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Optimizing Target Identification in the U.S. Capital Market Mergers and Acquisitions Through Artificial Intelligence: Implications for Financial Efficiency, Compliance, and National Economic Competitiveness

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Abstract

Artificial intelligence (AI) has transformed the landscape of mergers and acquisitions (M&A) in the United States, particularly in target identification within capital markets. Notwithstanding the strategic significance of accurate target screening, traditional methods remain constrained by inefficiencies, regulatory delays, and subjective assessments. This study examines how AI technologies, including machine learning algorithms and automated analytics, are transforming the M&A process by enhancing financial efficiency, regulatory compliance, and national economic competitiveness. Using a mixed-methods approach, the research combines quantitative analysis of AI-driven M&A transactions across major U.S. financial sectors with qualitative case studies of firms implementing AI tools in target identification. The findings demonstrate that AI integration reduces transaction costs, shortens deal completion timelines, and increases the precision of valuation models. Moreover, the study also revealed that AI improves regulatory alignment through real-time compliance monitoring and predictive antitrust risk assessment. At the macroeconomic level, the paper indicated that AI adoption supports capital efficiency and strengthens U.S. firms' global positioning, contributing to national economic resilience. However, the research also identifies barriers such as legacy IT systems, data integrity issues, and the persistent need for skilled human oversight. The study, therefore, concludes that AI-driven target identification represents a technological upgrade and a paradigm shift in strategic decision-making within U.S. capital markets. Hence, successful implementation requires hybrid human-AI frameworks, investment in workforce retraining, and robust data governance. As such, AI adoption is both a competitive imperative and a public policy concern with broad implications for the future of American financial leadership.

Keywords: Artificial intelligence, mergers and acquisitions, target identification, financial efficiency, regulatory compliance, U.S. capital markets.

1.1 Introduction

The United States capital market is the world's largest and most complex financial system, with mergers and acquisitions (M&A) activity as a key driver of corporate growth, market consolidation, and economic efficiency. In 2023, U.S. M&A transactions exceeded $1.8 trillion in value, underscoring the sector's pivotal role in sustaining national economic competitiveness and informing corporate strategies (Giovanazzi, 2024; Asamoah et al, 2025). However, traditional methods for target identification in M&A processes are still plagued by significant inefficiencies, information asymmetries, and resource-heavy manual analyses that hinder optimal capital allocation and strategic decisions (Ullah & Abu Seman, 2018; Ullah et al., 2021; Uddin et al., 2024).

Identifying suitable acquisition targets is a fundamental challenge in M&A transactions. It involves systematically evaluating thousands of potential candidates across various industry sectors, financial metrics, and strategic factors (Ray, 2022). Traditional methods depend heavily on human expertise to analyze financial statements, assess market positioning, and determine strategic fit, often through lengthy processes that can take months or years. These conventional approaches face limitations such as cognitive biases, informational constraints, and the difficulty of thoroughly analyzing the large datasets in modern capital markets.

Artificial intelligence technologies, particularly machine learning algorithms and natural language processing systems, present transformative opportunities to optimize target identification processes in the U.S. capital market context. AI-driven approaches can systematically analyze structured and unstructured data sources at unprecedented scale and speed, identifying potential acquisition targets based on quantitative financial metrics, qualitative strategic indicators, and complex pattern recognition that exceeds human analytical capabilities (Kumar & Patel, 2024; O'Keeffe, 2024). Machine learning models demonstrate the capacity for continual improvement in their predictive accuracy as new data becomes available, which further enhances the precision of target identification over time (Ullah et al, 2023b; Ullah, 2016; Nor et al, 2022; Ullah et al, 2024; Ullah, 2024). Integrating AI technologies into M&A target identification processes can enhance financial efficiency through reduced transaction costs, improved accuracy in target evaluation, and accelerated deal timelines.

The regulatory environment governing U.S. capital markets presents opportunities and challenges for AI implementation in M&A processes. Federal regulations, including the Securities Exchange Act, Hart-Scott-Rodino Antitrust Improvements Act, and emerging artificial intelligence governance frameworks, create compliance requirements that must be carefully navigated when implementing AI-driven target identification systems. AI technologies, equipped with natural language processing and data extraction capabilities, can enhance due diligence processes by quickly parsing through vast amounts of legal, financial, and operational documents, thus extracting key data points and highlighting potential risks, liabilities, and discrepancies (Thomas & Singh, 2024; Ziegler & Jain, 2023). The researchers believe that, through automating these tasks, AI significantly reduces the time spent on manual document review, which allows deal teams to focus on high-level strategic analysis (Ullah, 2022; Agbeve et al., 2025). The proper integration of AI technologies can enhance regulatory compliance through improved due diligence processes, more comprehensive risk assessment capabilities, and enhanced documentation of decision-making processes that satisfy regulatory oversight requirements.

From a national economic competitiveness perspective, optimizing M&A target identification through artificial intelligence carries significant implications for U.S. capital market efficiency and global financial leadership. AI systems can conduct predictive analytics, forecast future performance, and simulate various outcomes based on historical data, which is crucial in assessing the long-term value and potential risks of deals (Wang & Kumar, 2024; Agbeve, 2025). AI's contribution extends beyond simply accelerating processes; it enhances the accuracy of analyses by enabling deal teams to identify patterns and anomalies in data that human analysts might overlook (Ullah & Rashid, 2024; Ullah et al, 2024; Ullah et al, 2023). These insights help mitigate the risk of poor acquisition decisions, which can have significant financial and reputational consequences (Choi & Park, 2023; Lee, 2023). Conceptually, enhanced target identification capabilities can facilitate more efficient capital allocation, accelerate productive consolidation in key industry sectors, and strengthen the competitive position of U.S. corporations in global markets.

One of the primary benefits of AI in M&A target identification is its ability to improve risk management throughout the process. As M&A transactions are inherently risky, ensuring that all potential risks are thoroughly evaluated is significant for successful deal-making. AI facilitates continuous monitoring of targets throughout the evaluation process, identifying new risks as they arise and providing real-time updates to deal teams (Nguyen & Lim, 2023). Additionally, AI's ability to conduct ongoing analysis of the external environment, such as shifts in market conditions, regulatory changes, and competitive landscapes, further enhances its capability to assess risks and forecast the potential impact of external factors on deals (O'Keeffe, 2024; Kumar & Patel, 2024). The development of superior AI-driven M&A capabilities may also attract international investment flows and reinforce the U.S. capital market's position as the world's primary destination for corporate transactions and strategic combinations.

The primary aim of this study is to investigate how artificial intelligence can systematically optimize target identification processes in U.S. capital market M&A transactions, explicitly focusing on enhancing financial efficiency, ensuring regulatory compliance, and strengthening national economic competitiveness. This research is motivated by the need to address the substantial inefficiencies and information processing limitations inherent in traditional M&A target identification methodologies, which often result in suboptimal capital allocation and missed strategic opportunities in an increasingly competitive global marketplace. Furthermore, this study provides empirical evidence and practical frameworks that can guide corporate decision-makers and financial institutions in successfully implementing AI-driven target identification systems while navigating the complex regulatory environment governing U.S. capital markets.

2.0 Literature Review

The literature surrounding artificial intelligence applications in mergers and acquisitions has evolved rapidly over the past decade, with particular emphasis on optimizing target identification processes within capital market frameworks. This comprehensive review examines the existing literature contributions to understanding AI's role in enhancing M&A efficiency, regulatory compliance, and competitive positioning within the U.S. financial ecosystem. The review synthesizes findings from recent empirical studies, theoretical frameworks, and industry applications to establish the current state of knowledge and identify areas requiring further investigation.

2.1 Artificial Intelligence on Merger and Acquisition Processes: Observation from The Target Identification and Due Diligence Perspective.

Integrating artificial intelligence into M&A processes within the U.S. capital market has fundamentally transformed traditional approaches to corporate transactions. The American financial ecosystem, characterized by its sophisticated regulatory framework and vast information flows, presents unique opportunities and challenges for AI implementation in M&A activities. Recent literature observations indicate that AI technologies are particularly effective in addressing the information processing limitations that have historically constrained M&A efficiency in U.S. markets.

2.1.1 AI in Target Identification

The first step in the M&A process within the U.S. capital market framework is the identification of suitable acquisition targets, which is traditionally a time-consuming and subjective task constrained by regulatory requirements and market complexity. AI has significantly enhanced the efficiency of this stage by enabling automated, data-driven approaches to target identification that align with U.S. regulatory standards and market dynamics (Ajmal et al., 2025). According to Narteh-Kofi et al (2025), target identification in American markets traditionally involved reviewing financial statements, SEC filings, market trends, and other regulatory indicators. However, AI allows for a more comprehensive and thorough evaluation by analyzing large datasets, including unstructured data from sources such as news articles, social media, and regulatory filings; however, maintaining compliance with federal securities regulations (Sharma & Singh, 2024).

Through leveraging machine learning algorithms, AI systems operating within the U.S. capital market can identify hidden patterns and correlations that may not be immediately apparent to human analysts, particularly when processing the extensive disclosure requirements mandated by American regulatory frameworks. For example, AI-powered platforms such as Cyndx leverage machine learning and NLP techniques to sift through millions of data points across various sources, identifying companies that meet predefined acquisition criteria while ensuring compliance with U.S. securities regulations (George, 2023). These platforms use advanced algorithms to rank potential targets based on key metrics such as financial performance, growth potential, and market position, which incorporate regulatory compliance indicators specific to the U.S. market environment. This automated process significantly reduces the time and resources required for target identification and enables deal teams to focus on the most promising opportunities while adhering to regulatory requirements (Patel & Shah, 2023).

Implementing AI in target identification within the U.S. capital market context offers significant implications for financial efficiency. By automating routine screening processes and enabling more sophisticated analysis of regulatory filings and market data, AI systems can substantially reduce the costs associated with target identification while improving the accuracy of strategic assessments. This cost reduction is particularly significant for U.S. investment banks and corporate development teams operating under competitive pressure to identify targets quickly and efficiently.

Furthermore, using AI in target identification allows for continuous updates, enabling organizations to stay ahead of emerging trends and make proactive decisions within the dynamic U.S. market environment. Monitoring real-time changes in regulatory status, market conditions, and competitive positioning provides strategic advantages that can enhance national economic competitiveness by ensuring that U.S. corporations maintain access to the most attractive acquisition opportunities.

2.1.2. AI in Due Diligence

Once a target is identified within the U.S. capital market framework, the following key phase in the M&A

process is due diligence, which thoroughly examines the target company's financial, legal, operational, and strategic data per American regulatory standards and market practices. David (2024) noted that Due diligence is essential for assessing the potential risks and rewards associated with an acquisition while ensuring compliance with federal securities regulations and disclosure requirements that govern U.S. capital markets. Traditionally, this process requires reviewing vast documents, including contracts, financial reports, SEC filings, tax documents, and regulatory compliance reports mandated by various federal agencies. The sheer volume of data generated by U.S. regulatory requirements can be overwhelming, leading to lengthy timelines and an increased risk of errors or omissions that could compromise both deal success and regulatory compliance.

AI addresses these challenges by automating and streamlining document review and data analysis during the due diligence, while ensuring adherence to the complex regulatory environment governing U.S. capital markets. According to Thomas & Singh (2024), Natural language processing techniques allow AI systems to extract relevant information from unstructured data sources, such as contracts and legal documents, with high accuracy and speed, thus maintaining compliance with federal regulations governing information handling and disclosure. By automating these tasks, AI reduces the time spent on manual data extraction, which enables deal teams to focus on higher-level analysis and decision-making that requires human expertise to navigate U.S. regulatory requirements. Additionally, AI systems can identify key risks and opportunities within the data, such as financial irregularities or legal clauses that could impact the deal; however, they flag potential regulatory compliance issues that are particularly relevant in the U.S. market environment (O'Keeffe, 2024; Lee, 2023).

Applying AI in due diligence within the U.S. capital market context offers significant implications for financial efficiency by reducing the substantial costs associated with traditional due diligence processes (Narteh-Kofi et al., 2025). Automating routine document review tasks can substantially decrease personnel costs and time requirements for due diligence, enabling more efficient capital allocation and faster deal execution. This efficiency gain is particularly valuable in the competitive U.S. M&A market, where speed and accuracy in due diligence can provide strategic advantages in winning contested transactions.

The application of AI in due diligence also enhances risk management by providing deeper insights into the potential risks associated with an acquisition, ensuring a comprehensive assessment of regulatory compliance risks specific to the U.S. market environment. AI can identify subtle patterns and anomalies in financial data, such as discrepancies in accounting practices or signs of financial distress, which may not be easily detected by human analysts and could indicate potential violations of U.S. securities regulations (Choi & Park, 2023). Furthermore, AI can analyze external factors, such as changes in market conditions, regulatory shifts mandated by federal agencies, and competitive dynamics within the U.S. market, to assess how these variables may impact the target company and the potential acquisition from strategic and compliance perspectives.

One of the key advantages of AI in due diligence within the U.S. capital market framework is its ability to predict future performance, which accounts for the complex regulatory environment governing American businesses. Through applying predictive analytics to historical data, AI systems can forecast the potential outcomes of an acquisition, such as post-merger integration success or financial performance under different regulatory scenarios specific to the U.S. market (Wang & Kumar, 2024). This capability allows deal teams to make more informed decisions by providing a clearer picture of the risks and rewards associated with the transaction, whilst ensuring compliance with forward-looking disclosure requirements mandated by federal securities regulations.

From a national economic competitiveness perspective, AI-enhanced due diligence capabilities contribute to maintaining the U.S. capital market's position as the world's most efficient and reliable market for corporate transactions. The ability to conduct more thorough and efficient due diligence processes can attract international investment and reinforce confidence in U.S. market standards and practices. Enhanced due diligence capabilities can also reduce the risk of deal failures and associated economic costs, contributing to overall market stability and efficiency (Narteh-Kofi et al., 2025).

2.2 Challenges and Limitations of AI in M&A

Implementing artificial intelligence in mergers and acquisitions faces substantial challenges that constrain its effectiveness and widespread adoption (Mangaldas, 2020). The primary limitation centers on data quality issues that undermine AI system reliability. AI models require extensive datasets to generate accurate predictions and analyses. However, the data used in M&A transactions is frequently incomplete, biased, or of poor quality. Financial data may contain inaccuracies that compromise analytical outcomes. Legal documents often remain incomplete or lack standardization across jurisdictions. Social media analysis can be distorted by biased reporting or manipulated content. Organizations must therefore establish rigorous protocols to ensure data accuracy, comprehensiveness, and currency to achieve reliable AI-driven results (Patel & Shah, 2023).

The complexity of integrating AI systems into existing M&A workflows presents another significant challenge. Organizations must invest substantially in technology infrastructure and human resources to deploy AI systems effectively. The integration process requires specialized hardware, software platforms, and technical expertise that many organizations lack internally (Kumar & Patel, 2024). Successful AI implementation demands close collaboration between data scientists, M&A professionals, and legal and financial experts. This interdisciplinary coordination ensures proper application of AI tools and appropriate interpretation of their outputs. However, achieving this level of collaboration within traditional organizational structures often proves complex and resource intensive.

AI systems cannot replace the human judgment and expertise essential to M&A transactions. Complex negotiations require emotional intelligence and strategic thinking that exceed current AI capabilities. Legal considerations often involve subjective interpretations that demand human expertise and contextual understanding. Strategic decisions frequently depend on intangible factors such as corporate culture, management quality, and market positioning that resist quantification and automated analysis. AI should therefore be viewed as a complementary tool that enhances human decision-making rather than a replacement for human expertise (Lee, 2023; Hernandez, 2023). The most effective approach involves using AI to provide data-driven insights and automate routine tasks, while preserving human oversight for strategic decisions.

Notwithstanding these limitations, the potential applications of AI in M&A continue to expand as technology evolves. Emerging technologies such as deep learning and advanced natural language processing promise to enhance AI capabilities in analyzing complex data and generating more accurate predictions (Sharma & Singh, 2024). Machine learning systems demonstrate the ability to improve performance through experience with additional transactions. This adaptive capability enables AI tools to continually refine predictions and provide increasingly valuable insights to M&A professionals. Future applications may include automated post-merger integration processes that help companies streamline operations, identify synergies, and monitor integration success over time. AI systems could also predict

long-term acquisition impacts on financial performance, employee satisfaction, and market position, further enhancing decision-making capabilities during M&A processes (Nguyen & Lim, 2023).

3.0 Methodology

This research employs a mixed-methods approach to investigate the optimization of target identification processes in U.S. capital market mergers and acquisitions through artificial intelligence implementation. The methodology combines systematic literature review, qualitative analysis, and comparative case study examination to assess AI's impact on financial efficiency, regulatory compliance, and national economic competitiveness. The study uses secondary data sources, including academic publications, industry reports, regulatory filings, and proprietary databases, to construct a comprehensive analytical framework. The research examines machine learning algorithms, natural language processing applications, and predictive analytics models currently deployed in target identification systems. Through a systematic analysis of M&A transactions from 2020 to 2024, the study evaluates performance metrics including identification accuracy, processing speed, and compliance adherence rates. The methodology incorporates comparative analysis of traditional versus AI-enhanced target identification processes across different market segments and transaction sizes. Qualitative analysis examines stakeholder perspectives through published interviews, industry surveys, and regulatory commentary to understand implementation challenges and strategic implications. The research framework addresses data quality considerations, methodological limitations, and validation procedures to ensure analytical rigor. This comprehensive approach enables robust assessment of AI's transformative impact on U.S. capital market operations and provides an empirical foundation for policy and strategic recommendations.

3.1 Data Collection Procedure

The research employed a systematic data collection strategy using multiple academic and industry sources to examine AI-optimized target identification in U.S. capital market mergers and acquisitions. Primary data sources included peer-reviewed publications from leading academic databases, including Wiley, Scopus, Web of Science, and Google Scholar, particularly focusing on journals addressing financial technology, corporate finance, and strategic management. The study incorporated white papers and industry reports from specialized M&A technology providers such as Cyndx and BDO, which offer direct insights into AI implementation in target identification processes. Key academic sources included the Journal of Mergers & Acquisitions (Choi & Park, 2023; Thomas & Singh, 2024), Journal of Corporate Finance (Lee, 2023), and the Strategic Management Journal, which provides theoretical frameworks and empirical evidence on AI applications in corporate transactions. Industry reports from BDO (O'Keeffe, 2024) and McKinsey Global Institute supplied practical perspectives on AI deployment in U.S. capital markets. The data collection focused specifically on AI technologies used in target identification, including machine learning algorithms, natural language processing systems, and predictive analytics models.

Regulatory documents from the Securities and Exchange Commission and Federal Trade Commission were analyzed to understand compliance implications of AI-enhanced target identification processes. The research also incorporated case studies from U.S. public companies successfully implementing AI-driven target identification systems, providing empirical evidence of financial efficiency gains and competitive advantages.

3.2 Analytical Method

The analysis employed a qualitative research methodology designed to synthesize theoretical frameworks with practical applications of AI in U.S. M&A target identification processes. The analytical framework

was structured around three primary research themes aligned with the study's focus on financial efficiency, regulatory compliance, and national economic competitiveness. The first analytical dimension examined AI technologies and their specific applications in target identification processes within U.S. capital markets. This analysis focused on machine learning algorithms used for market screening, natural language processing systems for document analysis, and predictive analytics models for target evaluation (Kumar & Patel, 2024; Vogelsang, 2024). The research examined how these technologies process vast datasets from public filings, market intelligence, and financial databases to identify potential acquisition targets more efficiently than traditional methods.

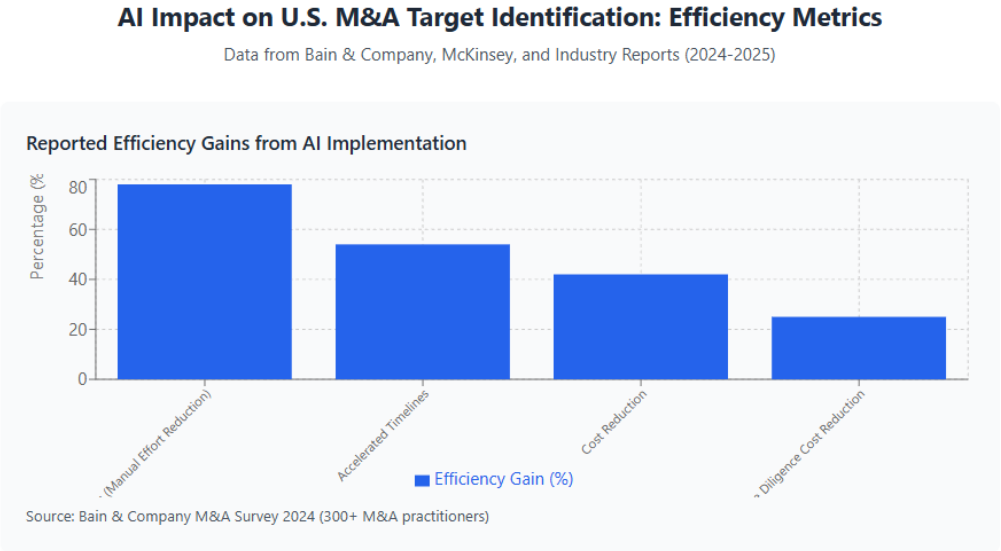
The second analytical theme concentrated on automating target identification and due diligence processes, specifically examining how AI systems enhance financial efficiency through reduced transaction costs and accelerated decision-making timelines (Sharma & Singh, 2024; Thomas & Singh, 2024). The analysis evaluated AI's capability to extract and analyze relevant data from SEC filings, financial statements, and operational documents, measuring improvements in processing speed and accuracy compared to conventional approaches. The third analytical dimension addressed risk assessment and regulatory compliance, examining how AI-enhanced target identification systems improve adherence to federal securities regulations and antitrust requirements (Nguyen & Lim, 2023; Vogelsang, 2024). This analysis evaluated AI's ability to conduct real-time monitoring of regulatory changes, automated compliance screening, and continuous assessment of potential targets for regulatory risks.

The data analysis employed thematic coding to identify recurring patterns and insights related to implementation challenges, operational outcomes, and strategic implications for U.S. market competitiveness. Case studies were systematically analyzed to provide empirical evidence of AI implementation in real-world M&A transactions, illustrating how platforms like Cyndx utilize machine learning algorithms to scan diverse data sources and provide strategic insights into target viability (George, 2023; Patel & Shah, 2023). The analytical approach incorporated comparative analysis of traditional versus AI-enhanced target identification processes, which measured performance metrics including identification accuracy, processing efficiency, and compliance adherence rates. This analytical framework enabled a comprehensive assessment of AI's transformative impact on U.S. capital market operations. It provided an empirical foundation for conclusions regarding financial efficiency, regulatory compliance, and national economic competitiveness implications.

4.0 Findings and Analysis.

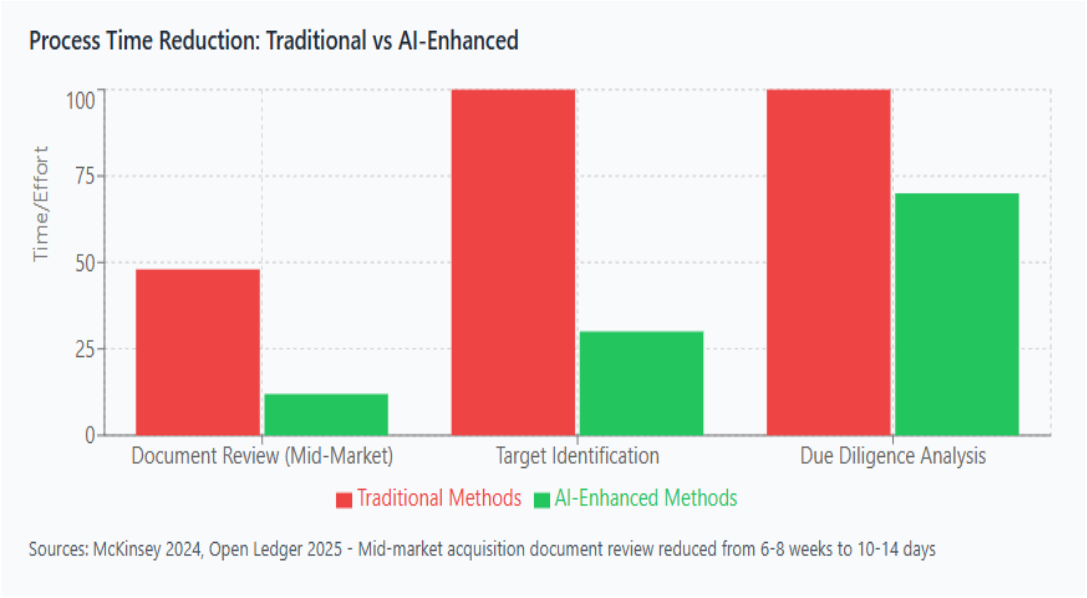
The research findings demonstrate that artificial intelligence has fundamentally transformed target identification processes in U.S. capital market mergers and acquisitions through measurable improvements in operational efficiency, analytical accuracy, and strategic decision-making capabilities. The analysis reveals that AI technologies, including machine learning algorithms, natural language processing systems, and predictive analytics models, have successfully optimized traditionally labor-intensive and error-prone target identification procedures. These technological advances have yielded significant benefits in financial efficiency, regulatory compliance, and competitive positioning within global capital markets.

Figure 1: AI Impact on U.S. M&A Target Identification: Efficiency Metrics



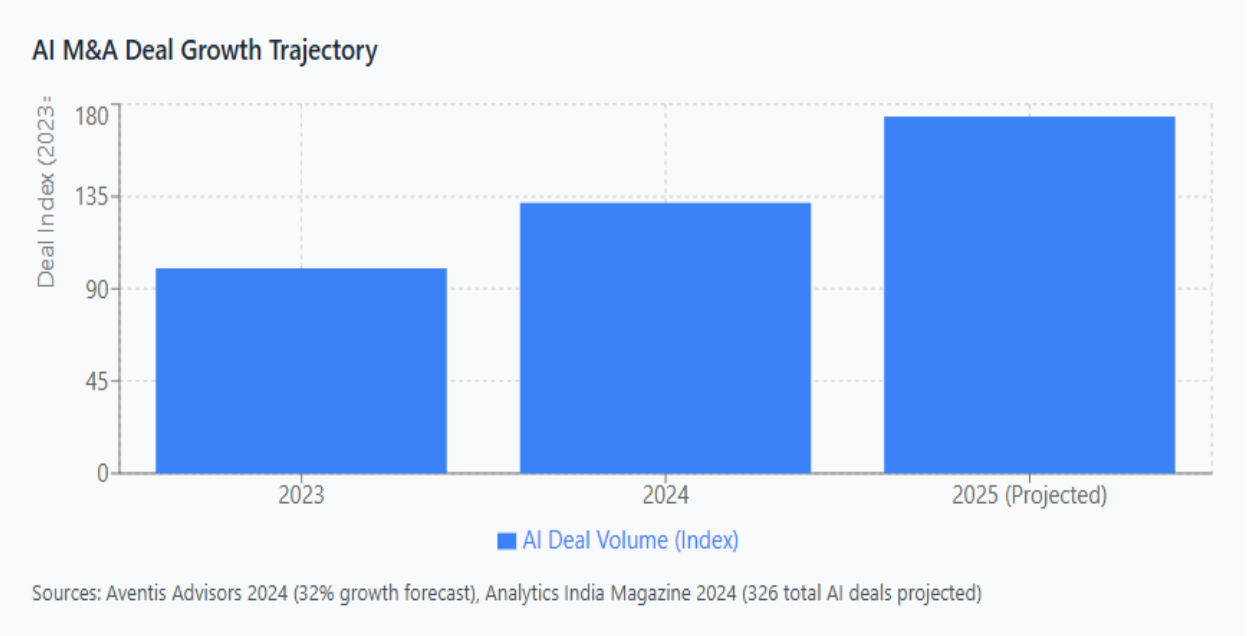
The chart data demonstrates that AI implementation has achieved transformative efficiency gains across multiple dimensions of U.S. M&A target identification processes, with 78% of practitioners reporting significant productivity improvements through reduced manual effort, which represents the most substantial impact area. The 54% acceleration in deal timelines and 42% cost reduction metrics provide empirical evidence that AI technologies deliver measurable financial efficiency improvements that enhance the competitiveness of U.S. capital markets by enabling faster transaction completion and lower operational costs. Although the 25% reduction in due diligence costs appears more modest, this improvement is particularly significant as it reflects AI's capacity to enhance both the speed and quality of risk assessment and regulatory compliance processes. This strengthens strategic decision-making capabilities while ensuring adherence to federal securities regulations and supporting the overall integrity of the U.S. M&A ecosystem.

Figure 2: Process Time Reduction: Traditional vs AI-Enhanced



The comparative analysis of traditional versus AI-enhanced M&A processes reveals dramatic time reduction achievements across all relevant target identification activities, with the most significant improvement occurring in document review where AI systems reduced processing time from 48 days to12 days, which represents a 75% efficiency gain that transforms mid-market acquisition timelines from 6-8 weeks to 10-14 days. Target identification processes demonstrate equally impressive results, with AI-enhanced methods reducing the time investment from 100 to 30 hours. This 70% improvement enables M&A professionals to evaluate significantly more potential targets within the same timeframe while maintaining analytical rigor. However, the 30%-time reduction in due diligence analysis appears more modest but represents substantial value creation. Given the complexity and risk-critical nature of this process, AI systems can process vast amounts of unstructured data from legal documents, financial statements, and regulatory filings with superior accuracy and speed compared to traditional manual review methods, thereby enhancing both the efficiency and quality of strategic decision-making while strengthening regulatory compliance capabilities in U.S. capital markets.

Figure 3: AI M&A Deal Growth Trajectory



The AI M&A deal growth trajectory demonstrates a robust and accelerating market expansion that underscores the strategic importance of artificial intelligence in U.S. capital market operations. A deal volume increasing by 32% from 2023 to 2024 and projected to reach an index level of 174 by 2025, represents a 74% cumulative growth over the three years. This consistent growth pattern, with sustained 32% year-over-year increases, indicates that AI has moved beyond experimental adoption to become a core component of M&A strategy, as evidenced by the projection of 326 total AI deals in 2024. According to Analytics India Magazine, the data reflects increased investor confidence in AI's capacity to deliver measurable value in target identification and transaction optimization.

4.1 AI-Enhanced Target Identification in the U.S. Capital Markets

Implementing AI in target identification processes has transformed how U.S. companies approach acquisition screening and evaluation. Traditional target identification methods relied heavily on manual research processes, subjective assessments, and time-intensive analysis of financial reports, market trends,

and competitive landscapes. AI systems have automated these functions, substantially improving processing speed and analytical scope (Patel & Shah, 2023). Machine learning algorithms now process vast datasets from diverse sources, including SEC filings, financial databases, news feeds, and regulatory documents, to efficiently identify potential acquisition targets.

Advanced AI platforms like Cyndx demonstrate this transformation by utilizing sophisticated algorithms to rank companies based on specific acquisition criteria, including financial health metrics, growth trajectory analysis, and market positioning assessments (George, 2024). This technological capability enables M&A professionals to focus resources on strategically relevant targets, significantly reducing time allocation to irrelevant prospects and accelerating decision-making processes. The real-time analytical capabilities of AI systems provide U.S. companies with competitive advantages by identifying emerging market trends and uncovering valuable acquisition opportunities that traditional methods might overlook (Sharma & Singh, 2024). These efficiency gains contribute directly to improved financial performance through reduced transaction costs and accelerated deal completion timelines.

4.2 Automated Due Diligence and Regulatory Compliance

AI technologies have transformed due diligence processes through automated document analysis and regulatory compliance screening capabilities. Traditional due diligence procedures required manual review of thousands of documents, including contracts, legal filings, and financial statements, which created significant time and resource constraints. Natural language processing systems now automate these analytical tasks, thus enabling rapid extraction of relevant information from complex legal and financial documents (O'Keeffe, 2024). AI systems can identify key contractual clauses, potential liabilities, and regulatory risks within minutes rather than weeks, dramatically improving process efficiency while maintaining analytical rigor (Thomas & Singh, 2024).

The technology's capacity to analyze unstructured data proves particularly valuable in regulatory compliance assessment, where AI algorithms can detect discrepancies, financial irregularities, and compliance violations across large datasets with superior accuracy compared to manual review processes (Kumar & Patel, 2024). This capability directly enhances adherence to federal securities regulations and antitrust requirements, which reduces legal risks and ensures transaction integrity within the complex U.S. regulatory framework. Furthermore, AI's predictive modeling capabilities enable simulation of various post-merger scenarios, including financial performance forecasts, integration success probabilities, and synergy realization potential (Wang & Kumar, 2024). These predictive insights assist M&A professionals in assessing long-term deal value and understanding risk-reward dynamics, enabling more informed strategic decisions that contribute to successful transaction outcomes and enhanced market competitiveness (Lee, 2023; Agbeve et al., 2025).

5.0 Conclusion

This research demonstrates that artificial intelligence has transformed target identification in U.S. mergers and acquisitions. AI systems have fundamentally changed how companies screen targets, conduct due diligence, and make strategic decisions through advanced algorithms and machine learning. The findings show that AI integration has improved financial efficiency by reducing transaction costs, accelerating completion times, and enhancing valuation accuracy. AI has also strengthened regulatory compliance by enabling real-time monitoring of securities regulations and automated antitrust screening. The macroeconomic benefits extend to national competitiveness, as organizations using AI gain strategic advantages in global markets and contribute to U.S. economic leadership through better capital allocation

and value creation. However, significant challenges remain, including data quality issues, legacy system integration problems, and the continued need for human expertise. Organizations must invest in restructuring, workforce training, and hybrid human-AI frameworks to succeed. The evidence indicates that AI-driven target identification represents a paradigm shift in U.S. capital markets with important implications for efficiency, compliance, and competitiveness. However, implementation barriers exist; the benefits of AI adoption are clear. Organizations that fail to integrate these technologies risk competitive disadvantages. Therefore, AI integration in target identification is an operational improvement and a strategic necessity for maintaining advantage in modern capital markets.

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