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Artificial Intelligence and Investment Banking: A Dual Analysis of Risk Management and M&A Advisory

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ABSTRACT

Rapid growth prospects and rates of the application and integration of artificial intelligence (AI) in daily life and even professional, corporate environments has demanded the need for investigation into its effects on investment banking. Investment banking covers a niche domain of finance harnessing complex dynamics, processes and operations, and hence AI's involvement may be either advantageous or lead to deficiencies and discrepancies to the field, which must be thoroughly assessed, addressed and considered. Investment banks around the globe today haven't fully subscribed the parameters of AI to their institutions and financial services, hence this study aims to address the reasons for these, investigate potential application or preferable avoidance, all in focus to boost success and growth of the industry. Plenty of research pursued by scholars and authors across a vast range of literature solely aim to study the involvement and capacity of AI integration in the general financial services markets, capital markets and the general investment banking agenda, however there seems to be little to no research in using AI systems and tools to calculate, manage and project risk, as well as in M&A due diligence operations and systems. In precision, the study scopes its focus towards M&A deals, including due diligence processes, as well as risk management and assessment operations, to understand the depth and potential of AI in these branches and fill in these gaps. The study targeted literature from a vast range of secondary sources of articles and papers, a systematic and insightful survey spanning a range of questions covering all research questions and hypotheses, as well as a real-life interview with field experts familiarized and experienced with the industry and its dynamics. Quantitative statistics, as well as qualitative insights and perceptions were both acquired, assessed and considered to validate the model of methodology and research approaches to better understand expert opinions and views to facilitate the implementation of AI into these investment banks. These were also supported with existing literature material and research to support theories, hypotheses and arguments concisely and in conjunction. Major results and findings were revealed during the study, including the ability of AI to potentially be

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involved in market data predictions and forecasts, fraud detection operations when scrutinizing through M&A deals, as well as improvement in risk calculations and managerial interpretations and automation of a vast range of different tasks through the adoption of AI models in these banks. A few inconsistencies and discrepancies were also exposed, including issues such as data privacy and security as well as for the need for transparency inherent to the finance industries, great need for capital funding and raising and its limited reach to smaller firms, as well as other ethical dilemmas which need to be considered. Finally, these findings and results elaborated on in depth in the study has demonstrated to be of significant use to investment banking corporations, other scholars aiming to fill in other gaps concerning AI and investment banking, or even AI implementation in the general financial services sector, for overall profitability, operational efficiency and synergistic growth for both the technical and financial industries.

1. Introduction

With the fresh new dawn of artificial intelligence (AI) in the current era is on track to revolutionize the world of investment banking, reforming financial functions. With its stimulating potential, AI harnesses the capability to completely restructure processes and boost efficiency, with providing major aid to corporate decision making (Datapilot, 2024). Investment banking is unequivocally inherent to the financial and economic industry that plays and takes part in several roles articulating the movement, behavior and health of financial markets and the corporate trade. It is definitively the avenue of the finance sector that bridges the gap and performs the role of an intermediary between corporate clients and financial matters. Investment banking offers a broad range of financial services such as capital raising, mergers and acquisitions and financial advising (Dr. N. Vani Shree and Ms. Rajeswari H, 2025). In addition, this field also offers and delves into assisting corporations with their Initial Public Offerings (IPOs) to help raise capital and essentially "go public" being enlisted in stock exchanges. In a nutshell, investment bankers generally control the dynamics of global investment affairs. They work in the assistance of steering direction through the tough challenges of the world of finance for their clients (Julia Kagan, Investopedia, 2024). So, why are investment bankers considered highly influential, specialized or pose any significance at all to global financial markets? Investment bankers hold a crucial role in providing advisory services to large corporates upon speculations and discussions of potential M&A developments, performing thorough investigation and scrutiny during the M&A due diligence phase, as well as participating in negotiations, deal-structuring and regulatory compliance (Donnelley Financial Solutions (DFIN), 2024). Aptly, investment bankers typically deal with high-risk, sensitive cases with large amounts of capital involved, effectively requiring critical risk management in mitigating potential risk in corporate investments. Having said that the first traces or "birth" of artificial intelligence (AI) can be traced back to the 1950s and 1960s, the first real luminance illustrating the power of AI had been

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canvassed throughout the 2010s and into the modern era which of that is today, typically referred to as the "AI boom". In this light, artificial intelligence has transformed and revolutionized the world in a series of different ways, with several controversy sparking of its involvement, potential and credibility to reform the investment banking sector. Enterprises in the modern age are forging a groundbreaking transition from traditional, conventional models to more data-packed intelligent ones, fully maximizing the potential offered by AI to respond in real time to market demand and changes. By using AI to track price changes, predict customer search intent, and identify customer segments, Airbnb is able to improve its business strategy and market positioning. Businesses also use AI-powered CRM software with machine learning and predictive analytics features, like Demandbase, Terminus, HubSpot, Salesforce Einstein, and Hootsuite, to improve customer relationship management, optimize marketing campaigns, and gain a competitive advantage. (Yang Gao, Siqiang Liu, Lu Yang, ScienceDirect, 2025). This paper aims to study, breakdown, and provide rational, reasoned and in-depth analytical arguments in concluding the potential, credibility and suitability in the integration of AI in the IB (Investment Banking) arena in synergy. In towards reaching a verdict, the paper aims to investigate strategy optimization and other affairs concerning the subject, particularly surrounding Mergers & Acquisitions (M&A), as well as Risk Management.

Statement or problems

- How is the element of risk management that is inherently present within the field of IB affected with the introduction of AI and to what extent can it outperform traditional models of predicting and mitigating the various kinds of risk involved?
- Is AI currently credible enough or inherits the potential to be effectively and efficiently used in M&A due diligence processes?
- How do professionals in the investment banking and finance industries perceive the growing role of AI in decision-making?

Focus of the Study

The primary goal that this study aims to achieve is to investigate the potential of AI in being integrated into the field of IB to largely boost efficiency, accuracy, minimize errors and effectively provide exponential growth to the industry. More specifically, it aims to explicitly address the potential involvement of AI models an systems to be integrated and applied in M&A deal structures, due diligence processes and other operations inherent in these, as well as managing risk within these parameters. It also aims to examine and outline certain potential risks that AI integration may pose to threaten and compromise various aspects of the field such as firms' integrity, data analysis errors, data manipulation, technical crises etc. This study aims to provide experts and investment banking corporations and firms reliable data, facts and figures to

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inspect and evaluate their next steps in either taking advantage and investing into the 'AI boom', or stay out and protect itself from an unfavorable pursuit.

Research Questions

- What are the current capabilities of AI in basic financial services that surround the basis of IB, including commercial banking, Fintech etc. and how they are implemented.
- What is the potential of AI in these fields and how it could steer risk management with capturing and presenting real time data, calculating ratios such as the beta of a stock and the Risk/Reward ratio, ROA and ROCE during the M&A due diligence process efficiently.
- What is the current background and implementation of AI in the largest investment banking firms in the world, opinions of AI involvement in their workforce and its measure of effectivity in its current use.

Hypothesis

- It could be reasonably hypothesized that AI models haven't been fully integrated into the foundational frameworks of the financial services industry and capital markets, but are currently slowly finding its footwork by simplifying and automating objective, algorithmic processes and even used via chatbots for client solutions and services.
- Quantitative analysis, calculations of ratios and statistical extrapolation should be feasible to be taken care of and conducted rapidly through AI systems, however it would be hypothesized that structuring, negotiating and advice seeking orchestrated though GenAI models would particularly for large trades, movements of high capital share securities and M&A deals require the need for human review and evaluation. Even so, it would more than likely entail years of R&D and investment involved in developing such structures.
- It could be potentially concluded that AI is gradually taking over the controls and processes of minimalistic tasks in the realm of secluded divisions in investment banks, however its viability for serious processes are unlikely to present themselves within the next 10 years at the least.

Significance of the Study

There are a vast series of plenty different firms and individuals that would likely benefit from this study conducted. Firstly, large financial institutional firms such as that this study is targeted towards including investment banking firms like JP Morgan Chase, Goldman Sachs, Morgan Stanley etc. as well as large corporate bodies looking to indulge and grow inorganically through

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substantial M&A (Mergers and Acquisitions) deals that may take place in the future and require significant speed and efficiency that AI (artificial intelligence) could assist with. On the other hand, this study could also help these firms and corporates understand and conclude whether it'd be feasible for AI to be involved in these deals, or if it would be better for these firms to exclude AI involvement in these processes. Additionally, it also focuses to address and investigate ability of AI to manage risk which would be significantly essential and critical to develop and grow the investment banking industry, overall leading to future profit exponentiation and efficiency cultivation.

Scope and Delamination

As thrilling and enjoyable gathering research over the course of the period on this topic of AI in investment banking, the challenges faced and obstacles met during the duration of this research paper included a vast range. Firstly, residing in the miniature GCC island of Bahrain, the field of investment banking is an incredibly niche and unexplored domain, with corporates unlikely and rarely engaging in M&A arrangements, further diluting the ability to carry out research in risk management in IB on a practical scale. Moreover, lack of access to efficient, realistic and professional AI models to simulate and mirror potential systems currently or potentially used in the realm of investment banking or other financial services limited assessment to examine the potential strengths and weaknesses of its practical application.

Definition of terms

- Artificial Intelligence- The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.
- Investment Banking- The business of providing financial services for corporate and institutional customers, such as investing and raising capital and arranging mergers and acquisitions.
- Mergers and Acquisitions- Mergers and Acquisitions (M&A) are business transactions in which the ownership of a company, business organization, or one of their operating units is transferred to or consolidated with another entity, a process usually conducted and led by investment bankers.
- Risk Management- It is the process of identifying, analyzing and controlling risks to certain projects or ventures, and as a whole in pursuit of mitigating those risks.

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- Due diligence- Due diligence is the process of carefully examining and verifying information before deciding or moving forward with a particular action or agreement.
- IPO- IPO (Initial Public Offering) is the act of offering the stock of a company on a public stock exchange for the first time.
- ROA- ROA (Return on Assets) is a financial ratio that indicates how profitable a company is relative to its total assets, significantly crucial to the M&A due diligence processes in investment banking.
- ROCE- ROCE (Return on Capital Employed) is a long-term profitability ratio that measures how effectively a company uses its capital, particularly important in business analysis in M&A due diligence processes.
- Capital Markets- Capital markets are financial markets where businesses, governments and organizations trade equity-backed securities like stocks to raise long term capital.
- Robotic Process Automation (RPA)- RPA uses software robots to automate repetitive, objective and trained tasks to mimic human actions and digital systems.
- Large Language Model (LLM)- It is a software tool that is capable of corpus-based linguistic analysis and prediction, particularly an artificial intelligence system that processes written instructions (prompts) and responds by generating natural language text.
- Natural Language Processing (NLP)- It is a field of artificial intelligence that gives computers the ability to understand/interpret and generate human language.
- Generative AI (GenAI)- It is a field of artificial intelligence that learns from large amounts of data and then creates or generates new multimedia content.
- Machine Learning- The use and development of computer systems that are able to learn and adapt without following explicit instructions.
- Long Short-Term Memory (LSTM)- It is a type of recurrent neural network that excels at learning and processing sequential data by remembering information over long periods of time.
- Fixed Income, Currencies and Commodities (FICC) Markets- Is a sector of financial markets where traders deal with bonds, foreign exchange and raw materials.

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- ESG- It stands for environmental, social and governance and refers to the framework for evaluating a company's sustainable and ethical performance or impact.

2. Literature Review

The role and significance of AI is vigorously and aggressively growing exponentially by the day, on a global scale surrounding a range of differing industries. In July 2023, EY's CEO Outlook Pulse showcased via a vigilant survey that almost 50% of CEOs are allocating investment budgets towards the implications of AI, with 43% fully integrating AI into their capital allocation processes (Finalis, 2025). With the recent adoption of Fintech, AI models and technology to the domain of investment banking and all its sub-quarters, a new dawn of its credibility and effectivity raises questions of its applicability in modern finance. Utilizing the skillset AI brings such as RPA (Robotic Process Automation) that uses software robots to automate repetitive, "by-the-book" and objective tasks such as modular data entry and system integrative operations (UiPath, 2025), could enable the technical aspects of the field to be amplified in terms of speed and accuracy, additionally with the automation of routine tasks freeing up time to focus on more critical and valued activities, innovation as well as continuous improvement and client satisfaction. Risk mitigation through predictive analysis and statistical models as well as fraud detection using advanced algorithms would allow to forecast market fluctuations, reduce financial fraud and detect for regulatory compliance, essentially being key and proactive roles for AI which would be highly beneficial to the investment banking and finance trade in the modern era and during corporate M&A deals (Ramesh Vankadoth, 2025).

According to Livingston Samraj, AI can help analyze large volumes of data that may help in the many situations top investment bankers and financial analysts often find themselves in and assist in making split second decisions that could cost high net-worth clients large investments in wealth and portfolio management services as well as hedge funds. They may also contribute by recognizing patterns for automated trading decisions and implications with analysis of market conditions and other available data (Livingston Samraj, Acuity, 2025). Moreover, the risk management function inherent to investment banks inclusive across a vast range of credit, market, operational, systemic and systematic risk is all heavily data-centric and often requires the development of efficient risk models and tools in particularly extrapolating future behaviors, which predominantly makes artificial intelligence an ideal candidate to revolutionize and evolve the field of investment banking (Simarjit Singh Lamba and Navroop Kaur, 2023).

Alongside comrading the plethora of research conducted on the integration and supplementation of artificial intelligence in investment banks, a gratifying surfeit of study has also been directed towards the adoption of AI models, particularly GenAI in the general financial services industry and in addition, global capital markets. This potential opens up doors to also be specifically

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applicable and actionable to the investment banking field in its niche services like M&A due diligence as well as market predictions. The strategic employment of GenAI models such as GPT underscoring its transformative architecture allow for a spectrum of applications like automated knowledge management and investment research. The major banks such as that of the pioneers in North America have made substantial investments in artificial intelligence streamlining innovations and fraud detection. In response to the changes of this dynamic environment as GenAI encompasses financial institutions responsibility to surpass today's sophisticated client expectations, banks are strategically restructuring budgets as for their IT operations to foster innovations and competitive threats (Dr. Kostis Chlouverakis and Ajay Rawal, Ernst and Young, 2024). Contributively, this can also be seen executively in the illustrated relationship between the National Bank of Bahrain (NBB) and Bahrain Fintech Bay, showcasing the significance and applicability of Fintech harboring the benefits of GenAI to banking, and how this in turn could also be strategized to grow within the roots of investment banking. On a larger scale, this sets the benchmark for banks to amplify client engagement and sustainable growth using embedded finance and integrating AI technologies, widely driving the potential for it to be foreseen in the world's top investment banks (Dr. Kostis Chlouverakis and Ajay Rawal, Ernst and Young, 2024).

Additionally, the aggressive growth of artificial intelligence capabilities is projected to reduce costs and amplify productivity rates across financial institutions outside of banking like asset managers and insurance firms. Some of the largest investment banks in the world including JP Morgan Chase currently utilizes AI to screen validations of payments for cashflow analysis to automatically show insights to clients. This definitively showcases how it could also be applied to M&A due diligence processes in the assessment of cashflow statements and liquidity evaluation for private equity and investment banking firms (JP Morgan Chase, 2023).

Powered by AI, JP Morgan are now able to automate the analysis of complex legal documents to improve efficiency on regulatory compliance by reviewing thousands of pages and documents much faster saving time and reducing chance for human error during M&A negotiations. This allows the global giant to reallocate resources to other tasks overall boosting productivity and profitability with their recently developed Contract Intelligence (COiN) platform. Additionally, Goldman Sachs' MARCUS is an online AI leveraging platform to provide tailored financial services to a range of different clients. It uses machine learning algorithms for quicker trades, market evaluation, strategy suggestion and risk mitigation (Datapilot, 2024). These systems facilitated through AI systems analyze a range of complex datasets to predict patterns and perform trades. Furthermore, IB financial advisors and consultants at Morgan Stanley may benefit from this AI faceted technology by giving them tailored investment advice according to

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the profiles and portfolios of the client as well as conforming to situations with market conditions, taking into account the idiosyncratic and systematic risk (Ramesh Vankadoth, 2025).

On the contrary, there has been a considerable amount of investigation into the arising problems and issues that introduce themselves with the implementation of artificial and generative intelligence in investment banks. Embracing the transformative and evolutionary potential of AI, considering its limitations and array of drawbacks are crucial. The many complex hurdles posed by AI's integration include issues of transparency due to the nature of AI models making potential "black-box" decisions in investment banking. This could span across flagging risky investments or predicting certain fluctuations in securities markets, which necessitate financial institutions, especially investment banks, a careful approach. The promises of AI to accelerate operational efficiency and automate processes and strategic analysis, this may incur a cost of further ethical dilemmas and potential biases forcing a trade-off for investment banks around the world. Inherently, navigation of the complex terrain of data privacy further puts investment banks in a position to contemplate and assess if AI models and automation are valid enough to be trusted with high volumes of sensitive, confidential and critical information and data. There are also socio-economic implications to be considered with this implementation such as job displacement. This could lead to arisen issues within communities and ethical complications for investment banks that could lead to more problems that solved with this adaptation of AI for larger investment banks like Goldman Sachs and Morgan Stanley. This furthermore calls for a need for robust government frameworks and legislative regulation when it comes to the M&A divisions and risk management departments in investment banks (Dr. Kostis Chlouverakis and Ajay Rawal, Ernst and Young, 2024).

Subsequently, biases in AI models are also no new consideration for risk in IB, as for the data used when exercising and constructing AI systems governs how impartial systems will be, and with ancient biases in financial datasets and files could lead to biased and inaccurate automated decision-making, potentially harming the integrity of risk management in M&A deal structuring (Ramesh Vankadoth, 2025). In addition, the absence of organic human judgement also affects this, as IB deal-making and privacy are inherent to this domain. Nonetheless, the deployment of AI in investment banking would likely invite probable ESG impact, with trained models increasing carbon emissions, thus risking reputational damage, as well as backlash from a range of stakeholders and high-profile clients. Not to mention the incremental capital costs subsided with the installation of GenAI and other models and systems to IB divisions and risk management structures. According to Statista, capital raising and growth for AI startups have seen powerful and incremental surges as seen from 2017 to 2020 as it rose from $18 billion to $26 billion. Demonstratively, this consistent growth pattern has been seen as these investments grew to over $65 billion in 2021, and then by 2022, global corporate investment reached an

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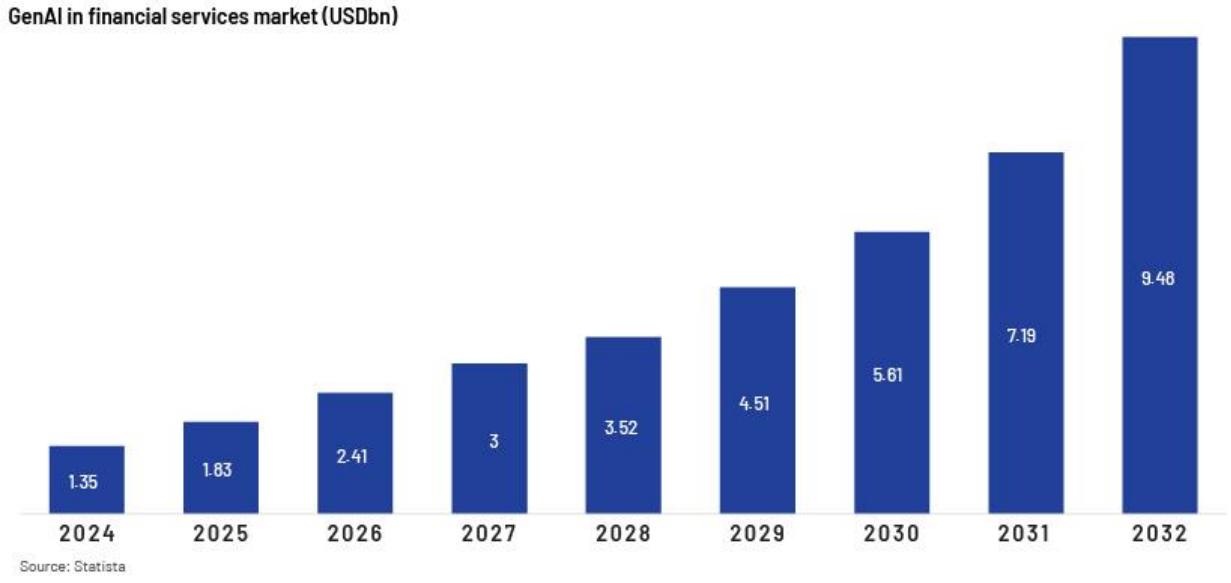
astounding $92 billion (Finalis, 2025). This truly characterizes the capital costs required to fully implement effective AI technology to investment banks, and smaller firms without access to such funding and debt capital, may not be able to take advantage of this at all.

According to credible research conducted by Deloitte, front-office productivity is set to increase by an impressionable margin of 27-35% with the integration of AI, potentially bringing in an additional USD3.5m in revenue per front-office employee by 2026. With the given benefit of boosted efficiency rates and cost cuts, it heavily improves business' ability to retain talent and foster strong employee engagement.

Moreover, with the recent wave of the "AI boom" taking its place in an unexpected industrial revolution, the investment banking sector is expected to secure a considerably large return. Combining the power of AI into investment banking operations are expected to yield success to a range of operations such as deal-making, research and due diligence.

The total global market valuation of GenAI's involvement in financial services is estimated to be around $1.35 billion in 2024 simultaneously producing a CAGR of 27.58%, and is forecasted to grow to $9.48 billion by 2032 according to Statista.

(Statista, 2024)



These statistics and projections actively illustrate and suggest the probable likelihood of AI effectively dominating the world of finance with projections showcasing multi-billion-dollar expectations according to data provided by Statista. These actions must now be taken into serious consideration to gain a head start and mitigate the risk of having missed the opportunity

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to integrate AI on a sizeable scale to maximize capabilities of investment banking firms and institutions for a generous ROI to the firm and its clientele, effectively enhancing growth of the industry.

With AI automation already revealing its dominance to the IB sector via machine learning algorithms and natural language processing (NLP) techniques used to automate trading, enhance modern risk assessment and management as well as perform thorough investment research, this has also opened up doors for large language models (LLMs) to automate tasks, thus directly improving worker productivity, as well as saving both time and money and maximizing efficiency. It was widely seen that Stanford researchers were able to demonstrate this efficiency boost by advancing productivity rates by 14%, as well as another study initiated by scholars from the Massachusetts Institute of Technology (MIT) claiming the benefits of GenAI to include time reduction and quality improvements in workflows of data analysts. Additionally, this may be of assistance to lower-skilled or newer employees to improve overall outputs. This could be seen practically applied with recent proofs-of-concept (POCs) with JP Morgan and Chase's "IndexGPT" that offers advice on investments to its clientele, while Wells Fargo is using LLMs to assist in determining necessary information to report to regulatory authorities and the improvement of systematic processes for increased speed and efficiency. These GenAI goes to show the potential for improvement in risk management operations in addition. Furthermore, it is also seen that several institutions are using GPT models to algorithmically analyze official statements produced by central banks. Bloomberg's recent launch of Bloomberg GPT, an LLM tailored for finance also demonstrates the investment approach pursued by vendors to investment banks. In similarity, Pitchbook has also unveiled its "VC Exit Predictor" that adopts a ML system to forecast startup's potential growth prospects.

It was asserted that Generative AI can help amplify analytical abilities to be applied in IB processes, and as Goldman Sachs are also leveraging this to efficiently develop robust code. Likewise, it is projected to improve as LLMs are trained on more parameters. Additionally, the investment banking division (IBD) would heavily benefit from GenAI particularly M&A with an improvement of an average 34% in productivity. This could behave as a catalyst in helping initial M&A deal structures and conduct due diligence, compliance and valuation, revolutionizing the industry and its operations. Moreover, legal documentation, prospectus and term-sheet drafting could all be automated and helped using generative AI as an inherent function during mergers and acquisitions orchestrated by investment banks.

In continuation, trading, including equities trading, are also seen to have a colossal impact with GenAI, with quick analysis, summarization of company and industry fundamentals, run valuation models as well as in conducting back test trading strategies and offering personalized tailored and trading advice and recommendations. It is also estimated that GenAI's impact on

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activities of traders such as leveraging NLP and sentiment analysis as well as generating synthetic data for risk modelling to manage systematic and systemic risk could significantly reduce time to understand market sentiment, catch anomalies and execute trades more easily, and on a greater scale.

On the contrary, FICC trading is seen to not harness as much gains as seen in other types of trading due to its complex nature of analysis and valuation utilizing swaps/derivates and a diverse range of other trading strategies and risk parameters. With FICC markets fostering more systemic risk, the need from AI to assess credit ratings, monitor bond yields and provide real-time insights may be too demanding and would require continuous validation from experts (Sriram Gopalakrishnan, Abhinav Chauhan, Val Srinivas, Deloitte, 2023).

Conclusively, artificial intelligence has dominantly shown is potential, vast array of usage and skillset it brings to the world of IB particularly in risk management, and rather less in M&A in comparison, as well as its application to some of the world's investment banking giants. Though it serves to show its power over the world's financial markets it also sparks several controversies and socio-economic debates, which must be taken into consideration and regulated by institutional policy and governmental regulation to avoid systemic risk and potential for collapse of risk mitigation systems powered by AI surrounding large M&A deal structures and other investment banking operations.

Critical Analysis

There includes a variety of various different similarities and differences between the different authors that have previously worked on the conduction of research in the integration of AI in investment banking. A few notable similarities between the different authors surrounding this topic would include the commendable ability of AI in risk assessment and management, particularly its ability to quantify it predominantly with credit, market and operational risk, as supported by Simarjit Singh Lamba, Navroop Kaur and Ramesh Vankadoth. Another major similarity to be highlighted would include authors' commendation on AI's operational efficiency to satisfy clients and time efficiency. These can be seen suggested by authors such as Swamy Biru and Saurav L. Chaudhari. On the other hand, Ernst & Young (EY)'s 2023 report states that institutions that confer with the adoption of AI particularly in the avenue of investment banking face increased risks. Such as threats of lawsuits from the utilization of web-based copyrighted material in AI outputs, concerns about bias, lack of traceability due to the "black box" nature of AI applications, and threats to data privacy and cybersecurity.

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Identifying Gaps

Although it can be seen how a sizeable amount of research has been carried out on the involvement of AI in the investment banking domain, a few critical and focused territories are yet to be explored and have a limited range of data such as AI in particular M&A deals with performance in due diligence processes as well as its expediency in performing IPO procedures and saving time consumption all the while being reliable and credible in practical cases. A lot of research offers commendability to AI in risk assessment and quantitative data analysis, however its practical usage in investment and compliance sectors and predictive analysis is still yet to be studied.

Conceptual Framework

Having seen and examined the various different academic works from numerous different authors, it can be confidently said that a lot has been studied, asserted and discussed of the credibility and involvement of AI in the broad field of investment banking. The industry is currently using chatbots, which are automated service assistants that provide consumers with the ease of answering their questions through online messaging platforms on gadgets like smartphones, laptops, and personal computers, thereby diminishing the need for in-person branch visits. For example, Vedapradha suggests that AI algorithms and Swedbank's AI chatbot, Nina, can be developed to create highly sophisticated investment strategies that guarantee high velocity data to outsmart the competition and enhance value for customers. R and Ravi Hariharan. In addition, KPMG states that AI has come to be greatly beneficial in investment banks across a range of different functions such as Automation, Sentiment Analysis, Optimization, Personalization and Gen AI (Generative AI). In addition, during the light of May 2024, JP Morgan Chase introduced a product called IndexGPT that prepares steady and systematic criteria-driven frameworks and blueprints for use in trading, on the regular, absorbed into indices for institutional clients (Acuity, 2025).

Theories of Investment

Modern Portfolio Theory- Diversification reduces risk, and is the efficient frontier of optimal portfolios. It assists in guiding asset management, portfolio construction and advisory services. Developed by Harry Markowitz, Portfolio Selection, 1952.

Capital Asset Pricing Model- Financial and statistical model that is used to calculate the expected return with respect to the risk-free rate and beta of an investment. Developed by William Sharpe, Journal of Finance, 1964.

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Efficient Market Hypothesis- Market prices reflect all available information, and is particularly difficult to beat markets. Helps shape IPO strategy and trading strategies. Developed by Eugene Fama, Journal of Finance, 1970.

Arbitrage Pricing Theory- Asset returns are explained by multiple factors, not just the beta. Applied in risk management, derivatives pricing and factor-based investing. Developed by Stephen Ross, Journal of Economic Theory, 1976.

Agency Theory- Managers may act in self-interest vs shareholders (principals); contracts & incentives matter. Used in M&A takeovers, as well as corporate deal structuring. Developed by Michael Jensen and William Meckling, Journal of Financial Economics, 1976.

Pecking Order Theory- A way of choosing how firms choose sources of financing, which flows from internal finance, to debt, to equity. Utilized in determining capital raising strategies and IPOs. Developed by Stewart Myers and Nicholas Majluf, Journal of Financial Economics, 1984.

Synergy Theory of Mergers and Acquisitions- In M&A, synergy is the idea that the combined value of two firms is greater than the sum of their individual values. This includes cost synergies, operational synergies, revenue synergies and financial synergies. Developed by Brealey, Myers & Allen, 2020; Damodaran, 2012.

Prospect Theory- Investors deviate from rationality, and that biases usually affect prices. Used in understanding market anomalies, IPO underpricing and investor sentiment. Developed by Daniel Kahneman and Amos Tversky, Econometrica, 1979.

3. Research Methodology

In pursuit of gathering data and conducting this research, it entailed a vast and multifaceted methodological structure and approach with respect to the intricate complexity of the topic.

Research design

Data gathered throughout the period of the study was through means of a dual combination of both quantitative and qualitative analysis and factors considered and assessed to justify and support claims, opinions and assertions holistically with credible, reliable and realistic evidence. This necessitated a blend of both primary and secondary research, as with the quantitative inherence in the domain of investment banking, calling for evidence supported claims represented with numbers and statistics as shown. Additionally, it also required for a qualitative overview due to the ethical and privacy violative concerns that circulated the dawn and adoption

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of AI in highly sensitive occupations such as in M&A advisory and risk assessment. This went to prove its requirement for the mixture of both quantitative and qualitative analysis and research throughout this investigation.

Data collection methods

As for the direct methodological implications utilizing both primary and secondary research approaches, it included an in-person interview using audio recording software of IT specialists at one of the country's most renowned banks, surveys and first-hand opinions from experts. A survey was also articulated comprising a blend of a total of 20 open and close-ended questions divided into 4 sections: Background, Awareness and Perceptions of AI in Finance, Risks Challenges and Ethics, and finally Future Outlook and Personal Opinions. Moreover, public company reports and releases from large corporate bodies online, as well as other publications and research conducted by a number of other academics in the field were also of great assistance to the production of this paper as well as for its provision of insights to assist in the secondary research portion of this paper.

Sampling structure

The survey employed a variety of different sampling methods, including purposive sampling, which was primarily utilized to target individuals with relevant expertise and experience in application in the real corporate world with finance and technology, with a hint of AI involved in addition. Ensuring a balanced, representative structure from a diverse range of age groups, a stratified system was used to target and divide certain groups to gather data of varying viewpoints from finance and IT professionals, qualified teaching professionals of the commerce domain as well as A level business and accounting students familiarized with the premise. It could further be suggested that convenience sampling was incorporated in the study, as participants were also based on availability and accessibility.

Ethical considerations

During the duration of this study, adherence to key ethical principles remained completely uncompromised and were taken into serious consideration. Covering the primary and qualitative research areas of the study, all participants were informed of the purpose of the study, as well as informed of the voluntary nature of participation in the research. With the provision of consent of all participants in the study, research moved forward smoothly and undisturbed. The confidentiality and anonymity of all participants were judiciously and prudently sustained throughout the duration of data collection, with all responses used solely for academic, qualitative analysis in contribution to the study of the application of AI in M&A and risk management procedures within investment banking. The integrity of the data was upheld with

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honest analysis and examination, as well as no reputational or professional damage to any of the participants. Nonetheless, constraints faced across the canvas of the study were handled and dealt with compliant to ethical principles, with scope and data limitations due to the lack of access to investment banking firms, operatives and expertise in the island of Bahrain, as well as AI implementation within these boundaries. However, they were morally tackled with the exploration of expertise in closely-related sub-domains adjacent to the world of investment banking and AI, and relying on primary and secondary resources due to a lack of proprietary industry data. This goes to show how all methodological constraints were handled transparently with the employment of precautionary measures in preserving the ethical and moral integrity of the study while maintaining its validity and reliability.

4. Findings and Results

Having underwent a series of diverse, varying research approaches, combining a blend of both primary and secondary research, as well as showcasing the dual analysis of the study through both quantitative and qualitative scrutiny, this chapter presents a vast plethora of key findings and verdicts that have been acquired.

In-person interviews with IT career professionals in the Banking Sector in Bahrain (13 July 2025)

Two IT experts experienced in the banking industry, employed (at the time of the interview) at one of the top banks in the Middle East and confidently familiar with the involvement of AI in the region and financial domain, with direct exposure and insight to the gradual development, implementation and management of AI systems within banking workflows commented on the current growth, application and potential of it, in pursuit of mitigating information gaps, as well as augmenting existing material. The first specialist claimed that AI was indeed “still not mature enough”, supporting this with the fact that the use of AI systems and models were still just in its testing phase, in the banking industry, and that people are just “trying things”, beginning with simplistic and basic tasks. He went on to argue how we are still “far behind” from effectively integrating AI and have it actually be useful within a bank. Subsequently, they were posed a question about the current or potential contribution of AI to the banking sector, where the first expert asserted its primary function to be “analysis”. Elaboratively, he amplified how data analysis that used to take hours and hours with full teams to extrapolate and forecast future quantitative expectations for banking functions, could potentially be replaced with the installation of AI models to be done “within a few minutes”. The second expert expanded on this notion in agreement, explaining how these departments that follow a repetitive task culture, inclusive of the acquisition of client details, could be efficiently gathered and assessed with the incorporation of AI in banking systems.

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Moreover, the professionals insightfully mentioned how they were currently working towards "upgrading" the current fraud detection systems within the bank, presently (at the time of the interview) followed by a "basic" algorithm, with the employment of an AI powered framework. He states that this would help make workflows "easier" for the fraud detection teams in banks, as well as enhance processes, effectively making it "sharper". In addition, management of large volumes of data as well as within the bank utilizing AI solutions is also a predicted prospect of AI in the foreseeable future, with this integration to be seen "very soon". Furthermore, he posited how the dependence of manual systems in risk analysis should be eliminated, and instead be governed by AI, especially in structured procedures, with its involvement strictly only deviated from the "creative part" of banking operations. They further clarified how the biggest concern banks should consider with a fully cohesive AI system is security, comparing the difference of AI utility between personal life and corporate life, with it being the root cause of "why we don't have a fully integrated AI system". They went on to back the claim of a "semi-integrated" model within banks, but most definitely more than it is now.

On a different path, one of the experts pointed out the lack of AI immersion in a current merger taking place, with there being "No AI solution for that" in the present, and it solely being orchestrated by higher level management. Conversely, they did however indicate there being a large scope for potential for AI participation in future mergers and takeovers.

Optimistically, one of the specialists had also appended to the topic, mentioning an agent-like AI tool, currently in development and testing, being employed and utilized within a trading application utilized by the bank's trading treasurers. He went on to emphasize its ability to analyze and display daily trades, with it being of colossal contribution to the bank's Treasury department, adjacent to investment banking, leading towards "Easier deals, Easier trading". He further accentuated to it being "revolutionary" to the industry, to mean boosted productivity rates and profit margins.

Systematic Qualitative and Quantitative Questionnaire assessment on the Perceptions and Impacts of Artificial Intelligence (AI) in Investment Banking (14 – 24 November 2025)

A 100% voluntary conducted survey was carried out on a sample of 39 career professionals, educators and A level students acquainted and accustomed to the premise of AI and its involvement in investment banking and the general realm of finance. The responses have been intended to satisficing and contributing to the purpose of the study addressing research deficiencies, bridging gaps and evaluating the hypotheses.

Having consented to being a part of the study and appreciated for their provision of a few career-motivated background details, it was seen that a majority were finance and IT occupational

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professionals (61.5% and 12.8% respectively), followed by respondents being qualified educators, A-level students and businesspersons. This included field experts with 74.4% of them having an expansive belt of experience spanning over 10 years. Furthermore, it is also seen how they were predominantly affiliated with industries inclusive of banking, investments and securities, trading and distribution, mutual funds, asset management and other financial services. Under this evaluation, it had been perceived as feasible to establish the strength and reliability of the sample's views, ideas and arguments.

Familiarity surrounding the research hypotheses was confidently seen with a near 65% of respondents having a poised understanding of its dynamics. Moreover, when asked on their beliefs on AI's current usage and involvement within the investment banking and general finance industries, of which they were posed with options including Risk analysis and Management, Algorithmic/Automated trading, Fraud detection and compliance, Customer relationship management or Market forecasts and Research, the majority had opted for algorithmic/automated trading facilities, seeing over 30% of the votes. This was then followed with risk analysis and management (28.9%) and finally fraud detection (26.3%). It shouldn't be overseen that nearly 8% believed AI fostered its territory over Market Forecasting and Research. Subsequently, a cumulative 77% of the participants firmly claimed that AI has either "Greatly or Somewhat" increased efficiency in investment banking operations. However, nearly 8% of the sample believed that AI had caused no noticeable change in these endeavors, or even reduced overall efficiency in these systems. In addition, participants were questioned on the potential advantages of which AI's integration in investment banking were to bring and have associated currently or in the foreseeable future, if any, to which the sample provided a range of varying responses. Many posited that it would potentially lead to a great deal of added efficiency and "smoothness" to investment banking operations, as well as quick and effective retrieval of market data. Stimulatingly, a large number had argued to its contribution to improved data and risk analysis, making quicker and rather accurate decisions, as well as market predictions and forecasting. Simultaneously, financial modelling was also stressed, with the tediousness and rigor of routine and repetitive tasks being eliminated with AI integration and automation, as well as enhanced client targeting and personalized client advice being developed and implemented.

In conjunction, individuals surveyed were also interrogated on the potential risks, challenges and ethical complexions to be scrutinized when considering the application of AI to investment banks and IB divisions. Firstly, opinions on AI potentially replacing human expertise and possibly triggering significant job displacement were analyzed on a 1-5 scale, and were seen as rather symmetrical and uniform.

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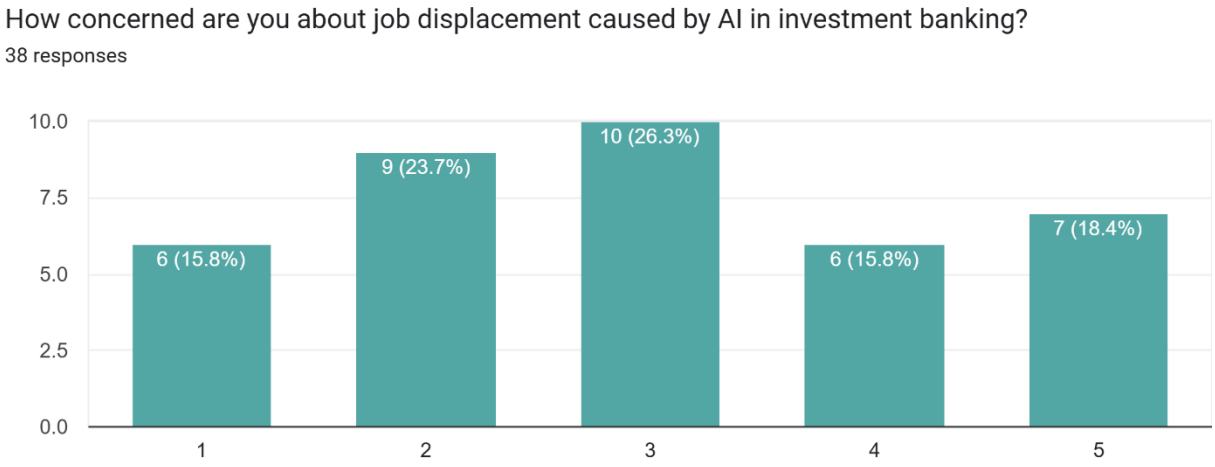

In a similar vein, the sample was asked on what they thought to be the biggest challenge in employing AI in investment banks, of which nearly half the participants believed Data Privacy and Security issues to be the primary and leading matter. This was followed by lack of technical expertise (17.9%) and high implementation costs (15.4%) to be subsidiary contemplations under evaluation. It is also notable that respondents also believed ethical bias and regulatory barriers (10.3% and 7.7% of participants opted respectively) to be contributing factors to the vulnerability and fragility of the application of AI. Alongside this, nearly 60% of the sample felt AI must "always" be governed and supervised by human expertise during investment banking decision-making, with 23.1% positing its need to only be overseen in high-stake decisions. Though, near 8% of the participants suggested AI would be able to operate independently in most IB cases and operations. When asked how likely they were to trust AI-driven financial decisions over human judgement, a minority reflected confidence in the artificially intelligent systems with only 12.9% opting for 4 and above on a 1-5 scale, and with near half of the respondents reflecting a balanced view and opinion choosing a 3. Understanding the participant cohort's aversion concerning the ethical risks of applying AI in financial IB decision-making, including bias, lack of accountability and privacy considerations, it was seen that concern largely ranged between 3-5 on a 1-5 scale, with less than 30% being less concerned. Additionally, when gathering research and suggestions in implementing ethical measures to ensure morally responsible utility of AI in investment banking, data privacy being a raised issue, robust pre-testing as well as transparency and the development of unbiased AI algorithms were raised as key implementations to eliminate AI ethical dilemmas. Furthermore to this, regulatory policies surrounding privacy concerns with confidential and sensitive client and market data would increase the likelihood of the minimization of these apprehensions. More to this, it was also

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proposed that strong human supervision and accountability would assist in holistically eradicating these potential discrepancies, as well as investment bankers hoisting control over the trade and performing ethically which would directly dilute the ability of AI in resorting to unethical practices, having used the term “ethical investing”. Some had also mentioned the need for frequent updates and prototype testing on these models before effectively integrating it into investment banks, with data encryption being essential and controlled use of these systems.

Further investigating, participants of the study were questioned on if they believed AI’s eventual replacement of traditional investment banking roles, to which an overwhelming majority (nearly 70%) theorized that investment banks would more than likely foster a blended combination of both human and AI collaboration, opposed to the 23.7% of respondents believing that human expertise would *always* remain essential. Let it also be noted that 5.3% believed that AI would inevitably replace the customs of the investment banking landscape. Under further study, the sample was asked on their predictions on the potential future influence of AI-driven models on risk management, an inherent function of the investment banking regime, and it was analyzed that risk assessment, analysis and accuracy were believed to be synergistically enhanced. Responses included that of AI’s current involvement in banking operations such as credit scoring, money laundering and loan default prediction, and that it would be “very likely” that it would help act as a catalyst to exponentialize development of risk analysis and minimize dependency on human interpretation. Some mentioned how real impact would only be seen if human involvement and overstepping are limited and controlled, while it was also seen that LLM (Large Language Models) integration would more than directly enhance risk management. Likewise, it was also interpreted that AI-driven models would detect and recognize patterns and potential IB catastrophes ahead of issues materializing, and in summation making risk analysis “easier”, allowing the human capital to focus on other critical areas like outcome assessment. On the contrary, some had believed there to be no absolute benefits to risk management harnessed via AI dominance, claiming that the likelihood of systemic errors occurring with AI may be too high to be applied to risk analysis in a critical domain like investment banking. This was further added on to, with views stating that AI being integrated into risk management operations would be “automated and made to reply on historical data to ensure reliability”, further denoting how that itself perceives to be a limiting factor and thus may cause a negative impact on risk assessment. Through a balanced lens, some had come to consider how that the support of AI in these risk calculation operations would be rather helpful, however a plethora of research would be required, as well as strongly built by experts and specialists to stabilize and establish its credibility to be involved in these tasks. Under further scrutiny, participants were asked to judge the reliability of AI in data analysis in sensitive regions like due diligence processes as a part of M&A deals and operations, to which an underwhelming 0% of the sample opted for a full confident 5, when structured on a 1-5 scale. Conversely, a significant majority of a cumulative

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84.2% of respondents believed a 3-4 more appropriately suited the true dependability of AI when scrutinizing through large volumes of financial data sets, ratios, statements and number crunching. In addition, when it came to AI's role in decision making within the investment banking industry in the next 5-10 years, study participants showcased a wide array of responses and perceptions. A substantial majority felt AI to be "more often" utilized in this sense, with it being expanded onto a "large scale" in executive decision processes. Further adding on to this, one pointed out how it would "likely support investment bankers by providing faster, data-driven insights for valuing companies and assessing risks", as well as with a vast range agreeing on its future ability to make increments in accuracy during decisions, market predictions as well as identifying beneficial and profitable investment opportunities ahead of time. Many poised the great likelihood of AI making IB decision-making much faster, effective and efficient, thoroughly using AI's data analytics expertise, and ultimately fostering a "huge impact". Some had a more extreme approach to this idea, arguing how AI would definitively be involved in "every segment" under the umbrella of investment banking, capturing the decision-making systems and processes "almost totally", as well as it potentially and confidently "overriding the existing system". One even stated that the need for "human obtained information would be eliminated" as AI would be greatly employed in decision-making within the general finance and investment banking industries, further claiming how these applications would "improve risk management" to facilitate a positive influence on IB decisions as well as provide clients with an enhanced experience employing investment banks. This was overall seen to make IB decision-making and managerial judgement much "easier", as opportunities and risks would be identified in a prior nature. On the other hand, some contended an opposed perception on decision-making processes in investment banks stimulated with AI models, claiming "Not to a greater extent". Moreover, it was also seen that AI may orchestrate increased volatility in IB decision-making, with it adopting "a similar workflow". Having provided an insightful and steady view in equilibrium, some suggested that it could instead be "an additional tool alongside human thinking", performing as a subsidiary catalyst to manual judgement and decision-making, to instead maximize accuracy in these processes synergistically. Adding on to this, some advocated that the success of artificial intelligence in these lie entirely dependent on the effectiveness and expertise of training the model.

In the heart of analyzing M&A deals via due diligence processes, respondents were interrogated on the potential of AI succeeding in capturing real-time market data, as well as instant ratio and performance calculation of companies seeking profitable inorganic growth, more effectively than current models and systems used by investment bankers. A major 45.9% of the sample had agreed on the prodigious potential displayed AI in accomplishing this, however felt that it was "too early to tell for sure", while, more confidently, an impressive 40.5% of participants argued that it would "most definitely be seen in the future". On a contrastive venture, a minority of

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10.8% believed that there may or may not be significant potential to be seen in the future, though it is vital to consider the elemental risks and problems that are associated with the scheme. More extremely, a mild 2.7% asserted that AI is simply and blatantly "not powerful enough" to achieve these endeavors, that current models are superior in these tasks. Finally, when asked on participants' insightful predictions on how AI may transform the investment banking industry overall, feedback was generally on a positively influential scale. The vast majority had suggested that it would revolutionize the domain "significantly" and "quite well", supporting this with ways such as improving decision-making accuracy, speed up processes with AI automation of routine tasks, efficiency and productivity levels, as well as a cost cutting mechanism. Some complemented this positing how its vastness showcases strong potential through data analysis and digitization of processes in all operations, as well as reducing human hours and effort to instead focus on other profitable dynamics to maximize overall profitability of investment banks. Some even proposed on its ability to potentially automate research, which may provide for more accurate insights to identify investment opportunities earlier, as well as making overall workflows easier and "more reliable that it is today". Simultaneously, some represented an even-handed evaluation, stating it would most likely only lead to a scaled 50% change in the industry of what it is today, and others exhibiting hesitancy, stating that it "may be better".

5. Discussion

Following a robust and comprehensive analytical assessment evaluating the results and findings of the carried-out research, a broad spectrum of diverse viewpoints, arguments, positions and opinions have been drafted, interpreted and presented. This chapter displays and showcases the key discursive interpretations and highlights verdicts concluded to address the research questions, statement or problems and hypotheses of the study.

Interview Discussion and Interpretation

With the confidence of a solid, experience-based background with over 10 years in the field from two IT experts at a top performing bank, their opinions, insights and views were deemed credible and reliable. This provides a crucial real-world lens through which the broader literature on AI in investment banking can be examined. Their insights not only complement prior academic and industry research but also provides practical applications and contextual limitations to be considered and assessed.

Firstly, the experts commented on the prematurity of AI being in its current stage, currently implicated in its testing phase to be applied in banks, and that they were just simply exploring, using the words "trying things". This actively suggests how though the current theme of the interview that took place invigorates a great potential and optimistic lens of the future where AI

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would potentially dominate the sector, it must be established that it may still be too early to integrate it into investment banks significantly. Though it is seen that in the short-term banks are currently applying AI in simple, basic and fundamental tasks, this may be far from applicable to the complex and highly sensitive tasks and systematic processes of the M&A market and risk analysis in investment banking, at least within the next couple years. Moreover, the interview followed with AI's primary and major current/future potential to content-fully satisfy the realm of analysis. This is additionally complemented and supported by Livingston Samraj, who asserted that AI can help scrutinize through vast arrays of data and speed up decision-making and operations (Livingston Samraj, Acuity, 2025). As AI had demonstrated its ability to analyze and assess large volumes of data, it may just be speculative to agree on its capacity to quantitatively extrapolate and forecast future trends, especially under IB dynamics, without any concrete evidence. However, Ramesh Vankadoth had argued on the contrary, advocating for the ability of AI to mitigate risk through predictive analysis and statistical models as well as fraud detection using complex algorithms to additionally forecast markets of which AI could be greatly beneficial; however, lack of empirical evidence weakens the substance of theories. On a side note, AI models could instead potentially be used in tasks surrounding a repetitive and uniform culture, that require no such advanced spontaneity or creativity which may be unrealistic and unreliable on AI to accomplish them. This was also practically seen in JP Morgan's AI implication to screen validations of payments as well as automation of analysis through long, rigorous and tedious legal documentation. This directly points towards the ability of AI to generally save time and effort in investment banks, while reducing the likelihood of human error, however does not directly provide substantial and proven ability to analyze investment risks during M&A deals. On a contrasting path however, AI models would likely be employable in analyzing, summarizing and providing objectively-driven verdicts on company financials as well as other qualitative factors, which may eliminate risks of human bias or unreasoned subconsciously psychological inclinations, potentially maximizing operational effectiveness and industrial growth.

Additionally, fraud detection was another given and highlighted prospect to be engineered and enhanced through AI powered algorithmic frameworks. With one of the interviewees having stated they were currently working on some sort of improved system utilizing and employing artificial intelligence, this may suggest that it is currently feasible and credible to succeed in this task domain. Accordingly, this could possibly mean that in the short term, AI could directly be used in several fraud detecting mechanisms internalized during M&A due diligence, such as identifying revenue/expense manipulation, inaccurate cash flow statements, inflated assets or even money laundering. AI has been powered to already utilize machine learning (ML) to adapt capabilities such as pattern recognition, orchestrate behavioral analysis and analyze real-time transactions. Through assessing heaps of datasets, AI models can learn to recognize the

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difference between fraudulent or “suspicious” activity/transactions, and legitimate ones, essentially using historical data to be trained to “catch” trends a human agent might miss, which also opens up door for massive scalability. Practically speaking, it was also seen that through the adoption of Long short-term memory (LSTM) AI models in their fraud detection systems, American Express saw a 6% improvement, while PayPal saw a 10% advancement. On the contrary, a few likely drawbacks that should be considered that its highly data dependent, as well as its inevitable problem of bias and error vulnerability (Mesh Flinders, Ian Smalley and Josh Schneider, IBM, 2025). That said, with these supporting evidence and strong, confident assertions, it could powerfully be concluded that investment bankers participating in M&A deals could potentially see carefully developed, valid AI Machine Learning and LSTM models integrated into their due diligence systems to improve accuracy and likelihood of identifying fraudulent companies, as well as flagging suspicious activities to mitigate risks associated when companies decide to takeover or “acquire” other corporates, in a shorter period of time, as posited by the expert as to be seen “very soon”. The expert then went on to protest on the largest issue at hand when substantiating a strong, cohesive system with AI in investment banks especially would be security. This poses a great risk for these banks, as client details and information are highly sensitive and confidential, especially when exposed to dynamically growing and competitive corporate M&A markets. It was then revealed how the difference between AI application between personal and banking life was vast, and that this issue must soon be addressed by specialist developers to finally implicate a fully integrated AI system to investment banks, as argued by the interviewee. This goes to show that it is fully possible, that if AI proves to display a robust, encrypted and vigorous systematic model to ensure the security of sensitive high net-worth clients and corporates taking part in deals requiring thorough risk assessments, it would finally at least support the claim of a “semi-integrated” model within banks, which then could be mapped onto investment banks specifically tailored, more than it is today, simultaneously assisting with analyzing risk for these clients instead of exposing them to volatile security risk.

Further down this avenue, the professionals highlighting the unseen involvement of AI in a current merger occurring at the time may imply that effort to seriously train AI models and develop these systems is severely under-stressed, with it only being controlled and implemented by higher-level management. This may point out to a reason as to why AI hasn’t shown true and definite results yet in these investment banking operations, and that if resources would be more concentrated towards this venture, its true scope would be revealed in this domain, potentially providing a larger overall turnover for investment banks.

In a positively gratifying finding, the current development of an AI agentic tool employed in the trading application utilized by trading treasurers of the bank was exposed during the interview.

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Its key abilities included analyzing and showcasing daily trades is a contiguous application to investment banking tasks and operations, and demonstrates a key finding which could be further explored to be applied practically in investment banks. This accelerates potential beyond the regular predominant scope of AI in traditional investment banking, and moves towards the notion of "easier deals, easier trading" as mentioned by the specialist. This could be applied to analyzing stocks and IPOs in the M&A market for investment bankers to make influential and significant assertions and judgements, proving for the utilization of AI as a tool. This could take global investment banking giants to new levels beyond the analysis model used by JP Morgan and Chase, as well as Goldman Sachs' MARCUS solely with its provision of analytical client services (Datapilot, 2024).

Questionnaire Survey Discussion and Interpretation

A thoroughly assessed and crafted survey was circulated amongst a credible and reliable sample of 39, comprised of a blend of IT and Finance Specialists under 10+ year backgrounds inclusive of banking and other financial services, investments and securities as well as asset management and mutual funds, alongside long experienced and qualified educators well-versed with the domain and what it entails, as well as enthusiastically driven and curious-headed A-level students familiarized with the industry and its specifics, creating a strong study participant pool to collect and gather points and views surrounding the fundamental outlook on addressing and answering the research questions, and confirming or rejecting the hypotheses.

The participants of the study were confronted with the question of what they believed to be AI's greatest current involvement sector within the investment banking agenda, to which the majority (over 30%) had opted for automated trading, while the other two, risk management and fraud detection weren't too far off (28.9% and 26.3% respectively), which goes to show the similar mirroring of these applications in the real world, with automated trading currently "in the works" in its beta phase and AI-driven fraud detection systems for increased speed and efficiency, and how this would create a high likelihood for success when properly innovated and developed, as well as refined to eradicate all potential risks. A minority of nearly 8% believed that AI may have already dominated research in extrapolating future market trends, however this may be considered negligible and insignificant as there has also been no concrete proof to support this conjecture. Following this, a total 77% of respondents had claimed that AI has either "Greatly or Somewhat" increased operational efficiency in these investment banks, which represents a strong majority pointing towards a positive and optimistic outlook on AI's ability to exponentialize growth in this sense, acting as a subsidiary supporting anchor on this theory, as well as seen with JP Morgan's COiN platform, and complex legal document analyzing AI tool, which further allows for time-saving opportunities where resources can be reallocated to other productive and profitable functions, boosting overall productivity rates and operational effectiveness in MNC

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investment banks, which could further be induced in smaller, growing ones, as seen by Deloitte's prediction of front-office productivity to see an increment of 27-35% with AI integration by 2026. Though, it may also be considerable to note that near 8% of the sample felt as of AI hadn't caused any real, impactful change yet in this sense, or maybe even reduced efficiency in these integration attempts. This could be due to heavy investments as seen as that almost half of assessed CEOs are allocating significant proportions of their budgets toward AI implications (Finalis, 2025) which may suggest overinvestment into systems not fully developed or beneficial just yet, which may have led to a decrease in overall efficiency of the investment banks. Under assessment of the responses on the potential advantages of AI integration into IB processes, it could be thoroughly concluded that a vast range believed AI to smoothen operations as well as maximize efficiency and speed. This heavily resonates with Deloitte's prediction of AI bringing in an incremental $3.5m in revenue per front-office employee by 2026. Further seen, a large majority had agreed to its ability and capacity in improving risk analysis and management using large data sets, as well as speed up decision-making with increased accuracy, and for market predictions and forecasting. This is precedented with MIT's study that found quality increments in workflows, especially found in data analytics which points towards AI being used as a strong, transformative tool in this sense, additionally supported with JP Morgan and Chase's "IndexGPT" offering recommendations to clientele, showcasing its capability to analyze risk and make judgements, in conjunction with the sample's opinions. Financial modelling and personalized client advice were also posited to be a strong gain of AI integration, which may allow for improved due diligence processes in M&A deal structuring, as well as risk management when drafting and offering personalized and tailored client advice as supported by Ramesh Vankadoth considering and scrutinizing through the idiosyncratic and systematic risk.

Besides this, a diverse array of responses is to be seen highlighting the potential risks, challenges and ethical dilemmas to be considered and tackled when investigating the application of AI to these investment banks. Seeing this, a rather uniform distribution of opinions on concerning the risk and notion of job displacement within the IB industry with this new synergy, as participants had mixed perceptions and views on this take, ranging from 15-27% of votes across the 5-point scale. This goes to show that with strong opinions on "semi-integration" of AI in these industries and corporates, job displacement may not be as big of an ethical crossroad as some may believe, however regulatory and legislative material may need to be enforced to keep this potential issue under control, as subsidized by Dr. Kostis Chlouverakis and Ajay Rawal, calling for needs for robust government frameworks under this topic (Dr. Kostis Chlouverakis and Ajay Rawal, Ernst and Young, 2024).

Similarly, when posed the question on the biggest challenge when it came to employing artificially intelligent models to investment banks, nearly half the sample thought Data Privacy

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and Security issues to be a leading factor in consideration. This further contributes to the general socio-economic issues exhibited with this implementation, and hence necessitates the need for elimination of security breach vulnerabilities and technical inconsistencies. Following this, it was seen that 15.4% of the sample invigorated capital costs and installation fees to be met as another challenge. This was advocated for alongside Statista, stating capital raising growth has seen surges from $18 billion in 2017 to $26 billion for AI startups, as well as when global corporate investment in these technologies accomplished a pinnacle of $92 billion in 2022 (Finalis, 2025), truly materializing and characterizing the capital capacity required to effectively integrate AI technology and models to investment banking divisions, and how it may limit smaller firms in strategically utilizing these opportunities. However, this may instead be offset with the ability of AI models to enforce cost cuts in IB operations, as credited by Deloitte, proving to produce an overall financial benefit to investment banks in the long term. In addition, biases have been no new hurdle to be battled by investment bankers in its attempt to blend AI models to its operations in M&A Advisory, as also seen when 10.3% of the respondent pool opted for its inherent challenge posed, and that experts would need to ensure robust refinement of the models before its application in investment banking firms. The 7.7% believing regulatory barriers to be the primary challenge may be considered insignificant and negligible, as there has been no substantial evidence to back that claim, as well as it could easily be amended if need by legislative authorities.

The findings clearly showed that respondents strongly support oversight in AI-driven decision-making within investment banking. 60% Believed AI should always be monitored by experts, signifying caution for addition of an extra layer of insurance and protection. Another 23.1% felt that such supervision should be mandatory at least for decisions. This outcome is consistent with the research discussed in the literature review highlighting the significance of judgment, in investment banking. Lamba and Kaur (2023) argue that although AI contributes to data-focused activities like risk modeling and forecasting it lacks the understanding and intuitive insights of experienced bankers especially in rapidly changing financial markets. This highlights the need for a method that merges AI skills to enhance collaboration, in investment banks and minimize the dangers of depending exclusively on either one. This cautious position is backed by the proportion of respondents (about 8%) who thought AI could operate independently in banking functions. Recent examples like JP Morgan’s platform aimed at automating the examination of documents illustrate that while AI can significantly boost accuracy and efficiency the accountability, for decision-making still lies with human specialists (JP Morgan Chase, 2023). Moreover, the surveys trust ratings revealed skepticism: 12.9% rated their confidence in AI-driven financial decisions as 4 or above on a 5-point scale while almost 50% indicated a neutral trust score of 3. This aligns with the viewpoint of Chlouverakis and Rawal (2024) who emphasize concerns about transparency deficits, in AI systems and the "black-box" nature of

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models. These issues pose challenges for clarity and reliability in decisions about client assets, market predictions and regulatory compliance. Moreover, this heightens exposure to issues around transparency and bias serving as a limitation in this area and demanding focus, from investment banks.

Concerns from participants were evident in their responses about topics related to AI usage. Most rated their thoughts between 3 and 5 citing problems like bias, lack of accountability and especially data privacy. These concerns mirror those that can be found within industry circles too. Vankadoth (2025) highlights how biases that exist within data will result in inequitable outcomes when used within machine learning models. Moreover, Chlouverakis and Rawal (2024) strongly emphasize how client and market data, which investment banks process, increase risks of privacy when using AI systems. To overcome these concerns, there was emphasis on the need for safety measures such as rigorous pre-testing, increased transparency, data encryption, and stringent regulations. These measures largely mirror those recommended by institutions that acknowledge the value of establishing responsible AI governance models to efficiently reduce risks while conserving public trust too. Responses related to the possibility of AI systems substituting investment banking roles largely showed evidence of desired cooperation rather than substitution too. Seventy percent of those surveyed agreed that investment banking's future would consist of technologies using a hybrid model, which would combine human expertise with AI systems' capability too. Industry trends largely coincide with this viewpoint too, with top investment banks now stressing process augmentation rather than substitution too. It's important to note how Goldman Sachs and Morgan Stanley invest heavily in developing technologies that increase efficiency related to human substitution (Datapilot, 2024; Vankadoth, 2025). It's important to note how only 5.3 percent agreed that AI systems could substitute roles within investment banking fully; this largely holds an extremist opinion that receives little or no basis related to industry trends or scholarly research-related efforts too and could therefore objectively and rationally be ignored too. While generative AI systems have made considerable strides, analysis abilities related to negotiation and expert knowledge would still ensure unautomated processes related to these systems too.

Risk management was introduced in the discussion of risks and responses to risks associated with applying AI techniques. The respondents agreed that there were possibilities for improvement using AI risk evaluation tools or pattern recognition techniques. Several responses pointed to applications of AI techniques within banking systems, such as credit assessment tools and risk management, when determining loan default risks. These opinions were consistent with opinions raised within the review of related studies; risk management can adopt AI techniques because risk management depends on analytics and data (Ramesh Vankadoth, 2025). The respondents were of the opinion that risk models using AI techniques could offer improvement in

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risk evaluation while relying less on human judgment for manual calculations. These opinions were subject to debate among the respondents. Several respondents were worried that risks associated with weaknesses within AI models could cause risks within investment banking environments to fail.In addition, some were worried that overdependence on facts, which was also pointed out by Deloitte (2023), could impair an AI model's capability to identify uncharted market circumstances. Feedback received implies that though there's trust in AIs' capability to predict and evaluate, there's consensus that human knowledge should occupy a central position concerning risk management to authenticate and correctly construe outcomes and react to situations. These scenarios occur periodically within the M&A market, making it critical to adopt drastic actions that could jeopardize investment banks' functionality and reputation risks, adversely affecting their reputation and trustworthiness. On top of that, research findings pointed to growing sentiment towards AIs' capability within the M&A due diligence process phases too. It's important to note that none of the respondents (0%) rated AI's trustworthiness when performing diligence activities at 5, but a considerable number rated it at either 3 or 4, indicating trust rather than trustworthiness was applied to AI applications. This implies measured trust among respondents that fits well with real-life scenarios too. Though there are visible improvements with regard to analysis capability provided with Goldman's AI-powered valuation and trading systems and JP Morgan's M&A AI-powered platform, there still exist strategic M&A activity areas beyond the capability of present AI models, like cultural fit analysis, management evaluation, deal structuring, and negotiation phases too. According to scholarly research, this was acknowledged based on which emphasis was given, suggesting M&A activity was not only about analysis but also required subjective input related to negotiation expertise and strategic knowledge that can only be achieved not yet with AI tools but with human expertise too instead. Yet still, an overwhelming percentage (86.4%) agreed that AI tools can increase diligence processes at an improved level moving into the future with regard to real-time data extraction ratio analysis and evaluation capability too.

Projections of respondents with regard to the extent to which AI systems would or could be incorporated into investment banking decisions revealed diverse cautions and acute insights throughout the decade indicating that numerous individuals were of the astute opinion or assumption that AI systems would or could be incorporated "frequently" into management decisions pertaining to improved market forecasts and evaluation and identification of investment opportunities (Bloomberg, 2024; Wells Fargo, 2024). Some respondents provided instead the indication of an expected shift with regard to which AI systems would or could oversee "every aspect" of investment banking or substitute traditional processes altogether or begin performing traditionally different processes with efficacy or could potentially replace traditional processes altogether when considering what is anticipated with regard to improved efficiency with LLMs to create more efficient generative systems. It was, however, pointed out

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eloquently by many of the respondents how important human intuition remained with regard to artificial intelligence functioning with autonomous capability rather than with supporting capability. This particular aspect tends to support Deloitte's (2023) theory that while artificial intelligence and investment banking's success would interplay with regard to model training quality or governance quality, among other factors.

The final section of the survey regarded opinions about how AI can affect or has already started affecting the industry of investment banking. Most of the respondents expected AI to revolutionize their industry by providing more accurate decisions, improved processes and efficiency, fewer mistakes, and automating repetitious tasks. These opinions were well-supported and matched empirical research papers concerning the positive effect of AI implementation in various sectors; these included efficiency improvement, cost-effectiveness, and faster operation (Finalis, 2025; Statista, 2024). Others expected AI to automate investment analysis and fast market opportunity analysis. These opinions could relate to empirical research done on front office areas that showed improved speed and quality analysis of generative AI tools (Financial Times, 2024). Most respondents provided balanced opinions about future influences expected to occur after AI implementation at only 50% or when AI becomes more stable and mature for sustainable influences into the future. These opinionated remarks related to empirical research done on major concerns or challenges posed by AI implementation to the environment and infrastructural techno-social setup (Tech Europe News Today, 2024).

6. Conclusion

The outcomes, findings, statements, and discussion in this research provide a large number of arguments leading to the reshaping of M&A deal structuring and due diligence analysis with the utilization of AI. These attempts validate theories and explanations related to M&A deal structuring and due diligence analysis with AI applied at different ends and angles that investment banks across the globe need to contend with and relate to. By using expert theories and viewpoints related to M&A deal structuring and due diligence analysis applied with AI at different ends and angles within this research, and considering empirical research studies and real-life applications associated with theories related to M&A deal structuring and due diligence analysis applied with AI at different ends and angles, these theories and viewpoints related to M&As and investment banks have been thoroughly tested.

By using a mixed-methods research design that included face-to-face interviews and a 20-question survey conducted among an academically qualified and representative sample, it was possible for this study to relate with and refute existing literature that was taken from diverse sources of articles and writings among qualified authors and subject-matter experts. It helped in closing various gaps found within this sector.

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The primary objective of what the researched aimed to fulfill and accomplish was to provide an investigative analysis and approach to identify the real potential and practicality of effectively integrating AI models and systems to investment banks to boost operational efficiency, speed up processes, automate tedious and repetitive tasks in the domain, minimize costs and maximize productivity. In addition, it was also significant to the study that risks, issues and potential discrepancies and inconsistencies were identified, and that ways to mitigate them were explored and asserted. This provides for great significance and employability to large corporate bodies, especially investment banks on a practical scale, as well serves as a framework for further research to be conducted and explored on AI in investment banking under a different umbrella of operations (besides M&A and risk management), as well as for other finance or financial service industries. It could be reasonably concluded that plenty of statements and assertions have been made, supported and can be compared with the hypotheses of the study.

Insights from the expert discussions showed that while AI is becoming more common in banking processes it is still at a stage especially in areas demanding strategic decision-making, negotiation or profound contextual insight. The experts pointed out that AI performs best and is most dependable in data-structured and repetitive activities, like analytics, fraud identification and automated workflows. Additionally, they stressed that security remains the obstacle to broader implementation given the highly sensitive and critical nature of investment banking information. These findings reinforce the idea that although AI might soon simplify tasks it is not currently prepared to manage complex investment banking processes on its own. The findings from the survey further supported this viewpoint. When asked questions in order participants consistently showed recognition of AI's capabilities in automated trading, fraud detection, risk modelling and data analysis, most participants suggested that AI has already enhanced efficiency and precision in processes. Nevertheless, respondents also expressed worries about data privacy, ethical challenges, implementation expenses and the necessity, for ongoing human supervision. Although the majority of participants anticipated that AI would have a significant impact on investment banking in the next ten years almost everyone felt that human judgment will continue to be crucial, particularly for critical decisions, deal structuring, and negotiations, all as an inherently crucial part of mergers and acquisitions within investment banking. Confidence in AI-based decision-making was moderate acknowledging its strengths while remaining aware of its limitations. The study additionally uncovered an optimistic view on AI's potential to improve M&A due diligence. While none of the participants showed trust in AI functioning independently for due diligence a large portion felt it could greatly aid ratio analysis, financial assessment and real-time data acquisition. This is consistent with patterns where major banks, like JP Morgan and Goldman Sachs have implemented AI-based tools to speed up document examination, compliance verification and data handling. Simultaneously participants and interviewees agreed that subjective assessment, strategic understanding and judgment, which are

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core aspects of M&A deal-making, are still outside the reach of AI capabilities. The results consequently indicate that AI is most effective, in enhancing the basis of M&A tasks instead of supplanting the human decision-maker.

Overall the findings indicate that the future role of AI in investment banking depends on an approach, where AI complements rather than substitutes human knowledge. AI is set to handle tasks, improve analytical accuracy, lessen manual efforts and speed up risk evaluation but this is effective only with solid human oversight, comprehensive governance structures and stringent data security protocols. The research additionally emphasizes the importance for investment banks to focus on transparent AI technologies through investment in enhancing employee division of labour and collaborate with regulators to create clear standards, for responsible AI use. Regarding investigations there is significant opportunity to investigate AI's capabilities in more sophisticated fields like valuation modelling, synergy analysis, IPO preparation and post-merger integration, areas with scarce empirical evidence at present. Extended research monitoring AI effectiveness in investment banks over long durations would also yield vital understanding of its dependability, error tendencies and enduring effects, on the quality of decision-making. To sum up the results convincingly back the hypothesis that AI won't hurt investment bankers but will develop into a supplementary resource that improves their skills, precision and productivity. Although obstacles remain, particularly relating to security, ethics and system dependability, the direction of progress indicates that AI will keep transforming operational aspects of investment banking. These risks and issues should instead be taken into consideration and further researched to eliminate the likelihood of these taking place in IBDs, and mitigate them to ensure smooth synergy and boosted profitability and gains for investment banks. Its impact will be most significant, in data-focused roles whereas judgment, negotiation and strategic choices will stay majorly human, however aided as a strong tool as suggested by the research. Ultimately, responsible integration of AI offers investment banks a transformative opportunity to strengthen performance, reduce risks, and achieve higher levels of productivity in the near future.

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