recently Due diligence may be the most important and time-consuming process in M&A transactions, and the combination of AI will help speed up this process. However, the risks brought by this automation cannot be ignored. The automation of due diligence has brought about problems such as disclosure of confidential information of any customer, network security risks, and replacement of manual work. Therefore, considering the combination of problem and cost AI in M&A due diligence, enterprises should adopt technology and innovative software to promote the transaction process. It is more necessary for the state to further improve relevant laws. Faced with numerous legal risks, AI enterprises should enhance their awareness of risk control and do a good job in data compliance.

From the perspective of privacy, the core of artificial intelligence is data and algorithms, which means that the higher the level of artificial intelligence, the more it needs a large amount of data to practice. These data are likely to include a large amount of personal information, the disclosure of which can lead to incalculable consequences. From the perspective of data protection, artificial intelligence requires a large amount of data to maintain, so when data is leaked and tampered with, it

will not only affect the output results, but also endanger the personal and property safety and social order.

5.1 Use public domain data that does not require authorization

Reasonable collection and use have the legitimate public personal information, collected and used by the anonymous personal information after processing, can minimize the use of AI data compliance risk of personal information, but in use, the enterprise still should focus on data related to business interests, avoid risks and unfair competition because of the improper use of personal property rights infringement.

5.2 Limit the use of AI data and establish security mechanisms

Enterprises establish strict rules and regulations and sign perfect confidentiality clauses with employees to effectively limit the scope of data use. To be specific, the development of artificial intelligence should have a cooperative relationship with privacy protection. The main ethical concern of artificial intelligence is the leakage of privacy, especially some sensitive customer information, such as human information in the medical field [28]. The development of artificial intelligence and the protection of personal privacy should not be placed in opposition just because artificial intelligence may lead to privacy leakage. Relevant recommendations should focus on two areas. On the one hand, the development of artificial intelligence should be subject to ethical restrictions. The bottom line is that customers' privacy should not be divulged at will. In any country, people's right to privacy should be protected by law and bound by ethics, which is their basic right and also a sign to ensure the degree of social civilization. And the potential data leakage risk of artificial intelligence has intensified people's ethical concerns about privacy leakage. Therefore, restrictions on privacy protection, as well as a more perfect legal system, will become a trend in the future. Only when both the company and the country have issued relevant systems and laws can double insurance be provided for privacy protection. The protection of privacy of artificial intelligence will be the key to its rapid development, and the relevant laws and institutions can maintain people's basic dignity and increase their sense of security. The ultimate goal of artificial intelligence is to assist humans to work more effectively, rather than to threaten humans. Artificial intelligence must protect privacy, this is the basic principle, otherwise artificial intelligence will lose the value of existence. On the other hand, ethical concerns about artificial intelligence should not deter people from developing artificial intelligence. The development of artificial intelligence must be subject to legal constraints and the formulation of relevant guidelines for artificial intelligence self-decision-making [29]. The development of artificial intelligence goes through a specific process and it is in a continuous process of progress. At this stage, the law will strictly regulate the development of artificial intelligence and formulate a specific legal framework for the development of artificial intelligence. This can avoid that the development of artificial intelligence led to some factors that are not good for human beings. Most importantly, critically speaking, the development of artificial intelligence should not be impeded. The potential ethical concerns about artificial intelligence should not deter people from developing artificial intelligence. The key lies in the relevant legal and regulatory measures, as well as the company's system. There is no right or wrong argument for technology, and the key is in the hands of human beings. As the technology of the future, artificial intelligence also represents a valuable opportunity. When people can prevent the ethical risks of artificial intelligence relying on legal means, the development of artificial intelligence will be guided correctly. Legal factors will actively promote a balance between the development of artificial intelligence and ethical constraints, and can restrict the wrong guidance of the profit-driven mechanism to a certain extent.

6. Conclusion

In the future, the development of artificial intelligence is much importance to the process of more advanced comprehensive and dynamic analytical tools and a big change in technology, process and

technology can deliver these tools in the past seems to be impossible: combine macroscopic perspective and microcosmic level of detail In less time, less effort, to be more accurate. Every coins has two sides, artificial intelligence needs to pay attention to many problems, the most worth mentioning is whether artificial intelligence will cause harm to people,.To understand the advantages and disadvantages of AI in acquisition and acquisition is for better application.

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