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The Transformative Potential of Artificial Intelligence and its Impact on M&A Transactions

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Artificial intelligence, which enables computer systems to mimic human brain processes, is being progressively incorporated into the legal sector to improve decision-making and streamline procedures. AI has many uses in the context of mergers and acquisitions, including easing due diligence, forecasting outcomes, automating document generation, and examining intellectual property portfolios. While AI can dramatically increase efficiency and decision-making, it's crucial to understand its limitations because it will never completely replace human judgment. The traditional understanding of M&A deals is reviewed, with a focus on the key elements of strategic planning, due diligence, negotiations and post-merger integration. Several reports, however, emphasize the drawbacks and difficulties of the conventional approach, necessitating the use of more effective techniques. The use of AI in M&A transactions is examined, with a focus on its capacity to process enormous volumes of data, analyse compliance and regulatory requirements automatically, and simplify integration. The advantages and disadvantages are discussed. AI assists in candidate selection and strategic analysis during the pre-merger process, which improves decision-making. It assists with due diligence and risk assessment throughout the merger phase, lowering the possibility of errors. However, during discussions and post-merger integration, human judgement and interpersonal abilities continue to be essential. AI has the ability to significantly improve M&A deals by enhancing efficiency and decision-making. However, in order to achieve the desired results, its limitations should be acknowledged, and human expertise should be matched with AI skills. The article underlines the significance of adopting AI technology to maintain competitiveness and adjust to the changing M&A transaction landscape.

Keywords: *merger and acquisitions, artificial intelligence (AI), due diligence, risk assessment, pre-merger, post-merger, negotiations.*

INTRODUCTION: ARTIFICIAL INTELLIGENCE AND ITS APPLICATION IN THE LEGAL ARENA

Artificial intelligence (AI) is the ability of computer systems to simulate human thought processes in order to emulate human behaviour and decision-making. Artificial intelligence (AI) is used in the legal field to develop technology that comprehends natural language, enabling legal practitioners to find pertinent and correct information. In legal databases like Westlaw, for instance, AI-powered natural language search enables computers to comprehend how people naturally think and use language, resulting in faster and more logical results. AI is no longer simply a futuristic idea; it is now a crucial component of common software and tools, continuously advancing and streamlining several activities for legal professionals.[1]

Corporate law can greatly benefit from the use of AI techniques, particularly in areas like workforce management, product development, and cost forecasting, among others. By evaluating massive amounts of data, these AI-driven systems improve corporate governance and allow for more informed management decisions. AI has numerous real-world applications or use cases in the merger and acquisition (M&A) arena. Utilizing such technologies that assess and analyse pertinent data, contracts, and legal risks connected with possible targets, legal due diligence—a crucial component of M&A—can be expedited. Additionally, AI algorithms can help in the prediction of decisions, assisting M&A teams in evaluating prospective legal issues during contract negotiations. AI templates for document automation speed up the creation of required M&A papers. The examination of intellectual property portfolios through such applications can help determine the strength and value of a target company's assets. The application can be extended to mergers and acquisitions, where such

[1] 'The meaning of artificial intelligence for legal researchers' (*Thomson Reuters*) <https://legal.thomsonreuters.com/en/insights/articles/meaning-of-ai-for-the-legal-industry> accessed 20 July 2023

technology can improve decision-making by delivering data-driven insights and supporting improved risk management.

While AI applications have many benefits, they are important to remember that it is still an aid to decision-making rather than a substitute for human judgment. Though this technology used in M&A processes improves decision-making effectiveness and knowledge, corporate deal-making still places a high value on experience and interpersonal connections.

It is expected that more and more automated methods will be used in M&A decision-making as the world adopts AI technology. Corporate executives may assign specific jobs to AI systems, using the results of the algorithms to guide their decisions. However, human control and judgement continue to play a key role in guaranteeing the success of M&A deals. During a panel discussion at the World Economic Forum, Ginni Rometty and Microsoft CEO Satya Nadella highlighted that AI complements rather than replaces human capabilities. AI's potential to increase productivity and provide employees with more breathing room strengthens its function as an aid, which is advantageous for both corporate settings and M&A procedures.[2]

TRADITIONAL UNDERSTANDING OF MERGERS AND ACQUISITIONS

Mergers and acquisitions (M&A) in today's world are a significant part of business transactions. The terms have also been used interchangeably despite having significant differences in meaning. A merger requires two or more businesses to be combined to form a new entity or holding company. In the case of an acquisition, there is the buying of stocks or other assets from the other business in order to gain managerial sway, and the same may not always be an amicably carried out act.[3]

A procedure for an M&A transaction is usually laid out based on strategies driven by certain goals. The procedure has a motive, and therefore these factors are used to evaluate the target

[2] Ananya Avasthi, 'The Utility of AI in Corporate Law' (*Datasaur Platform*, 29 October 2021) <https://datasaur.ai/blog-posts/utility-of-ai-in-corporate-law> accessed 20 July 2023
[3] Pieter Klaas Agersma, 'Cross-border acquisitions of European multinationals' (2005) 30(3) Journal of General Management 13

that has to be acquired or merged. The potentials, once listed out, are contacted, followed by a valuation analysis from the buyer's end. The comprehensive investigation, negotiation, and deal terms are all decided based on many subjective and documented factors.[4]

For the seller, there is a need to establish a motive for the sale. Therefore, the sale has a reason. The same helps in moving toward the preparatory phase, wherein the company's financial, operational, and contractual aspects are evaluated and addressed. This is followed by the creation of a data room that has all the sensitive documentation related to the company and relevant to the M&A transaction. A memorandum is eventually drawn up with all this information. The seller also checks for potential buyers. The negotiation and closing of a deal take place to confirm a successful transaction.

It is, however, important that after the deal closes, the terms are complied with. This ensures smooth transitions after integration. There are, however, certain challenges in the M&A procedures for both the buyer and seller sides. These include issues requiring effective communication between the parties, retention of key employees for the transition period, and ensuring that the targets and financial projections are met. The due diligence process is particularly important because the pre-determination of potential risks and liabilities is important here; otherwise, it hampers the entire transaction. There is also a significant amount of cultural clash, and therefore it becomes immensely important for the groups to navigate their differences within the organisational culture and ensure smooth integration.

Broadly, the M&A transaction requires due diligence ranging from financial and legal to commercial. The focus of these investigations varies, as do the end goals. The financial aspect looks into the management and system, and the conclusion of such an investigation must lead to confirmation of profit, which will also subsequently provide a basis for valuation in the future. The legal due diligence will dwell on the contractual agreements and determine the problems associated with them. The outcome will be to determine the warranties and

[4] Timothy J. Galpin, Mark Herndon, *The Complete Guide to Mergers and Acquisitions: Process Tools to Support M&A Integration at Every Level* (3rd edn, Jossey-Bass 2014)

indemnities; the existing contracts will be validated along with the sale and purchase agreements.[5]

The life cycle of an M&A process in India is formulated in five stages.[6]The process begins with the formulation of an M&A strategy based on comprehensive reasoning, and the primary motivation here is to be able to align the long-term goals and growth strategy of the company with such reasoning. The next step requires the identification of the target through an initial assessment. The target valuation and due diligence follow from hereon, which are primarily based on a due diligence model, timeline, etc. The data required under the model is collected, and a written analysis M&A report is the outcome. The potential merger is assessed, and the negotiations begin. The deal structure (M&A strategy, integration process, costs and risks, etc.) here consists of the duties and responsibilities of each party, and this agreement is reached. Once the negotiations are conducted successfully, the deal is closed. This is followed by the beginning of the integration process. This stage is the determining factor in the success of the M&A. The integration is reflected in the corporate culture and human resources, among other areas.[7]

APPLICATION OF ARTIFICIAL INTELLIGENCE IN MERGERS AND ACQUISITIONS

A lot of organizational processes depend on data. The manual assessment of such data is part of the traditional notion of mergers and acquisitions. There are various problems with such processes, including a shortage of time to study documents with the necessary degree of focus. Once the issue of insufficient attention allocation is resolved, there are many issues with this methodology's accuracy and effectiveness.[8] Concerns exist about crucial goals being overlooked or left out, such as the capacity to use historical knowledge or unsuccessful past transactions as a basis for developing new strategies. However, after multiple merger waivers,

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[5] Peter Howson, *Due Diligence: The Critical Stage in Mergers and Acquisitions* (1st edn, Routledge 2003)
[6] Nikhil Gupta, 'Opportunities and Challenges of M&A in India' (Master of Science in Management Studies, MIT Sloan School of Management 2004)
[7] Howard Sher, 'Due Diligence Investigations' (1998) 6 Juta's Business Law 15
[8] Stefan Rao Kostas, 'The Past, Present, & Future of M&A - Assessing How the Lean Process and Artificial Intelligence Can Remedy the Pitfalls of Traditional M&A' (2022) 24(1) Transactions: Tennessee Jouranl of Business Law 115

the M&A process has changed. We see the traditional M&A methodology being developed around methods that address every phase of the M&A life cycle, from the pre-deal to the post-closing scenario. However, these methods have numerous drawbacks because they are demanding, time-consuming, and expensive.[9] Additionally, M&A deals are intimately related to corporate growth, but the process has not evolved for decades, and this has been frequently criticised. The procedure seems to be optimised by a perusal of combined work with AI.

Due diligence and negotiation are frequently conducted concurrently, allowing for the use of investigational data in the development of pertinent contractual clauses. Additionally, since the formation of the virtual data room, contact between the buyer and seller has been quite consistent. This will profit by enabling direct document requests whenever necessary. The sellers are responsible for creating a data room with all the necessary information organised. The firms now have a uniform diligence list. be eventually transformed into a memo using the analysis. This will make the transaction's warning signs clearer. But perhaps what is commonly overlooked is the fact that lawyers involved in such deals frequently pore over every document when assessing the dangers. The process is rather laborious by itself; therefore, it needs a better strategy that is effective and aids in finding potential synergies.[10]

The current M&A transaction approach is primarily focused on deal closing, and in such circumstances, the needless costs are not acknowledged. These additional costs make up a double-digit percentage of total costs.[11] It becomes crucial to track and prevent such wasteful spending. To address these underlying issues, methodologies have been developed. One such procedure is the lean technique. This is a new development that aids in creating a strategy that is appropriate for due diligence operations. This has moved forward. It uses a 'just in time'

[9] Bruce C. Doeg, 'Rethinking What is Possible in Mergers and Acquisitions' (*Baker Donelson*, 28 July 2020) <https://www.bakerdonelson.com/rethinking-what-is-possible-in-mergers-and-acquisitions> accessed 23 July 2023

[10] Kristin Ficery et al., 'Where Has All the Synergy Gone? The M&A Puzzle' (2007) 28(5) Journal of Business Strategy <https://doi.org/10.1108/02756660710820802> accessed 23 July 2023

[11] Edward Stephen, ' Most Wasteful Costs During M&A' (*Firmex*, 2014) <https://www.firmex.com/resources/reports-guides/most-wasteful-costs-during-ma/> accessed 23 July 2023

strategy.[12] It makes it possible for the person to deliver the required or correct amount of the right parts at the right time. Such a methodology is frequently used in the automotive industry. This strategy significantly reduces the need for additional resources and costs.[13] This five-stage, sequential, cyclic process was growing in manufacturing.[14]

The development process began with an assessment of the value that allowed it to be closely related to the product for the client. Based on the values determined, a mapping of the present and future was then completed. This made it possible to evaluate the product and the related problems critically and to manage data in conjunction with physical advancements. The following section centred on removing any function barriers, and this was accomplished by designing the product so that it changed over time. Since no sales forecast was needed here, the necessary demand was generated by a pull from the customer's end. This led to the last stage, when this process was cycled through for a subsequent lean transformation, repeating the process until the finished product overlapped with the client.

With the Implementation of the lean process in the context of mergers and acquisitions, deal teams can address the shortcomings of traditional M&A procedures. The lean process can offer customers quicker, better, and cheaper solutions because it places an emphasis on improving production flow and management infrastructure. By mapping and analysing prior transaction failures, transaction teams can uncover ways to better serve clients, learn from their mistakes, and improve future transactions.[15]

AI has enabled machines to mimic human intelligence and skills. Machine learning is a subset of an algorithm that increases in accuracy as it processes more data. It uses algorithms to simplify tasks and lets people train it by submitting more data over time. An artificial intelligence (AI) technique known as "Deep 'earning" uses neural networks to replicate the

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[12] Lukasz Dekier, 'The Origins and Evolution of Lean Management System' (2012) 5(1) Journal of International Studies <http://dx.doi.org/10.14254/2071-8330.2012/5-1/6> accessed 23 July 2023
[13] 'Toyota Production System Basic Handbook' (Art of Lean, 2000) <http://artoflean.com/wp-content/uploads/2019/01/Basic_TPS_Handbook.pdf> accessed 23 July 2023
[14] 'The Five Steps of Lean Implementation' (*Lean Enterprise Institute*, 18 May 2000) <https://www.lean.org/the-lean-post/articles/the-five-steps-of-lean-implementation/> accessed 23 July 2023
[15] *Ibid*

structure and function of the human brain by simulating each layer of nodes' processing of information before transferring it to the next layer. During the model's training phase, it is exposed to a large collection of labelled examples. It can automatically learn patterns, features, and representations thanks to this method. Deep learning makes use of deep neural networks to complete difficult tasks. These neural networks' artificial neurons are stacked in several layers, which enables the model to learn from a vast quantity of data and make predictions about the future.

The term 'deep' in deep learning refers to the depth of the neural network or the number of layers it contains. In contrast to traditional machine learning techniques, which only have a few hidden layers, deep learning models can have dozens or even hundreds of hidden layers.[16] Since they can automatically create hierarchical representations from the raw data, deep learning models are very effective at managing unstructured and high-dimensional data. These models are trainable technologies that improve when exposed to different types of transactions. The same in an M&A transaction will successfully handle the tiresome procedure by changing the cycle into an effective, outcome-driven method.[17]

Review of Contracts and Due Diligence: Large numbers of contracts and legal papers may be quickly analysed and organised using AI-powered software, which can also spot important clauses, potential pitfalls, and business prospects. This is expedient for the due diligence process and lowers the possibility of human error.

Data analysis: AI algorithms are capable of processing and analysing enormous amounts of data from several sources, offering insightful information that is useful for market analysis, risk assessment, and transaction appraisal. The ability of AI to recognise patterns and trends improves decision-making throughout the negotiation phase. Predictive Analytics: AI can be used to foresee post-merger integration issues, potential synergies, and deal success rates. AI can provide insightful projections to help with decision-making by examining previous data and market trends.

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[16] 'What Is Deep Learning?' (*IBM*) <https://www.ibm.com/topics/deep-learning> accessed 23 July 2023

[17] *Ibid*

Target Identification: Based on particular criteria established by the acquirer, AI-powered solutions can help identify possible target enterprises. Large datasets may be rapidly filtered through by AI, which can also link businesses with similar strategic objectives.

Market Intelligence: AI may assist M&A professionals in staying current on market trends, competitor activity, and industry advancements, allowing them to make wise judgments and take advantage of opportunities.

Automated Compliance and Regulatory Analysis: Artificial intelligence (AI) can help in detecting and navigating complicated regulatory requirements, guaranteeing compliance with laws and regulations that may have an influence on the M&A deal.

Expedient integration: AI can help with post-merger integration by speeding the procedure, spotting potential bottlenecks, and managing cultural differences between the merged businesses.[18]

Deal teams may conduct more successful and efficient M&A transactions by utilising AI's skills in these areas, which will increase client satisfaction and produce better results for all parties. To remain competitive and satisfy the shifting needs of the M&A business, it is critical for law firms and professionals to embrace AI technology and continuously adapt to this fast-expanding field. Law firms can more easily manage the complexity of the legal landscape, uphold their professional obligations, and expedite their operations by utilising artificial intelligence (AI) in their practice. AI enables businesses to manage massive data volumes quickly and effectively, changing their approach from being merely reactive to being more strategic and predictive.[19]

[18] Florian Bauer et al., 'M&A and Innovation: The Role of Integration and Cultural Differences—a Central European Targets Perspective' (2016) 25(1) International Business Review <https://doi.org/10.1016/j.ibusrev.2014.07.010> accessed 23 July 2023

[19] *Ibid*

M&A LIFECYCLE: ANALYSING POTENTIAL BENEFITS AND RISKS ASSOCIATED

The importance of M&A transactions in enhancing or sustaining competitive advantages and attaining growth successes is highlighted in this analysis. Acquisitions can increase economies of scale and broaden the product offering, but they also run the risk of destroying value. Over 50% of M&A transactions fail to produce the expected results, which is a significant failure rate.[20]

Inadequate M&A results can be attributed to both hard problems—such as transaction structuring and poor financing—and soft factors, sometimes known as 'Human factors'. The human aspects place a strong emphasis on the value of teamwork, communication, and cultural compatibility both before and after the merger. Three crucial phases—the pre-merger, merger, and post-merger phases—are proposed in a differentiated view of the process to handle the issues in M&A transactions. By effectively evaluating strategic scenarios, gathering data, and selecting acquisition candidates, AI has promise for assisting the pre-merger process. The role is limited within the negotiation period; however, assistance is imminent for the post-merger scenario too.[21]

The two companies are actually combined during the merger phase, while coordination and integration are the main goals of the post-merger phase. The M&A process can be expedited and cost-effectively shortened by using AI's capacity to process enormous amounts of data. As a result, this section examines the potential advantages and disadvantages of integrating artificial intelligence (AI) into various M&A transaction phases.[22]

Pre-Merger Phase: AI is capable of analysing enormous amounts of structured and unstructured data from a variety of sources, including changes in sociocultural, political, and technical contexts. As a result, opportunities and dangers for the company's expansion and

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[20] Matthias Lederer et al., 'State-of-the-art and possible fields of application for the integrated support of merger and acquisition processes by means of artificial intelligence' (2022) 7(1) International Journal of Data Science <https://www.inderscience.com/storage/f5> accessed 23 July 2023

[21] Mail Burdon, 'Artificial Intelligence – An Authentic Opportunity for Mergers and Acquisitions' (*TouchPoint*) <https://www.firmex.com/thedealroom/artificial-intelligence-an-authentic-opportunity-for-mergers-and-acquisitions> accessed 23 July 2023

[22] Lederer et al. (n 20)

value maximisation can be efficiently identified. With the help of substantial data and AI-driven SWOT analysis, it helps improve planning and strategic decision-making. AI algorithms are capable of quickly and effectively analysing data that is made publicly available to develop 'Company Profiles' of prospective acquisition targets. AI reduces the pool of prospective targets by automatically evaluating individuals based on predetermined criteria, conserving time and money. Managers can concentrate on the most promising individuals using this method for further assessment.[23]

Merger Phase: AI can help with the evaluation and interpretation of substantial amounts of data from all levels of the target organisation during due diligence. Artificial intelligence (AI) offers effective risk assessment and spots discrepancies by combining and analysing data from the financial, legal, tax, HR, IT, and environmental sectors. Due diligence is streamlined as a result, resulting in more precise assessments and easier integration. Since human relationships are complicated and dynamic, AI's function in negotiations and contract agreements is constrained. In this stage, where AI cannot entirely replace human judgement and knowledge, tactical judgments and interpersonal relationships are vital.[24]

Post-Merger Phase: After completion, AI can examine data to make sure the seller adheres to the promised accounting and valuation standards. Due diligence after acquisitions can be made more effective and risk-free by using AI expert systems to pinpoint crucial decision paths. With unrestricted access to data, AI may do a thorough audit of the financials, spotting abnormalities and chances for optimization. The contract management platforms offer a simple fix for the usually difficult and pricey integration process. The process of managing contracts can be simplified, and risks and penalties can be reduced, with the correct solution.[25]

The post-merger period entails integrating two business cultures and employees, which is

[23] *Ibid*
[24] *Ibid*
[25] Scott Friesen, 'How Artificial Intelligence Can Aid Post-Merger Integration' (*Health Data Management*, 21 June 2019) <https://www.healthdatamanagement.com/articles/how-artificial-intelligence-can-aid-post-merger-integration> accessed 23 July 2023

one of AI's challenges. As the emphasis is on cultural dynamics and human relationships, this technology's application is constrained in this context. While it can help with some tasks, such as assessing confidentiality agreements and spotting inconsistencies in contracts, it cannot take the place of coaches or teams in managing difficulties with human-centric integration.[26]

CONCLUSION AND THE WAY AHEAD

There are several advantages and prospects for development associated with the application of artificial intelligence (AI) to the legal sector, notably in the context of mergers and acquisitions (M&A). This proves to be a useful tool across the M&A lifecycle, reducing procedures, improving decision-making, and offering data-driven insights. It helps with strategic analysis, candidate selection, and SWOT analysis during the pre-merger process, enabling better decision-making. Similarly, this technology assists with due diligence, risk assessment, and accurate analysis of vast amounts of data throughout the merger phase, lowering the likelihood of oversight and mistakes.

Even if AI has significant potential, it is important to be aware of its limitations, especially in human-centric contexts like negotiations and post-merger integration, where human interaction and judgement are still essential. The use of AI in the legal industry has a number of benefits and development opportunities, particularly in the context of Mergers and Acquisitions (M&A). Throughout the M&A lifecycle, this technology proves to be a helpful tool by streamlining processes, enhancing decision-making, and providing data-driven insights. During the pre-merger process, for strategic analysis, candidate selection, and SWOT analysis, this technology enables better decision-making. Throughout the merger phase, it helps with due diligence, risk assessment, and the correct analysis of enormous amounts of data, reducing the probability of oversight and errors. Even though AI has a lot of potential, it's crucial to be conscious of its limitations, especially in situations that still require human engagement and judgment, including negotiations and post-merger integration.

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[26] *Ibid*