GENERATIVE ARTIFICIAL INTELLIGENCE POSITIVE IMPACT ON

AMERICAN FINANCIAL INSTITUTIONS

by

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Dedication

This thesis is dedicated to my wife and daughters who have supported me throughout my education. Thanks for making me see this adventure through to the end.

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I am sincerely grateful to my mentor ABHILASH KAYYIDAVAZHIYIL for his invaluable advice throughout doctorate research and SSBM professors for their guidance.

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ABSTRACT

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Generative Artificial intelligence (GenAI) has played a significant role in influencing the operations of the financial institutions through monitoring market risks and credit risks. The purpose of this study is to determine the positive impacts of Generative AI on the American financial institutions. “Generative adversarial network” of the GenAI streamline the process of content development that supports managers of financial institutions for personalised advice. Additionally, analysis of historical data giddies up the process of decision making by analysing the sentiment of the current market. Furthermore, GenAI develop simulation based on the current data that assists in the evaluating different scenario that ease the process of decision making for financial institution.

Literature review chapter has reviewed the positive impacts of the GenAI within the financial institutions. It has been found that the theories like technology acceptance model and theory of reasoned action are beneficial for determining the behaviour of the financial institutions at the time of using GenAI. Implication of theories has effectively paved the way of conducting research within the context of implication of GenAI in financial institutions. Developing in-depth

comparing between Predictive AI and Generative AI has also determined accessibility of GenAI capabilities in financial institutions.

Methodology chapter has supported this study to identify the most suitable methods for this research such as philosophy, approach, design of this research, data collection, and review of the research problem, questions, sampling, and data analysis. Primary quantitative research design helped this study to gather relevant information related to the positive impacts of GenAI on the financial institutions of North America through reliable primary sources.

Positivism research philosophy was integrated for designing the research methodology as it views the phenomenon of Gen AI's impact on financial institutions of North America. Additionally, integration of deductive research approach ensure evaluation of GAI's impacts like risk assessment, investment decision through evaluating empirical evidence. Based upon the factors of philosophy and approach, quantitative strategy was undertaken to gain better visualisation on Gen AI's impacts in finance. Apart from this, questionnaire was used as research instrument for collection of relevant information through closed ended questions. Therefore, survey of 35 participants allows opportunity to capture's it's their experience on the impact of Gen AI within financial institute of North America.

Use of Generative AI has played a major role for developing customer services of financial institutions for offering virtual assistants to customers with the use of AI chat bots. The study focuses on the outcome of the survey question that young adults are most aware about the application of modern technologies along with its impacts due to the exposures of technology in American Financial Institutions. Financial institutions of North America can focus on proactive risk management with the integration of Generative AI due to the ability for improving risk management strategy in customer satisfaction.

From the data analysis, generative artificial intelligence in managing financial institution activity along with opening new avenues in managing decision making, and predictive capability of American Financial Institution has obtained. It is seen that most of the respondents agreed that generative AI is effective in managing financial facilities in reducing issues regarding intellectual property.

Discussion on primary data analysis and previous theoretical framework helped to address an inclusion of GenAI over financial decision-making for North American institutions. Meeting research questions was an important part of this chapter to incorporate financial planning for organisations. Meaningful insight creation from vast amount of data set helps to banking employee to overcome banking operational challenges like employee abuse, intellectual property pressure.

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CHAPTER I: INTRODUCTION

1.1 Introduction

Generative artificial intelligence (GenAI) plays a crucial role in generating various types of contents which includes audio, texts, imagery and synthetic data. Google whitepaper “Attention is All You Need” on transformer models fuelled the innovation in Generative AI and General artificial Intelligence. As per the opinion of Caprar*oet al*. (2023), Generative AI model comes with the benefits of helping the banking organisations in identifying the possible risk areas. Accordingly, the credit risk reports within the banking organisations are developed with the help of GenAI depending on extracting customer insights. In addition, Generative AI helps in analysing credit data along with the code of source for gaining understanding about the risk’s profiles of the consumers in the banking organisations. Thus, the risks management in the financial institutions become one of the significant positive impacts of the technology.

Banking sector in global platforms is noticed to be able to adopt cutting-edge technology and gain benefits from it. As stated by Kanbach et al. (2024), introduction of GenAI within the banking sector is considered to be a technological innovation which is a deep-learning technology responsible for generating human-like videos, images and audio. Through using GenAI in financial institutes of North America it is possible to synthesize data mainly for training AI models. Integration of GenAI within banking operations of North America is responsible for foreshadowing a seismic shift into landscape. On the other hand, before diving into GenAI in the banking industry it is necessary for the financial sector to adopt artificial intelligence properly (Singh, 2024). Use of Artificial Intelligence (AI) in banking operations of “North America” is accountable for making huge changes through including deep learning as well as machine learning technologies which is known as traditional AI. Therefore, through using traditional AI banking sector of North America is able to improve its business operations which further allowed them in using GenAI.

GenAI is an advanced version of traditional AI. After becoming active users of traditional AI, it was possible for the financial sector to use GenAI. As mentioned by Kanbach et al. (2024),

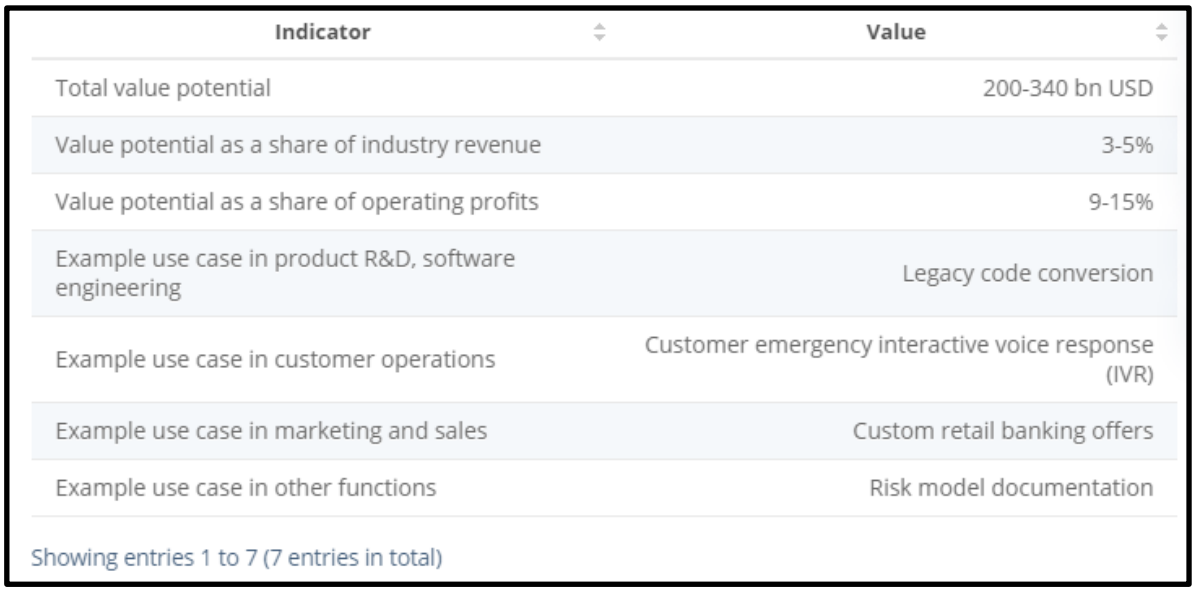
traditional AI systems that are used in banking mainly rely on machine learning. Banking sector present in North America can use technology for recognising patterns within historical data for identifying the root cause of previous events as well as trends for future. Apart from that, the banking sector present across the globe can implement AI in their businesses as it uses predefined rules along with being trained on structured data which are also being stored within spreadsheets and databases. On the contrary, Dhake et al. (2024) identified that the banking sector used GenAI for different causes which are customer service automation, fraud detection, algorithmic trading, risk assessment and credit score calculations. Thus, GenAI is being used by the banking sector of “North America” reshaping the business model of the banking sector.

Advent of GenAI in the banking industry is considered as a technology innovation which has the efficiency of reshaping existing business models. According to Singh (2024), GenAI has an immense impact on the banking sector which is across different banking functionalities in terms of banking operations as well as decision-making. Banking sector in North America uses GenAI as a catalyst in order to redefine boundaries of operational efficiency, rule-based decision-making and customer experience. Customer interaction plays an important role in a data-rich banking environment which further assists in usability of GenAI in handling customers. Contrastingly, through implementing GenAI it is possible for the financial sector to improve its efficiency as well as decision-making process (Singh, 2024). Through using GenAI which consists of large language models (LLMs), the banking sector in North America is able to gain proper undertaking about patterns as well as structure from huge volumes of data. Thus, through using GenAI, it can be expected that the banking sector of “North America” is able to shift towards using creative as well as sophisticated AI models. .

1.2 Research background

In recent times, use of GenAI in financial institutes increased at a high rate showing positive results on outcomes of businesses. According to the viewpoint of Vishnu et *al.* (2023), it is estimated that within industries present globally, it was possible for GenAI to add the

equivalent of around $2.6 trillion to $4.4 trillion annually in value. In this respect, it can be forecasted that the banking sector in North America is able to use GenAI for improving its business operations which includes better decision-making capabilities. On the other hand, among different industry sectors, it is expected that banking has one of largest opportunities which includes annual potential of around $200 billion to $340 billion which also results in increase of productivity (Vishnu *et al*. 2023). Recently, it has been effective for banks in North America to use GenAI for increasing its productivity. Hence, through emphasizing on GenAI Banks of North America are able to improve their business operations as well as productivity to a high scale.



Indicator	Value
Total value potential	200-340 bn USD
Value potential as a share of industry revenue	3-5%
Value potential as a share of operating profits	9-15%
Example use case in product R&D, software engineering	Legacy code conversion
Example use case in customer operations	Customer emergency interactive voice response (IVR)
Example use case in marketing and sales	Custom retail banking offers
Example use case in other functions	Risk model documentation

Showing entries 1 to 7 (7 entries in total)

Figure 1.1: Potential impact of the generative AI on the banking sector

(Source: STATISTA, 2024)

Figure 1.1 reveals the potential value provided by Gen AI to financial institutions like the banking sector. It can be seen that the added value of Gen AI is between $200 and 340 billion which is equivalent to 3% to 5% of the total revenue of the industry (STATISTA, 2024). The successful implementation of Gen AI contributes to the benefits of the banking sector in preserving profitability through effectively analysing the historical data. Fritz-Morgenthal*et al*. (2022) have mentioned the role of Gen AI in stimulating a number of economic scenarios including market risks, credit risk along with operational risk. Likewise, the application of AI

helps in analysing financial information along with the operational information of the banking sector which further develops understanding regarding the presence of operational error. This helps the organisations in being prepared for the future consequences within the financial institutions. This study investigates the importance of Gen AI in positively influencing the financial institutions in America.

Banking sector of North America can use GenAI for increasing data accuracy within business performance. As opined by Ding *et al.* (2024), GenAI stands at “forefront of data processing” along with analysing, as well as utilizing advanced algorithms for dissecting large datasets efficiently as well as swiftly. Sophisticated techniques of GenAI can help the banking sector of North America in enabling it in organizing and cleaning organizational data for ensuring reliability and accuracy in all generated insights. Contrastingly, GenAI has the capability of handling diverse data formats and types used in the banking sector for ensuring comprehensive analysis and increasing accuracy (Decardi-Nelson *et al.* 2024). Thus, GenAI is used by financial institutes of North America in extracting information for identification of patterns, streamlining data analysis processes as well as providing actionable insights.

One of main capabilities of GenAI is minimizing errors that occur within the data processing process of the banking sector located in North America. As suggested by Cholevas et al. (2024), by using GenAI, the banking sector is able to employ “advanced error reduction” techniques which include anomaly detection as well as outlier analysis. Usability of GenAI assists the banking sector of North America in surpassing traditional methods in respect to reliability as well as accuracy. Through focusing on adaptive learning capabilities of GenAI at a continuous rate, the banking sector situated in North America is able to use error reduction algorithms for enhancing accuracy level of organizational performances. On the other hand, financial institutes of North America are accountable for empowering businesses for making informed decisions within real time through delivering up-to-the-minute insights. Therefore, inclusion of GenAI in collaboration with IoT devices enables the banking sector of “North America” in enabling analysis of real-time data streams along with enhancing accuracy.

Banking sector of North America can use GenAI for risk and compliance purposes. As influenced by Hilario *et al.* (2024), the banking sector uses GenAI in collaboration with manual process automation for maintaining time-consuming activities. In this context, the banking sector situated in North America is able to use GenAI along with manual process automation. Apart from that, it is necessary for North America's banking sector to translate or update old codes along with code acceleration into new ones. On the other hand, Khanal et al. (2024) asserted that financial institutes prefer using GenAI as regulatory as well as policy expert in order to use it as a business operational procedure. Moreover, through using GenAI it becomes easier for banks in comparing regulations, operation procedures and policies. Financial institutes of North America is preferring use of GenAI in all business operations for checking code regarding compliance misalignment as well gaps. Use of "GenAI" also allows financial institutes in automating regulatory compliance checking along with providing alerts mainly for potential breaches. As a result, through incorporating GenAI in existing business systems, financial firms that are in North America are able to improve business operations, increase productivity, protect sensitive data as well as upgrade the skill of employees in appropriate manner.

Summarization of customer information is done for informing financial institutes about credit decisions and GenAI is accountable for helping in improving their end-to-end credit processes. As inferred in the study of Ding *et al.* (2024), GenAI has efficiency of generating codes for sourcing and analysing credit data for gaining view into risk profiles of customers. Banking sector of North America can also use GenAI for accelerating migration of "legacy programming languages". In this context, GenAI also assists financial institutes performing businesses operating in North America in automation monitoring of performances and generating alerts in case metrics are not able to measure tolerance level. On the other hand, Prather *et al.* (2023) observed that companies are using GenAI for drafting model documentation as well as validation reports. North America's financial institutes can use GenAI for checking cyber security vulnerabilities along with using natural language for generating codes mainly for detecting rules along with accelerating secure code development.

Financial institutes in North America are considering GenAI as a roadmap for gaining immense new growth through making transformation in business functionalities. As per the viewpoint of Singh *et al.* (2024), GenAI helps financial institutes in building proper culture as well as application of appropriate business model and strategy in improving business performances. It would be better for the banking sector to incorporate GenAI within its existing business performances for the welfare of business. On the contrary, integration of GenAI in existing frameworks is expected to assist financial institutions in reshaping their traditional operations by making complete digital transformations (Liu *et al.* 2024). GenAI also has the potential of bringing revolution into business performances of the financial sector which include a way of managing risks. Moreover, financial sector of North America can focus on using GenAI in all respects for tackling strategic business decisions along with exploring emerging risk trends. Finally, the financial sector located in North America can also use GenAI for strengthening resilience, controlling business processes proactively and improving risks.

Banks are using Generative AI-based chat bots for assisting front line through suggesting client-specific actions. According to the study of Liu *et al.* (2024), GenAI offers insightful data based on specific behaviours as well as preferences of customers to organizations for providing them with personalized user experiences. GenAI can also further help financial institutes of North America in analysing huge customer data which includes account balances, investment portfolios, transaction history, and financial goals for offering personalized user experiences. Opportunities that bank of North America gain from implication of GenAI are enhancing service operations through offering hyper-personalized recommendations which are based on different aspects. It includes creation of customized financial plans, providing “tailored financial advice”, specific circumstances as well as product suggestions. Hence, financial institutes present in “North America " would also emphasize on using GenAI for helping financial advisors in finding as well as synthesizing answers of finance related queries together offering highly “personalized instant insights”.

1.3 Research Problem

The application of the Generative AI comes with the issues of ethical concerns which include the issues associated with customer data privacy along with the displacement of the human workforce. The study of Liu *et al*. (2020) has highlighted that AI is trained with a large volume of data which increases the risks for data privacy and security concerns. Likewise, the rise in the use of advanced technologies like AI has worked on increasing the concern for personal data privacy of the consumers of the American financial institutions. Besides, AI has also increased the concern for displacing the human workforce within the financial institutions by operating the tasks with maximum efficiency (Tschang and Almirall, 2021). As a result, it contributes to increasing unemployment within American financial institutions.

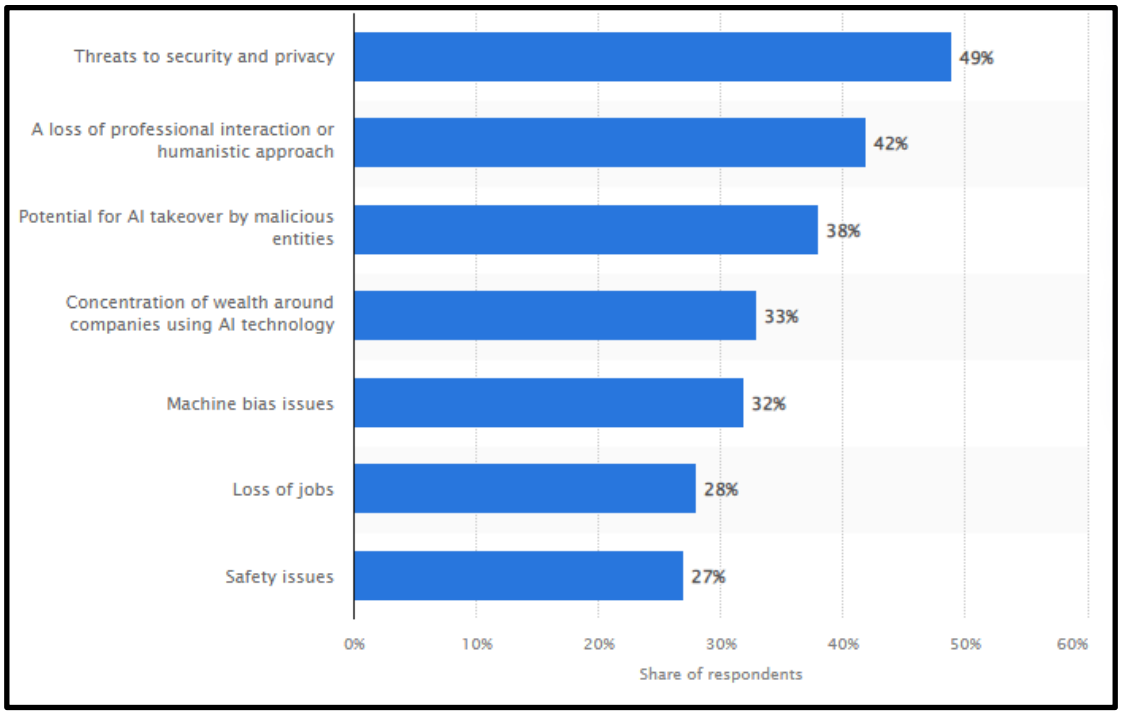


Figure 1.2: Ethical concerns associated with utilising AI in the financial services

(Source: STATISTA, 2023)

Figure 1.2 shows the concern of the professionals from the financial industry regarding the ethical concerns generated from the application of AI. It can be seen that about 49% of the professions of the financial industry believes about the threat of privacy and security concerns

at the time of utilising AI (STATISTA, 2023). In addition, the other ethical concern which has arisen in the financial industry includes the loss of the professional interaction along with the machine bias issues. As mentioned by Mulcahy *et al*. (2024) the application of the AI in the place of the human result in reducing humanistic approach at the time of delivering services to the consumers. Accordingly, the loss of the human touch in the activities of the financial institution increases the issue of the potential machine bias along with the misinterpretation of the information. This results in creating concern for the efficiency and the productivity of the financial sector. This study is beneficial in solving the sites of privacy, security and humanistic approach at the time of incorporating Generative AI in American financial institutions.

GenAI technology is responsible for sharing privacy concerns in collaboration with machine language or AI which includes leakage from “training datasets” as well as managing data. One of main challenges that are faced by organizations for using publicly available GenAI systems is automatically opting-in user input data along with utilizing data in training models as well as improving responses. Moreover, opting in functionality of GenAI system used by financial sector increasing likelihood of face that's genetic information can get leaked. Opting-in option of GenAI increased risk of connects users getting access to sensitive information of customers of the financial sector in “North America”. On the other hand, GenAI is still a new approach for banks and thus there is a high tendency for them in facing challenges at a high scale (Zhechev, 2024). Thus, GenAI is found to rely heavily on data which states about data privacy concerns. Due to lack of proper security in managing sensitive information of organizations and customer's financial sector of “North America” is regarding privacy of respective data through using GenAI. Apart from that, in recent times main issues including mismanagement might also lead towards data breaches among financial organizations situated in North America along with tarnished reputations. As inferred in the study of Kalia (2023), non-compliances are accountable for resulting in hefty fines as well as the legal repercussions. The banking sector of North America is operating under stagnant regulations as well as compliance which is non-negotiable. GenAI has a high tendency of inheriting biases mainly from data that are being used for training purposes within financial sectors. Due to the presence of bias, the banking

sector of North America leads towards discrimination in respect to probing financial services or lending. As a result, due to lack of transparency as well as awareness within GenAI, it became challenging for financial organizations of “UDA North America” in continuously monitoring as well as making improvements in their businesses performances.

Integration of GenAI within “businesses activities' ' of the financial sector in North America is considered as a complicated aspect as it makes a negative impact on change management. As suggested by Gupta *et al*. (2024), all employees of the financial sector are not able to adopt changes that occur due to integration of GenAI within existing banking systems easily. Use of GenAI is also being considered to be causing disruptions in the established process of banks of North America which is a challenging aspect for banks that it needs to overcome shortly. On the other hand, data “privacy and security” is top priority of banks of North America during use of GenAI, but it cannot be maintained while handling huge sensitive customer data. As per the study of Rahmani and Zohuri(2023), banks face challenges in safeguarding data from unauthorized access as well as breaches due to lack of proper application of data security strategies. Hence, in this respect, banks of North America can easily mitigate it through heavily investing in robust security measures as well as compliance frameworks.

Implementation of GenAI is a complex approach therefore banks of North America are not able to provide proper protection to sensitive data along with facing challenges in maintaining regulatory compliance. As argued by Frey and Osborne (2023), successful implementation of GenAI demands a highly skilled workplace and lack of it created challenges in using GenAI appropriately. Due to the lack of capability of a skilled workforce in leveraging as well as understanding GenAI technology might create a challenging situation for the workforce in adapting GenAI in a suitable manner. Apart from that, banks of North America can also face issues in up skilling existing employees along with recruiting new talents having expertise in AI as well as machine learning. Shortage of skilled professionals in the market is accountable for increasing complexity in implementation of GenAI. As a result, due to lack of development of GenAI, adoption culture within organizations discourages employees from making embarrassing changes through bringing GenAI.

Many banks prefer relying on complex IT infrastructure and legacy systems which might always be compatible with “requirements of GenAI ". As opined by Huang *et al.* (2024), integration of the AI algorithm of GenAI in existing infrastructure of the banking sector is contemplated to be a daunting task. Banking sector of “North America " might face challenges in using GenAI properly due to financial challenges. On the contrary, Dwivedi *et al.*(2023) asserted that legacy systems might lead towards a lack of flexibility and agility that is necessary for accommodating the dynamic nature of GenAI. Therefore, for using GenAI in all respects within business operations, North America’s banking sector needs to make huge investments in software, hardware as well as data management systems which might not be possible for small or medium sized organizations.

1.4 Aim of Research

The aim of this study is to elevate the positive impact on American financial institutions by using Generative Artificial Intelligence (Generative AI) in financial activity management. This research will also help leaders of American financial institutions to understand positive impacts of Generative AI on American financial institutions.

1.5 Significance of the Study

This study is significant in learning about the positive impacts of Generative AI within the American financial institutions. As illustrated by Abrokwah-Larbi (2023) Generative AI has become one of the crucial factors within the banking industry in delivering personalised experiences to the consumers. Accordingly, this study is focused on determining the implications of the Generative industry specifically within the American financial institutions. This is beneficial in acquiring knowledge about the current influence of the Generative AI in streamlining the operations of the American financial institutions. In addition, it is possible to generate insights about the challenges of using Generative AI within the American financial sector. However, Hasal*et al*. (2021) have argued that safety issues due to the privacy concern of the personal information of the individuals associated with the banking sector at the time of utilising AI. This study is going to delve into the factors which are responsible for reducing the

adoption of Generative AI in the American financial sector. Thus, this research is significant in delivering unique information responding to the areas of benefits and challenges of Generative AI in the American financial institutions.

This study is responsible for stating important aspects regarding use of GenAI which includes using it for improving business operations of financial institutes located in North America. Following study stated that through using GenAI, the banking sector is able to identify risks appropriately. On the other hand, through using GenAI, banks of North America are able to develop their credit risk reports in person through analysing credit data in suitable manner. Apart from that, through using GenAI, opportunities the banking sector can gain in increasing its profitability through analysing historical data. Moreover, this study has been responsible for mentioning difficulties that the banking sector of “North America” has been facing after application of GenAI. As a result, by using GenAI, North America’s banking sector is able to enhance their working capabilities as well as perform at a high scale.

One of main concerns of the banking sector regarding use of GenAI is the increase in threats of privacy in respect to protecting sensitive information of customers. On the contrary, following study also did not fail to mention a positive aspect of the use of GenAI which is completing tasks within a short span of time. Furthermore, this study also mentioned that through using GenAI, the banking sector of North America is able to deliver personalized experiences to customers. This study also portrayed that American financial institutes are able to acquire more knowledge on recent market trends due to the positive influence of GenAI. This study mentioned the positive impact of use of GenAI which includes application of machine learning in their business performances. Alternatively, the significance of the following study lies in the effectiveness of GenAI on financial activity management of banks in North America. Hence, this study is responsible for starting about opportunities and challenges that financial institutes of North America are facing accordingly.

1.6 Purpose of Research

The purpose of the study is to generate understanding regarding the positive impact of the Generative AI on the American Financial Institutions. As mentioned by Kalia (2023) the financial institutions have received the benefits of identifying the possible risks along with preserving profitability by interpreting market trends and historical data patterns with the use of Generative AI. Accordingly, the choice of GenAI is rapidly increasing with the financial institutions of America for preserving the safety of the organizations in the higher risk environment. This research is focused on handling matters like conceivable financial facility mistakes within the financial institutions of North America.

1.7 Research objective and Questions

The application of GenAI within the financial institution has come with the opportunity of handling the predictive matters including employee abuse, intellectual property pressures and others. As highlighted by Bandi et al. (2023) Generative AI offers the completion of tasks like data translation along with marketing material generation. Accordingly, the use of GenAI can ensure effective translation of information within the financial institutions of North America. In addition, the choice of the GenAI can help in predicting the activities that are inherently unpredictable which includes human behaviour. On the contrary, Kanbach et al. (2024) have argued that Generative AI has the advantages to the organizations in maximizing operational accuracy along with leading to effective economic risks analysis. The risks analysis activities with the use of GenAI help the financial institutions to avoid the uncertainties and risks of financial frauds. As a result, the positive impact of GenAI within the financial institutions includes its contribution to the management of risks along with influencing positive performance of the organizations.

1.7.1 Research objectives

- To recognise the repercussions of Generative Artificial Intelligence (GenAI) for American financial institutions, with a specific emphasis on the optimistic effects
- To investigate the approaches in handling the predicted matters of GenAI including intellectual property pressures, employee abuse, and conceivable financial facility mistakes in financial institutions of North America
- To recognise the potential assistance of GenAI for increasing operation accuracy, effective economic risk analysis, and enhanced procedures in the areas of speculation banking and retail treatment of accounts in North American financial institutions

1.7.2 Research Question

1. What are future repercussions of Generative Artificial Intelligence (GenAI) for American financial institutions, with a specific emphasis on the optimistic effects?
2. How to handle GenAI's predicted matters, such as intellectual property pressures, employee abuse, and conceivable financial facility mistakes in financial institutions of North America?
3. What are potential assistance of GenAI to increase operation accuracy, effective economic risk analysis, and enhanced procedures in the areas of speculation banking and retail treatment of accounts in North American financial institutions?

1.8 Dissertation structure

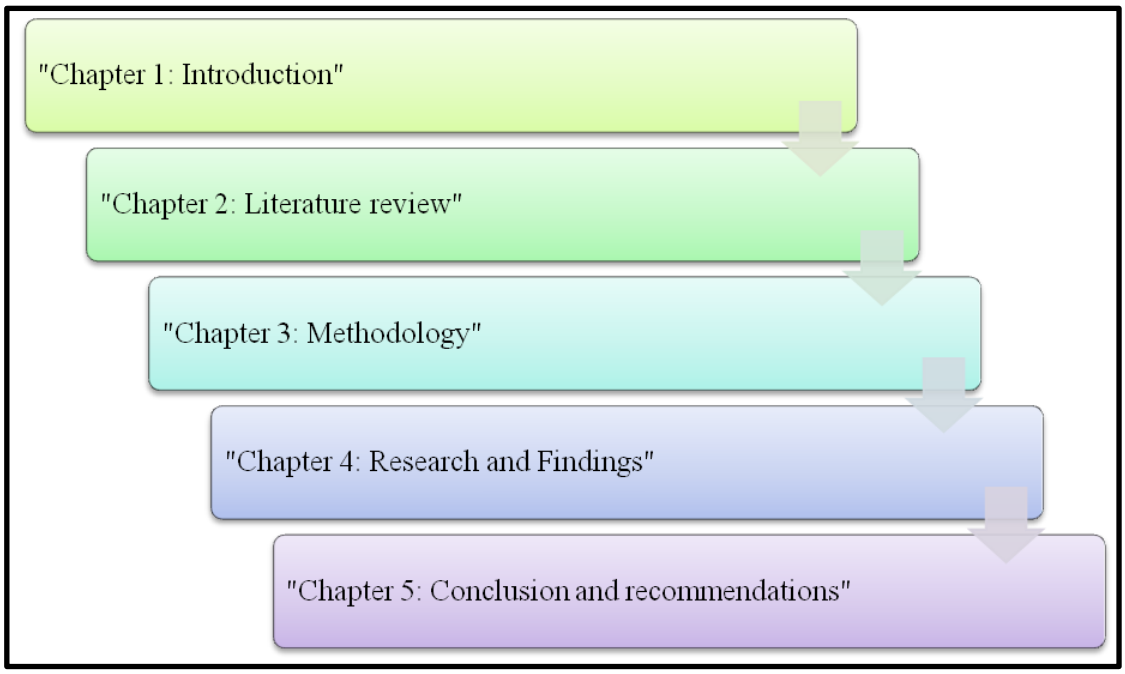


Figure 1.3: Structure of the dissertation

(Source: Created by author)

Figure 1.8 shows the structure of the dissertation which includes a total of five chapters. The first chapter is the introduction chapter which determines the problem statement associated with the research area along with constructing the aim and objectives. In addition, the second chapter is associated with performing a literature review by undertaking the previously published studies. In the Chapter 2, the current study of literature review helps to generate potential reviews as well as opinions of the authors to interpret potential insights on research variables related to application of Generative AI in financial operations. Apart from this, development of chapter 3 has aimed to cover proper methodological paradigm to determine potential conduction of the current research within the effective research tools and techniques. Third chapter will identify the method for collecting and analysing data in this research. Moreover, the fourth chapter will analyse the collected information along with interpreting it. Finally, the last chapter is associated with concluding the overall findings of the research.

1.9 Summary

This chapter has summarized the background associated with the use of GenAI within the financial institutions of America. It has been found that the integration of GenAI within the financial institutions of North America has played a key role in improving decision making. Furthermore, the importance of performing research in the selected area has been recognized in this chapter. It has been identified that the research on the positive impacts of GenAI within the financial institutions can help in accelerating the integration of this technology within the financial sector of North America along with reducing the risks of financial threats. The research objectives and the research questions depending on the problem area are constructed in this chapter. This chapter has identified the significance of performing this study in helping the financial institutions of North America in developing knowledge about appropriate risk management and development in the organizational activities. Following chapter has been responsible for stating about different challenges that financial sector of “North America” has been facing for longer period of time are skill gap, regulator compliances, security concerns and lack of data privacy.

CHAPTER II: LITERATURE REVIEW

2.1 Introduction

Advent of technology remained an important aspect to generate a positive factor to consider a highly beneficial performance of financial organisations. Data analysis and review associated with financial performance play an important role in terms of considering accurate and transparent management procedures. Automation of manual tasks in the financial sector created an insight into enhancing core business aspects such as “risk identification, customer experience and fraud detection”. Fair lending obligations, data handling regulations as well as best-interest duties for customers can be potential in terms of integration of AI into financial services (PWC, 2023). This interaction between technology and manual financial operations can be potential to ensure strategic insight, efficiency, and risk management procedures. Considerable changes in decision-making can be beneficial for addressing an engaging procedure towards associating strategic aspects for considering business areas. This chapter of research focuses on considering a detailed perspective associated with inclusion of GenAI in financial decision-making with a detailed theoretical analysis.

2.2 Conceptualisation of Artificial Intelligence and Generative AI (GenAI) in the financial institute

Artificial Intelligence (AI) is responsible for changing quality of services and products of financial institutes. AI assist banking industry by providing better methods such as real-time data management for handling data as well as improving customer experience (Al-Araj et al. 2022). Moreover, AI is also accountable for helping banking industry in increasing speed, redefining and simplifying traditional processes to make it more efficient. On the other hand, with the realm of emerging technologies, Generative AI helps financial organisations to consider real-time data management as most valuable asset in the business process (Benbya *et al.* 2020). In recent times, banks are well aware about cost-efficient and innovative solutions of AI which would allow them in building a successful business. Use of AI in finance assists in driving insights for performance measurement, data analytics, forecasting, and predictions.

Apart from that, financial sector also prefers using AI for real-time calculations, intelligent data retrieval, and customer servicing (Al-Araj et al. 2020). Thus, AI is contemplated to be a set of technologies that enables financial sector to gain a better understanding about customers and market.

2.2.1 Drivers of "AI disruption" within financial sector

Use of big data is considered to be a driver of AI disruption within banking. Finally, big data has a positive impact on the financial sector due to changes in expectations of customers (Ahmadi, 2024). In recent times, customers of financial sector are more interested in interacting with respective organisations on a digital level along with traditional structured data such as transactional data. As mentioned by Ahmadi (2024), by leveraging on "big data" financial sector is able to offer personalised services to their customers. Recently, banking industry is using a 360-degree view of customers' interaction with brands which include transaction history, basic personal data as well as social media interactions (Truby et al. 2020). On the contrary, by using AI and big data financial sector is able to make more strategic decisions for welfare of businesses (Truby et al. 2020). Along with big data, availability of infrastructure such as cloud, software, hardware and fast computers is considered to be a driver of "AI disruptions" in banking. However, Ahmadi (2024) argued that presence of high computational infrastructure and resources, AI as well as cloud technology allows the financial sector to process large volumes of data quickly at high efficiency and lower costs. Therefore, by using cloud technology and proper infrastructure, financial sector is able to leverage AI in best possible way.

Application of GenAI in financial sector involves personalising products and services along with enabling transparency as well as complication through algorithm trading and data modelling prediction process. According to Hassan *et al.* (2023), incorporation of AI within businesses activities of financial sector allows in managing frauds, risks, reducing costs and automating operations. AI-driven solutions offer opportunities to financial sector in addressing challenges related to regulatory obligations by automating data collection procedures.

Supporting this, Hassan et al. (2023) stated that GenAI involves in enhancing organisational readiness and improving quality as well as speed of decision-making process. On the other hand, in this context, banks are under scrutiny from regulators for providing accurate reports in a timely manner and thus are in need of AI for meeting their regulatory obligations. Therefore, by utilising AI, banks are able to optimise its present service offerings and provide more personalised experiences for customers.

2.2.2 GenAI in the banking sector

GenAI is expected to be having a significant impact on banking sector in regard to added value. For instance, total potential added value might range within 200 and 340 billion US dollars which is also equivalent to 3-5% of total industry revenue (Statista, 2024). It can further be analysed that by investing in implementation of GenAI in banking sector it is possible to improve its business operations. For instance, successful implication of GenAI within banking sector might assist in increasing its profitability to around 9-15% (Statista, 2024). Banking sector can use GenAI in customer operations which include “Customer emergency interactive voice response”. Alternatively, application of GenAI would allow financial sector to undergo substantial digital transformation resulting in enhancing security, efficiency and convenience. GenAI also has a huge impact on entire value chain of financial sector resulting in making it more responsive and efficient to market dynamics. Thus, financial sector can also use GenAI-powered virtual agents to improve user experience as it would help in minimising wait time, repetitive questions, redundant as well as improve interaction.

GenAI plays an important role in improving financial services by bringing innovation in their products as well as services (Singh, 2024). As opined by Singh (2024), the financial sector can bring innovation in their services and product by using GenAI through capturing voice of customer, advanced research methodologies, and gaining competitor insights. In light of this, GenAI helps in maintaining credit scoring modelling within financial sectors towards managing as well as measuring aforementioned services. Credit managers of financial institutes can also use GenAI for gaining insights as well as crucial information and also for handling unstructured

data. On the other hand, application of GenAI helped financial institutes in improving customer experience as it directly impacts customers' loyalty and satisfaction level (Kanbach et al. 2024). Apart from that, financial institutes are preferring use of "Gen AI-powered virtual agents" mainly for handling customer inquiries. Moreover, by using GenAI to existing processes financial institutes are able to search knowledge repositories, generate prompt engineering and convert customer calls into data (Kanbach et al. 2024). Therefore, integration of GenAI within businesses process would allow financial institutes to improve user experience by minimising wait time for customers, improving interaction with banks as well as reducing repetitive as well as redundant questions.

Integrating GenAI in traditional operations allows financial sector to create new values with AI. As influenced by Dhake et al. (2024), it is better for banks to use both AI and GenAI for improving their business performances. Leaders of banking sector need to consider GenAI for extending as well as enhancing within the implication of GenAI approaches in the financial institution. Apart from that, financial institutes can use GenAI for personalising marketing contents that are created for digital channels. On the contrary, financial sector is using GenAI for enhancing its back-end processes, regulatory compliance and customer support (Kanbach et al. 2024). Integration of GenAI in business operation allows management of the financial sector in making strategic decisions regarding mitigating risks potentially. Alternatively, Kanbach et al. (2024) asserted that GenAI is assisting financial sector to make necessary changes by providing it opportunities to increase innovation and efficiency. Thus, banking industry is using GenAI for preventing frauds, improving customer-facing chatbots and increasing speed of time-consuming tasks.

Financial sector is using centrally led GenAI operation model for attracting as well as retaining proper talent. As inferred in the study of Ebenv *et al.* (2023), financial sectors are using GenAI mainly for making strategic decisions substring in the welfare of businesses. In this context, AI has already proved to be beneficial for finance business which is allowing financial sector to embrace GenAI as a valuable tool for improving business operations. GenAI allows financial institutes to make classifications and predictions based on existing data and also create novel

content by analysing patterns of existing data. Use of GenAI, assisted the financial sector in generating content in different modalities which include images, text, and code (Christodorescu *et al.* 2024). Apart from that, by integrating GenAI into “businesses activities” financial sector is also able to enhance its efficiency and accuracy level. Adoption of GenAI in banking and finance sector is expected to be increasing at an exponential rate in near future. Therefore, financial institutes are able to recognise potentiality of GenAI which is allowing them to integrate it in their business operations for gaining competitive advantages along with driving innovation.

Interests of the financial sector are increasing regarding use of GenAI in all aspects of businesses as it is an advanced form of AI and has capability of making products by learning from extensive datasets. As per the viewpoint of Aldasoro et al. (2024), GenAI and machine learning algorithms are used simultaneously in financial institutes for generating new data as well as valuable insights which further assists in making “informed financial decisions”. Apart from that, application of GenAI allows financial sector to redefine traditional approaches by enabling sophisticated risk simulations, fraud detection and increasing informative financial scenarios (Aldasoro et al. 2024). Thus, the usability of GenAI assists financial institutes in generating new insights, making predictions as well as providing valuable information for helping managers in making better decisions.

2.3 Theoretical perspective

2.3.1 Theory of reasoned action (TRA)

Theory of resonated action (TRA) comes with the benefits of predicting the behaviour of the individuals under any specific setting. As per the opinion of Alhamad and Donyai (2021) TRA states that the behaviour of any individual is determined through their intentions for performing the behaviour. Accordingly, the application of this theory through perceived usefulness of GenAI can be beneficial in developing knowledge regarding the intentions and behaviour of the financial institutions of America regarding technology. Furthermore, the identification of the behaviour can lead to maximising opportunity to integrate the technology within diverse

activities of the financial institutions of America. On the other hand, Syed *et al*. (2021) have argued that TRA believes that the subjective norms and the attitudes of the individuals work on shaping their specific behaviour. Likewise, the subjective norms of the American financing institutions regarding the benefits of GenAI in contributing to the management of risk within the banks can lead to the adoption of the technology. In addition, the belief and attitude associated with the contribution of GenAI can help in preserving the profitability of the American financial institutions through analysing historical patterns and shaping their particular actions of adopting technology as per TRA. Therefore, the use of the TRA is beneficial in explaining the ways in which the attitude and behaviour of the individuals of the financial instructions changed regarding the impact of GenAI.

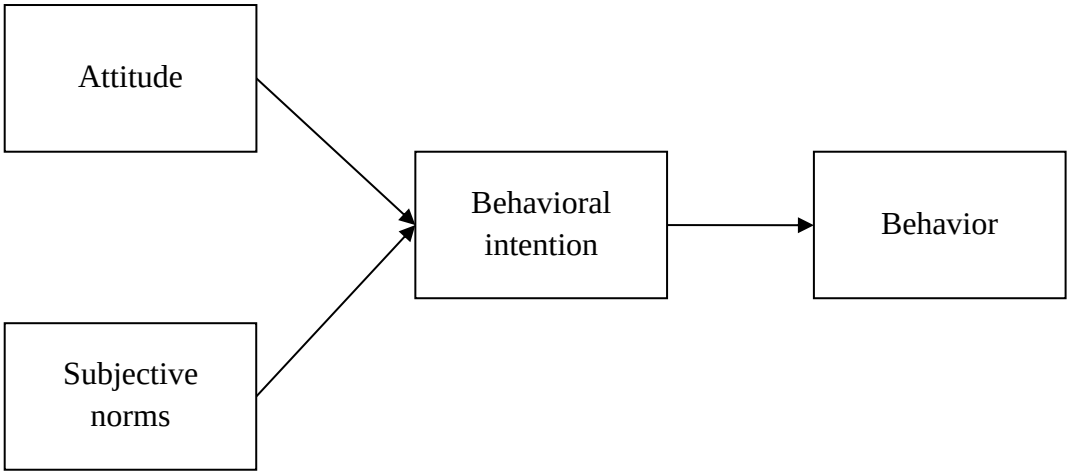


Figure 2.1: "Theory of reasoned action (TRA)"

(Source: Created by author)

The subjective norm in TRA is utilised for describing the behaviour of the individuals and the community. As highlighted by Ajzen (2020) adequate understanding about the behaviour of the individuals comes with the benefits of predicting the possible actions. The use of this theory can help in recognising the behaviour of the individuals associated with the financial institutions including financial analyst, auditor, financial advisor, accountant and operational manager through perceived ease of use. In addition, the concern about the use of advanced technology like GenAI can also be understood with the application of TRA within the financial

institutions. However, Sahu et al. (2020) have argued that the complexity of human behaviours along with their decisions making are not covered in the TRA. Likewise, it can be difficult to gather knowledge regarding the decisions making of the individuals of the financial institutions about the use of technology with the application of this theory through understanding behavioural intentions. Besides, the complexity in decision making that are experienced by the managers at the time of introducing the technology like GenAI within the workplace of the financial institutions cannot be understood with the use of TRA. Thus, the choice of this theory can help in understanding behaviour of the financial managers of the financial institutions of America along with creating difficulty in determining their decision-making activities.

2.3.2 Technology acceptance model (TAM)

"Technology acceptance model (TAM)" can be considered as an information systems theory which helps in explaining the ways in which users work on adopting technology. As highlighted by Mohd Amir *et al*. (2020) TAM states that the perceived usefulness and the perceived ease of use of technology result in transforming the acceptance of the advanced technology among the individuals and the organisations. Accordingly, the application of this theory through perceived usefulness can be beneficial in recognising the acceptance of GenAI within the financial institutions of America for maximising optimistic effects on the organisations. In this context, the perceived usefulness of the GenAI including the detection and the prevention of fraud according to TAM can result in influencing its acceptance. On the contrary, Na *et al*. (2022) have argued that the use of TAM helps in determining the attitude of the individuals of the organisation toward the management of the organisational activities with the use of the advanced technologies. Likewise, the attitude and behaviours of the individuals of the financial institutions of America can be recognised with the help of the TAM. Besides, the factor of ease of use of TAM is also beneficial in leading toward the integration of technology within the financial institutions of America for maximising the efficiency and productivity of the organisations. Therefore, TAM is crucial for determining the behaviour of the financial managers along with their perception about technology at the time of using GenAI.

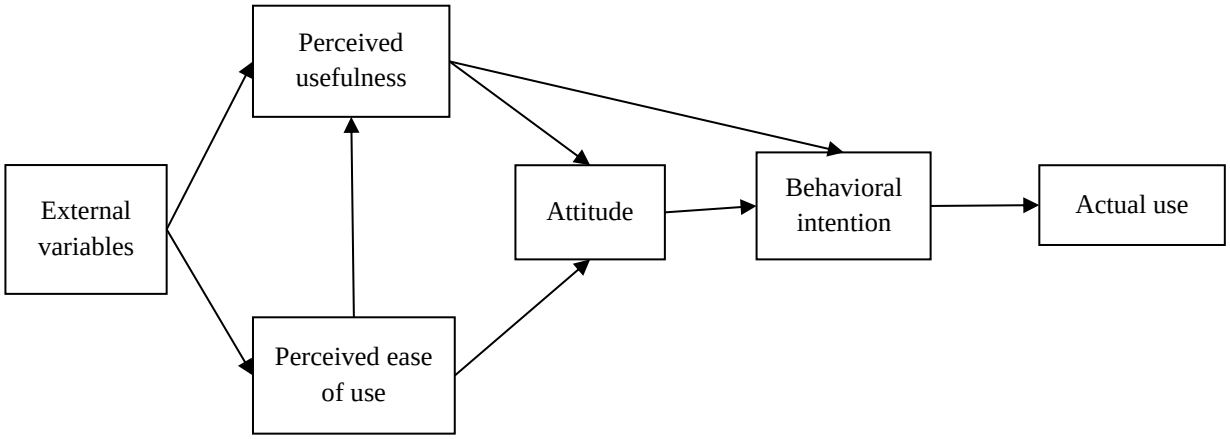


Figure 2.2: "Technology acceptance model (TAM)"

(Source: Created by author)

Perceived ease of use of the advanced technology has become a crucial factor in influencing the decisions of technology acceptance of the people according to TAM. The study by Wilson *et al*. (2021) has highlighted perceived ease of use refers to the efficacy of using technology without incorporating huge effort. Likewise, the integration of TAM as per the aspect of perceived ease of use within the workplace of the financial institutions helps the financial managers to focus on determining the effortless use of GenAI. The effortless use of GenAI further motivates the individuals of the financial institutions of America to maximise the efficiency of completing the task. In contrast, Malatji *et al*. (2020) have argued that the use of TAM comes with the limitations of quantifying the behaviour of the individuals. The use of TAM and excessive focus of perceived usefulness can lack in covering all aspects of using technologies like information technology within the workplace of the financial institutions of America while integrating GenAI. Henceforth, the application of TAM can lead to creating limitations in terms of understanding the quantified behaviour of the individuals of the financial institutions.

TAM works on incorporating the social and external influences behind shaping the technology acceptance behaviour. As mentioned by Kimiagari and Baei (2022) TAM helps in delivering theoretical guidance regarding the integration of the right technology within the organisations. Accordingly, the use of this model and the usefulness of the technologies in maximising

efficiency can guide the financial institutions of America to focus on critically analysing the advantages of the GenAI before integrating it within the workplace. In this context, the managers of the financial institutions can measure the efficiency of GenAI in tracking the faults present in systems, improving overall security along with minimising financial risk. Conversely, Al-Marri *et al*. (2020) have highlighted that the perceived usefulness of the advanced technologies as per TAM help in avoiding threats of failure through maximising efficiency and productivity. Thus, the financial institutions of America can work on determining the effectiveness of AI in handling cyber threats with the integration of TAM along with “perceived usefulness” of the technology.

2.3.3 Theory of planned behaviour (TPB)

Theory of planned behaviour (TPB) is associated with assuming that the individuals act rationally based on their attitudes, behaviours along with subjective norms. As narrated by Lin and Roberts (2020) the principles of theory of planned behaviour help in understanding the ways people behave across diverse settings, scenarios and settings. Accordingly, it can be possible to understand the barriers of the adoption of GenAI based on the attitudes and behaviour of the individuals of the financial institutions of America as per TPB. Furthermore, it can also be possible for the financial institutions of America to introduce change as per the needs and demands of the employees at the time of integrating GenAI for maximising the output of the organisations. Contrastingly, Yu *et al*. (2021) have argued that TPB explains the behavioural intentions of the individuals at the time of engineering with any activities. Likewise, the behavioural intentions of the financial managers and the employees can be taken into consideration at the time of including GenAI for the maintenance of the works in financial institutions. In this context, the introduction of employee abuse after the choice of GenAI for lack of specific skills and knowledge need to be addressed through determining behavioural intentions with the application of TPB. Henceforth, the application of the TPB can play a crucial role for maintaining the employee engagement while introducing GenAI within the financial institutions of America.

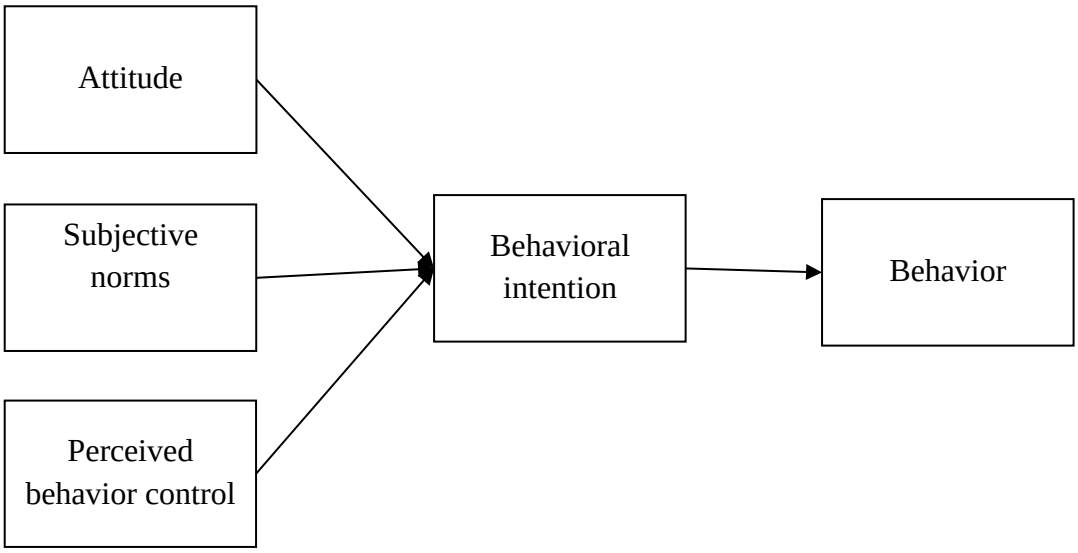


Figure 2.3: "Theory of planned behaviour (TPB)"

(Source: Created by author)

The personal attitudes of the individual are considered as one of the significant factors of TPB which help in shaping particular behaviour. As opined by Gomez-Hernandez *et al*. (2022) the prejudices and fear among the individuals regarding the use of the new technologies can result in creating barriers to its adoption. Accordingly, the personal attitudes of the employees of the workplace of the financial institutions need to be positively improved for fostering the acceptance of the GenAI with the identification of the subjective norms. In this context, training and development opportunities regarding the skills and knowledge gained associated with advanced technology like GenAI can help in maintaining employee motivation within the financial institutions along with developing positive attitudes. Contrastingly, Sok *et al*. (2021) have argued that TPB is criticised due to its higher focus on predicting the behaviour rather than contributing toward behavioural change. Similarly, the integration of the principles of TPB can help in determining the attitude and behaviour of the employees of the financial institutions of America regarding GenAI. The complexity of human behaviour is not fully captured by the TPB (Gomez-Hernandez *et al*. 2022). This can create difficulties for the financial institutions of America at the time of integrating technology. Besides, it can create issues in the selection of the strategies for the financial institutions to employ the right strategies for transforming the

behaviour at the time of integrating GenAI. Thus, the application of TPM is limited to leading toward behavioural change of the individuals in the financial institutions of America.

2.3.4 Diffusion of innovation theory (DIT)

Diffusion of innovation theory (DIT) is associated with describing the speed and the patterns at which the new products, practices or ideas spread throughout any population. The study of Nordhoff *et al*. (2021) has highlighted that the innovators, early adopters along with the early majority plays a crucial role within diffusion of innovation theory. Accordingly, the principles of DIT including early adopters can be beneficial for the individuals of the financial institutions of America in understanding the easy trend occurring. In addition, it also became possible for assessing the likelihood of success or failure within financial institutions of America after the application of GenAI with DIT. In contrast, Min *et al*. (2021) have argued that pro-innovation and individual blame bias is the main criticisms associated with the theory of diffusion of innovation. Likewise, the behaviour and attitude of the individuals can be changed due to the impact of the cultural, societal and external factors at the time of using technologies like GenAI. Besides, the early majority can be gained by the financial institutions by rapidly integrating GenAI at the prior phase of the popularity of the technology. In this context, the technological environment currently present in the financial industry of America can result in shaping the attitudes of the individuals in the institutions using GenAI for creating an optimistic effect among the innovators. Henceforth, the use of this theory can be limited in understanding the risk-taking behaviour of the individuals of the financial institutions with the use of the GenAI in practice.

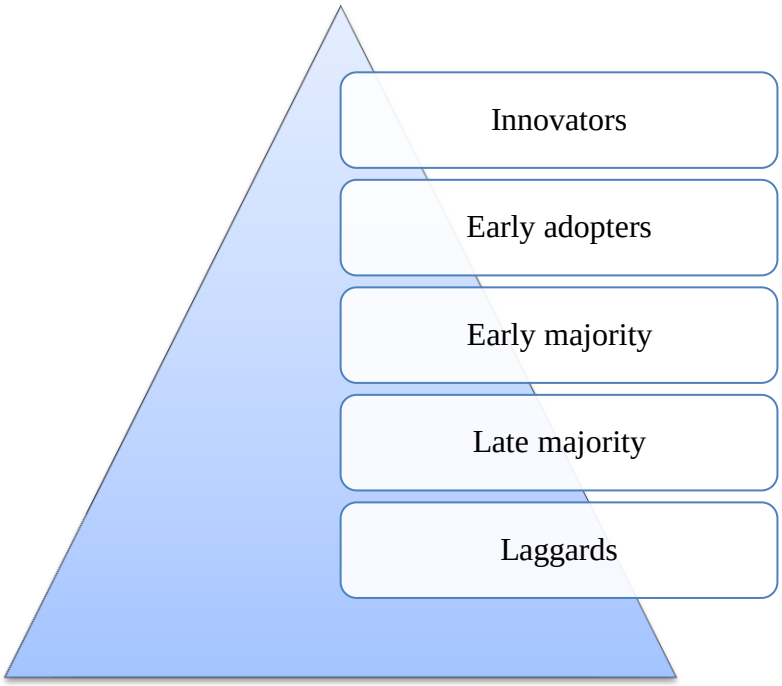


Figure 2.4: "Diffusion of innovation theory (DIT)"

(Source: Created by author)

DIT can be utilised for predicting the rate of adoption of the new technology like GenAI within the financial institutions. As commented by Goh and Sigala (2020) the principles of diffusion of innovation focuses on the early adopters which can lead to transforming the organisational performance through innovation. Likewise, the application of DIT can contribute in influencing the assistance of GenAI in the financial institutions including the rise in operational efficacy of the organisations. Besides, it can also be possible for financial institutions to incorporate early majority for focusing on the determination of the possible benefits of innovations like GenAI in leading toward effective risk analysis. Contrastingly, Amini and Jahanbakhsh Javid (2023) have argued the inability of the organisations in using and appropriately applying data and information leads to creating limitations for diffusion of innovation theory. The lack of technological capacity and capability of the financial institutions of America can lead in creating barriers for maximising the adoption of technology. Thus, the application of DIT can create barriers in generating the maximum benefit due to the inability of the financial institutions of America.

2.3.5 Information systems Theory (IST)

Information system theory (IST) is associated with dealing with the role of transforming information as the theoretical foundation for information computer technology (ICT). Collins *et al*. (2021) have opined that the principles of information system theory contribute toward maximising communication within the workplaces. The use of information according to IST can be crucial in maintaining communication between the individuals of financial institutions along with the intellectual pressure on the institutions. In this context, the communication about the use of the GenAI for protecting the confidential information of the financial institutions along with its intellectual property can be maintained with IST. In contrast, Pearlson *et al*. (2024) have mentioned that the use of the information system theory can be beneficial in making decisions along with analysing personal responsibilities. Accordingly, the application of IST can help in maintaining the flow of information at the time of supporting the activities of the American financial institutions with the use of GenAI. Besides, the integration of relevant information as per IST within the area of the speculation banking and retail treatment of accounts can also be possible due to use of the GenAI. Consequently, GenAI and IST are associated with each other at the time of fostering the efficiency and productivity of the financial institutions of North America.

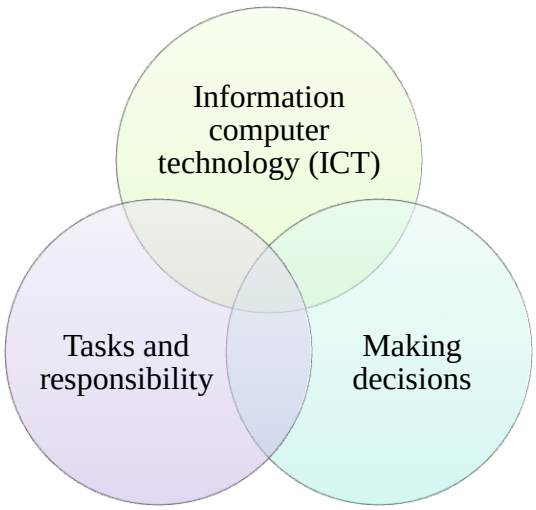


Figure 2.5: "Information systems Theory"

(Source: Created by author)

IST ensures the importance of delivering information to the individuals for carrying out their tasks and responsibility with maximum efficiency. Pan and Zhang (2020) have highlighted that the delivery of information associated with the use of technology can help in optimising the performance of the organisation. The application of IST in guiding proper information sharing can lead to maintaining the performance of North American financial institutions through effective risk prediction and mitigation with the help of GenAI. Moreover, the contribution of information sharing can also lead to reducing the cost of operations of the financial institutions with the integration of the GenAI. On the contrary, Wang *et al*. (2021) have argued that the information system theory is highly focused on performing the quantitative measures of the information. Consequently, the quantitative measures of the financial risk information as per IST can contribute to effectively analysing the current activities of the North American financial institutions with the use of GenAI.

The use of IST is associated with delivering better services to the consumers associated with the industries. As commented by Tamilmani *et al*. (2021) the flow of information is one of the significant aspects of the organisations in maintaining positive customer services. Accordingly, the financial institutions delivered with the opportunity of maintaining information flow in its operation with the integration of GenAI. However, Pérez-delHoyo *et al*. (2020) have argued that the information system theory is criticised as it can be difficult for the non-technical staff to appropriately understand technical information. Therefore, the individuals of the financial institutions with the lack of technological knowledge can experience difficulties in using GenAI for maintaining the prediction and mitigation of the financial risks within the workplace as per IST.

The key advantages associated with IST are to boost communication and collaboration within the workplace. Xi *et al*. (2023) have pointed out that information technologies deliver the opportunity of instant messaging and sharing information which is further related with accelerating communication. The implementation of GenAI can be beneficial for the continuous circulation of information, collaboration and communication between the individuals of the financial institutions according to IST. Contrastingly, Gregor *et al*. (2020)

have mentioned about the complexity of the management of information which has created criticism for the information system theory. Therefore, the difficulties in the maintenance of information related with the activities of the American financial institutions can lead to creating difficulties at the time of using GenAI.

2.3.6 Expectancy-Value Theory (EVT)

Expectancy-value theory (EVT) can be defined as a motivation theory which helps in defining the relationship between the expectancy of success and value of task completion. As examined by Eccles and Wigfield (2020) the use of the expectancy value theory can be beneficial in explaining the motivation among the individuals along with positive outcomes. Accordingly, the application of the EVT can lead to maintaining the encouragement and motivation among the individuals in the financial institutions while integrating GenAI. As opposed to, Shang *et al*. (2023) the integration of the principles of expectancy value theory ensures that the employees always rationally act along with being aware about their needs. Therefore, the improvement in the efficiency and productivity of the employees at the time of using GenAI can contribute to influencing their rational decisions about the technology with the inclusion of EVT.

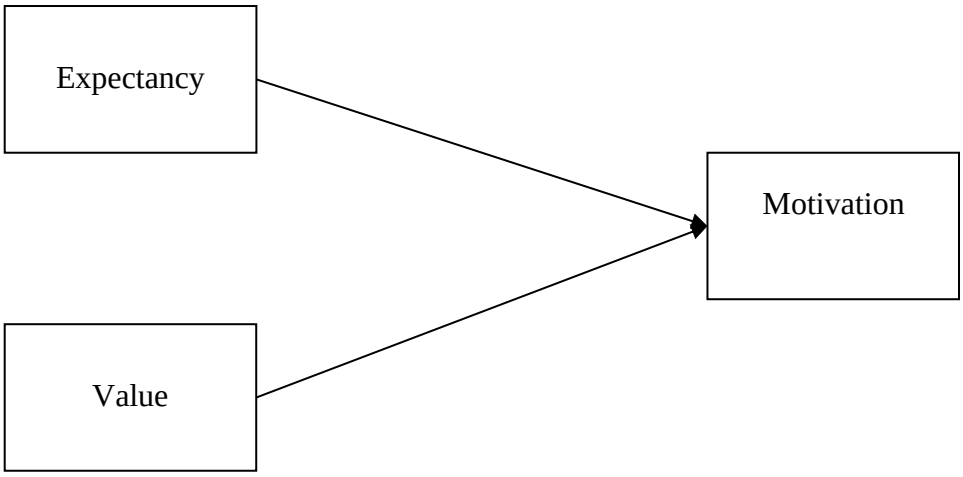


Figure 2.6: "Expectancy-Value Theory (EVT)"

(Source: Created by author)

EVT is based on the idea that more effort can lead to increasing performance of the individuals within the workplace. The study by Kuhn *et al*. (2022) has highlighted that expectancy value theory can help in focusing on the expectations from the individuals along with driving performance. The managers of the financial institutions can define the expectation from employees at the time of integrating GenAI for the activities like financial risk management. However, Beymer *et al*. (2022) has argued that the learning and workload capacity of the employees are not valued under the expectancy value theory which leads in driving its criticism. Therefore, the lack of initiatives of the financial institutions of North America in allocating training to the employees while including GenAI can result in decreasing the value of the expected outcome as per EVT.

The value of the technology can play a significant role in influencing the adoption of GenAI within the workplace of the financial institutions of North America. As illustrated by Kuhn *et al*. (2022) the principles of value in expectancy value theory are associated with maximising the value of the assets of the organisations. Accordingly, considering the aspect of value of the EVT can help in engaging the employees with the financial institution while integrating GenAI.

2.4 Future repercussion of GenAI for financial institute

Integration of “Generative Artificial Intelligence (GenAI)” has revolutionised multiple sectors especially financial institutions by increasing unprecedented efficiency, accuracy and innovation in financial consultation and insurance services. Rane (2023) informed that GenAI is mainly exemplified by models like ***ChatGPT”*** that drive potential transformation in financial industry by handling data sets and automating tasks of financial risk management. Inclusion of GenAI has possessed future repercussions for financial institutions by simplifying data entry process, reconciliation and financial analysis that embrace real-time query resolution in financial-data management. Apart from this, Gill *et al.* (2024) stated that GenAI has influenced financial reporting and risk-management in insurance services by influencing accounting standards for ensuring compliance or accuracy in financial institutions. Owing to this, in management and financial accounting, GenAI helps to predict future trends of financial

planning that ensure authenticity maintenance in financial records management. However, Ray (2023) contradicted that implementing GenAI in financial management and accounting services opposed challenges such as ethical concerns due to biases in AI algorithms. In light of this, managing data security has been critical for financial institutions while measuring and protecting sensitive financial data. Despite such issues like ethical concerns, Ali and Aysan (2023) suggested that financial policy makers need to prioritise interdisciplinary collaboration and comprehensive training programs for understanding future repercussions of GenAI for financial institutions. Effective training and development program on usage of GenAI for financial institutions helps policy makers and other individuals to develop greater insights of the concerned technology and embrace accuracy in operation of financial future.

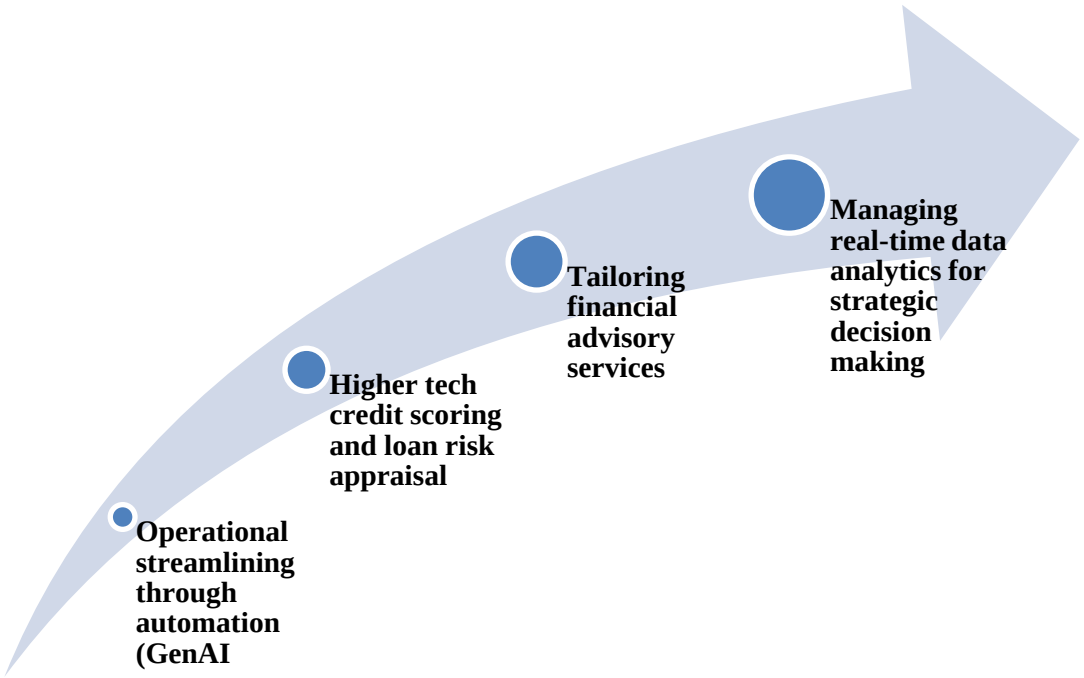


Figure 2.7: Future repercussion of GenAI for financial institute

(Source: Created by Author)

2.4.1 Operational streamlining through automation (GenAI)

GenAI simplifies infraction and repetition of routine tasks in financial institutions to avoid errors in data input as well as data delicacy identification processes that streamline financial operations. According to Rahmani and Zohuri (2023), GenAI has emerged as a transformative force in financial institutions towards reshaping operations streamline of banks as well as

financial record entities. Implication of GenAI in context of future repercussions for financial institutions has been identified by driving efficiency in cost reduction practices related to financial operations. Apart from this, Sewpersad (2024) stated that ***"Robotic Process Automation (RPA)"*** a key component of GenAI has been employed into financial operations towards automatic routine as well as repetitive tasks. Analysis of future repercussions of GenAI for financial institutions has been evident by transforming financial data entry, document verification and data transformation process. However, Patel (2023) argued that with integration of GenAI from predictive AI in the mortgage data maintenance process, financial policy makers faced potential difficulties in managing copy of documentation within an accurate manner. Lack of required understanding of usability of GenAI in the mortgage data maintenance process, overall cost management process has been increased that nurtured streamline development of financial operations. Despite issues such as authenticity maintenance in mortgage data management, GenAI helps to address scalability issues in data recording through blockchain technology by optimising transaction speeds and reducing data size (Patel, 2023). Owing to this, GenAI has embraced potential advantages in financial data management by providing AI-driven compression algorithms and optimising authenticity in financial operation streamlining practices. Thus, GenAI employed RPA and blockchain technology to optimise operation streamline through automation and emerged significant in future repercussions across financial institutions.

2.4.2 Higher tech credit scoring and loan risk appraisal

GenAI possesses strong scoring analytical capability towards monitoring diverse data in financial institutions for managing high credit score and risk appraisal in loan sanction activity. Supporting this, Yusof and Roslan (2023) informed that GenAI plays a vital role in credit risk scoring modelling process by analysing probability of credit default, loss given default and exposure at default. Incorporating risks in credit scoring through GenAI has effectively ensured stability as well as profitability of financial institutions. Thus, measuring financial stability and probability in business operation through higher tech credit scoring has depicted future

repercussions of GenAI for financial institutions. On other hand, Soni (2021) proclaimed that key strength of GenAI lies in its ability to analyse as well as interpret huge amounts of data such as structured and unstructured data in loan risk appraisal. GenAI has offered potential solutions in the loan risk appraisal management process by customisation of credit risk modelling. However, Edunjobi and Odejide (2024) argued that limited access and inherent biases to financial data management have effectively hindered comprehensive financial data management that failed to maintain accuracy in credit scoring as well as loan risk appraisal activities. In this regard, financial institutions have witnessed potential complexities in handling complex borrower profiles while loan sanctions and credit score management that deviated from the financial standard sets. Despite issues of maintaining accuracy in credit score caused by limited accessibility in comprehensive data management, Ochuba *et al.* (2024) suggested implication of GenAI that emerged as transformative forces. GenAI has offered a powerful set of tools and techniques that bring potential revolution in financial institutions by managing credit risks and making investment plans more effective. Thus, maintaining accuracy in comprehensive data management and facilitating informed decision-making practices have embraced potential future repercussions of GenAI across financial institutions.

2.4.3 Tailoring financial advisory services

Developing customer-centric strategy through GenAI has enabled driving force in financial advisory services by optimising customer engagement in financial institutions through influencing customer expenditure patterns and investment options. Supporting this, Mai (2024) stated that GenAI has driven significant forces in stock prediction and sentiment score generation processes that provide strong investment performance. Owing to this, integration of GenAI in financial advisory services has offered significant aspects in stock performance management for customers associated with financial institutions. On other hand, Dhake *et al.* (2024) narrated that financial leaders and policy makers have used GenAI in maintaining financial advisory services by analysing current trends in market conditions. In light of this, financial policy makers have developed the potential ability to enhance firm structure by

generating real-time information in stock performance management throughout the financial advisory services. Moreover, Chua *et al.* (2023) also explained that GenAI helps to monitor a client's portfolio on the basis of a predetermined plan, balancing assets and market changes instead of measuring human interventions. Similarly, GenAI has influenced financial advisory services through generating potential levels of personalisation as per customer's preferences and increasing opportunities for financial institutions to manage risk in financial operations. Thus, personalising financial advisory services and influencing customer investment plans through GenAI have highlighted future repercussions as well as performance optimisation across financial institutions.

2.4.4 Managing real-time data analytics for strategic decision making

GenAI involves equipping financial institutions with real-time data analytics for expediting strategic decision-making processes within a data-driven way. According to Jejeniwa *et al.* (2024), the advent of GenAI has heralded a transformative era in financial and accounting practices that have profound impact on automation of routine tasks by embracing real-time data access. Integration of GenAI in real-time data analytics practices has imposed comprehensive reviews on data reconciliation, repetitive task management and error reducing practices through optimising data-driven strategic decision making. Likewise, infusion of GenAI in the real-time data analytics for strengthening data-driven strategic decision has represented seismic shifts that streamline operation as well as optimising data accuracy for financial institutions. Apart from this, Himeur *et al.* (2023) narrated that GenAI has profound implications for financial reporting with real-time data accessibility that maintain regulatory compliances and risks associated with discrepancies in financial records. Relating this, financial policy makers and leaders have used data-driven strategic decision-making practices for managing real-time data through GenAI that enable significant effort for financial transaction classification. However, Allioui and Mouradi (2023) argued that the impact of GenAI has enabled potential paradigm shifts in financial institutions that are conceived, evaluated and executed through real-time data analytics. Regarding this, integration of GenAI

into real-time data management in financial accounting practices helps to optimise automation and encompasses data-driven analytics. Thus, optimising operation-automation and data-driven analytics in financial-accounting with supporting real-time data, future repercussions of financial institutions has been depicted by profound reconfiguration of strategic decision-making practices for dynamic financial reporting.

2.5 Approaches in handling predictive nature of GenAI in financial institution

2.5.1 Analysing high return in financial operations and performance management

GenAI has referred to deep-learning models that help to generate high quality of text and real-time data visualisation for predicting the nature of financial data in financial institutions. As views of Ericson *et al.* (2024), in recent times, GenAI has involved in redefining financial operations through current market searching as well as context creation by real-time image processing activity. With the realm of real-time image and inclusive data on the basis of financial market trends, a high level of return has been generated by financial institutions that enable profitability. On other hand, Vuletić *et al.* (2024) stated that GenAI is involved in regenerating trading strategies based on informed beliefs in current market data that exhibited price volatility of stock as well as investment planning. Accordingly, financial institutions have prioritised the implication of GenAI for obtaining higher return in business operation through time series forecasting and classification in financial settings. However, Dong *et al.* (2024) proclaimed application of predictive AI has been crucial in analysing trends related to financial risk by enabling potential adjustment and investment formulation. Accordingly, potential adjustment and formulation of investment plans while getting higher returns in business operations have imposed potential drawbacks of using predictive AI. Despite using predictive AI, GenAI in financial institutions enables standard optimization of risk as well as portfolio management by accumulating real-time data instead of potential adjustment (Kanbach *et al.* 2024). Contrastingly, integration of GenAI has effectively increased returns in financial institutions by using real-time data management in business operations and supercharged repetitive task management successfully. Thus, analysing higher return in financial institutions

through GenAI has been evident by decreasing risk of financial loss and further reformulation of investment plan in business process.

2.5.2 Assessing capability of autonomous operation in financial institutions

In accessing the availability of autonomous operation in financial institutions, GenAI has introduced an agent-based approach towards integrating day-to-day operation as well as generative values in business operations. Supporting this, Oyeniyi *et al.* (2024) stated that GenAI offers a repeatable framework as well as a process embedded with an agent-based approach that deals with continuation in financial operations. In light of developing autonomous financial operations, GenAI has revolutionised approaches of financial institutions by embracing regulatory report management. However, Ericson *et al.* (2024) argued that predictive AI in financial institutions has been crucial to drive potential insights for data analytics, financial performance management and forecasting real-time data accessibility. Based on this, the potential level of intelligence data retrieval process has been disrupted in the financial institution due to limited accessibility of data management by predictive AI. Contrastingly, Dong *et al.* (2024) suggested that in developing autonomous operation within financial institutions, GenAI has managed real-time data in financial operation while increasing scale economics within the business process. Integration of GenAI in financial business data management has effectively led to greater market concentration within sectors and reduced costly investment with technology advancement. From this, it has been evident that infusion of GenAI instead of predictive AI has been beneficial for assessing capability of autonomous operation in financial institutions through real-time data management practices. Thus, analysing capability of autonomous operation in financial institutions, handling the predictive nature of GenAI has been effectively measured within an effective manner by financial institutions.

2.6 Benefits of using GenAI in financial institutes

2.6.1 Enhancing customer experience

Figure 2.8: List of potential benefits of using GenAI in financial institution

(Source: Created by Author)

Consideration of GenAI in the financial sector remained an important part to consider a highly beneficial aspect in terms of generating a highly effective approach regarding customer service. Customer-centric data transactions can be positive in terms of addressing a highly effective solution towards precise data interpretation. As evaluated by Riemer *et al.* (2023), leveraging this technology can be potential to drive an insight into various needs and behaviours of customers in assessing accessibility of technology. Aspects such as “automated financial analysis and AI-assisted code development” can be potential in terms of the versatile approach of “customer service chatbots”. On other hand, Takaffoli et al. (2024) focused on a user-centric approach towards addressing a potential service in terms of optimised activities for considering better involvement. AI-based ideation can be an important part for considering a highly effective solution in terms of maintaining a highly productive approach in financial operations. However, Singh (2024) noted that analysing customer preferences based on personalised marketing offers could be potential to attract new customer base in contemporary scenarios. Individual perceptions as well as creating a responsible approach can be beneficial in addressing decision-making as well as team performance. Analysis of customer experience

can result in offering a range of personalised services in terms of addressing technology-inclusion. Hence, it can be said that tailored customer experience remained an important aspect to generate a positive approach regarding financial activities and planning.

2.6.2 Detecting fraudulent activities

Automated financial services in contemporary scenarios remained an important part to determine structural changes to address advanced information processing. Basic algorithmic trading remained an important part for determining detection of fraud for assessing improved financial structure. As evaluated by Aldasoro et al. (2024), important types of GenAI such as “Large Language Models (LLMs)” are utilised as a potential driver to consider “summarising, coding and generating synthetic data”. Code development and information processing can be effective to generate an environment of robo-advising while focusing on “fraud detection”. On the other hand, Ferrara (2024) focused on a negative perspective to consider ethical guidelines and continuous monitoring to determine transparency. Reflecting on negative consequences regarding reinforcement of GenAI can be an important aspect for companies to deal with changes. Machine learning and automation can be potential to associate a number of changes to incorporate an insight into better structuring as well as planning towards decision-making. However, Ahmadi (2023) noted that machine learning needs a huge amount of data in order to generate a possible solution towards accurate data management. Fraudulent activities in fast data processing remain an important aspect to consider proper verification and communication. Hence, financial institutions can be beneficial to consider actions, activities and behaviour to consider proper inclusion of GenAI in financial decision-making.

2.6.3 Efficacy in compliance and regulatory reporting

In the realm of compliance redefined in financial institutions, the integration of GenAI has been effective for navigating complex regulatory landscape in financial reporting towards reducing risks and cost. As asserted by Liu et al. (2024), GenAI has maintained data-quality and integrity in regular reporting that helps financial institutions to reap cost-saving and resolve

issues such as legal-compliance in data management. Accordingly, GenAI has effectively transformed regulatory reporting through developing capabilities in data-driven visualization and real-time monitoring activities. On other hand, Singh (2024) proclaimed that GenAI is considered an important tool in credit risk assessment for increasing efficiency in compliance and regular financial reporting. Integration of GenAI has positively aided with detecting historical credit risks and raising early warning signals to financial institutions towards extensive adoption. Thus, the implication of GenAI has been offered immense benefit to financial institutions by real-time monitoring practices in data management that increase efficiency in regulatory and compliance in financial operations. Additionally, YUNUS (2023) informed that GenAI represents the most impressive and advanced technology in financial regulatory compliance management and efficiency optimization by interacting with complex data patterns. Infusion of GenAI has become more convincing in financial institutions that help to detect false sense of data management and reduce spread of misconception that destabilize financial systems. Moreover, Huang et al. (2024) contradicted that in the landscape of emerging technology-based digitalization, financial institutions faced potential difficulties in a diverse range of navigation management in real-time data management. In this regard, robust measurement in data credibility to protect data against risk has been disrupted in financial institutions that increase ethical concerns and regulatory compliances. Despite issues like ethical concern in real-time data management, YUNUS (2023) suggested inclusion of GenAI in financial institutions that emphasized innovative capabilities in regulatory reporting to overcome novel security challenges. Thus, GenAI has provided immense benefit to financial institutions by navigating security landscape for reducing cost compliance and regulatory reporting activities.

2.6.4 Algorithmic trading and market analysis

GenAI in algorithm trading and market analysis helps to transform financial market patterns through providing predictive models, automated decision making and risk analysis practices. According to Zheng *et al.* (2024), in algo-trading analysis, GenAI has fundamentally changed

financial activities through revolutionising ways of human interaction with machines and providing new modes of production or behaviour patterns. With advanced algo-trading activities in financial institutions, GenAI improves trading strategies by optimising behavioural patterns of stocks on basis of current market trends and reducing risks in market analysis. Apart from this, Dou *et al.* (2024) informed that Generative AI in algorithm trading uses machine learning, sentiment analysis and complex algorithm prediction for analysing millions of financial data that execute optimal prices. Accordingly, traders associated with financial institution have also benefited in accessing real-time data over algo-trading markets with higher accuracy and efficiency that mitigates risks while higher returns. Thus, integration of GenAI in algo-trading activity has been benefited for the financial initiation to automate trading systems and encompass a wide range of trading strategies in financial market analysis practices. However, Oyeniyi *et al.* (2024) argued that GenAI has been revolutionised the algorithm trading strategies in the financial market by automating the process of the trading based on predefined criteria as well as analytical models. The concerned strategy has positively leveraged computational algorithms towards making the trading decisions more effective with potential advance of market data. Thus, the implication of the GenAI over predictive AI has been beneficial for financial institutions in managing real-time data accessibility over algo-trading and market analysis.

2.7 Factors responsible for influencing implication of GenAI within financial institute

2.7.1 Personalised financial advice

GenAI eases the process of creating new content and ideas like images, stripes based upon its data algorithm. Considering this, the application of GenAI could be utilised regarding preparation of technology and strategies that streamline the process of decision making in the finance sector. As per the research of Huang *et al.* (2024), GenAI is revolutionising the financial advisor services that assist in optimising investment strategies, enhancing transparency, with the AI-powered intelligence system. Advancement of GenAI powered robo

advisor assists in minimising human intervention; automate financial management of access by leveraging its powerful computer model. On the other hand Kalia (2023) argues that GenAI assists portfolio manager management by providing financial recommendations through analysing economic indicators, historical market data. A comprehensive knowledge on the market volatility through analysing historical data supports in alleviation of making wrong steps to enhance the amount of return. Referencing this, managers of financial institutions could improvise diversification; manage risk exposure to potentially enhance returns by integrating GenAI (Che *et al.* 2024). Therefore, personalised advisory is the traits of GenAI through utilising previous market data working as influencing factors for managers within American finance sectors to integrate GenAI.

2.7.2 Decision making

GenAI develops new content that does not present in the previous dataset through analysing historical data. In this regard, financial institutions could leverage the benefits of previous data for making efficient decisions regarding investment of financial strategies. As asserted by Chui *et al.* (2023), “ChatGPT 4” provides better personalised support regarding risk management decision making along with providing sentiment analysis in financial studies. Sentiment analysis through GenAI like ChatGPT 4 better captures risk factors and less volatile stocks performance to ease the process of decision making. Hence, utilisation of GenAI supports decision making through understanding market volatility and sentiment. On the contrary, Che *et al.* (2024) depicted that integration of GenAI shifts the paradigm that enhances efficiency and accuracy regarding trading decisions and democratises access to sophisticated investment strategies. These strategies are helpful in making informed decisions through evaluating the advantages like profitability and disadvantages like value depreciation of investment strategies to maximise return on investment. Its ability to detect patterns from data sets which could be overlooked by the human eye mainly increases accuracy of decision making through integration of GenAI within financial institutions (Maple *et al.* 2023). Therefore,

volatility, sentimental analysis, identification of data patterns among vast amounts of data sets eases the progress of decision making and acts as influential factors for financial institutes.

2.7.3 Risk assessment

Financial sector is associated with risks like high market volatility in which improper decisions might lead to a financial institute's losses. A better understanding of the market based on the real time market data potentially alleviates such market risks. As per the views of Rane (2023), GenAI like ChatGPT is utilised by finance experts for financial advisory, risk assessment, fraud de detection. GenAI could stimulate potential outcomes regarding a scenario that supports financial institutions to undertake early measures in order to eliminate the threats. Additionally, GenAI provides insight from the dataset that might not be apparent through traditional methods. On the other hand Xu *et al.* (2024), it has argued that GenAI analyses large amounts of data sets and models that enable financial institutions to better identify and respond to potential risks. Considering this, identification of potential challenges for financial decision making is giddy up the process of making fast responses by addressing those challenges. Apart from this, Maple *et al.* (2023) argued that GenAI eases the process of the supervisor in reviewing evidence in order to address potential areas of concern. Following the context, the supervisor of a financial institution could find the loophole of a decision which supports the elimination of threats. Therefore, identification of potential issues and fast response to those challenges acts as influencing factors for integration of GenAI within American financial institutions.

2.7.4 Regulatory compliances

Strict legal framework, police guidelines are associated with financial institutions to operate business activities in an ethical manner. Financial institutions need to deal with different regulatory factors such as consumer protection policy, data privacy policy, financial regulation. In this regard, legal implications of using ChatGPT are to draft AI-related legal policies and implementation of measures in order to deal with legal risk (Rane, 2023). GenAI like ChatGPT assists in drafting legal policies which also ensures AI related guidelines to the employees for

its ethical use for fintech operations. On the other hand, Maple *et al.* (2023) depicted that GenAI supports regulators of a firm in comprehending complicated legal text that allow an organisation to ask questions interactively of a corpus of compliance obligation. In this regard, employees could gain a comprehensive picture on regulatory compliance during operational activity within financial institutions. Therefore, integration of GenAI eases the process of decoding complicated regulatory text in a simplified manner that facilitates the process of regulatory compliance within the finance sector.

2.7.5 Reduction of cost in finance sector

GenAI assists in making effective reduction which simultaneously supports cost sauvignon during operational captivity within the financial institution. In accordance with Huang *et al.* (2024), GenAI is beneficial for financial managers to optimise portfolios and tax saving opportunities in real time. Providing knowledge on tax saving opportunities assists save money for both client and financial institution that simultaneously enhances the amount of cost saving. However, Riemer *et al.* (2023) argued that GenAI is likely to utilise extensive automation which results in significant opportunity for cost reduction and demand generation for high quality service. GenAI assists financial institutions in making effective decisions with lower financial professionals that simultaneously support an organisation to save extra money. Additionally, GenAI does not need extensive human intervention to operate within financial institutions that cut employees' hiring costs (Huang *et al.* 2024). Therefore, GenAI provides tax saving opportunities, cutting the necessity for extra work for cost saving which act as influencing factors for integration of GenAI within financial institutions.

2.8 Importance of GenAI in financial Institutes

2.8.1 Sentiment analysis

Sentimental analysis refers to the analysis of a vast amount of textual data for identification of positive, negative and neutral sentiment for making informed decisions. Considering this, Gen AI supports the evaluation of large textual dataset that enable financial institutions to identify trends and shift in sentiment. As per the views of Amin *et al.* (2024), ChatGPT’s advancement

in intertwines stocks trajectory through sentiment analysis. Twitter data that contains hash tags helps in identification of sentimental shifts through the algorithm power of GenAI. Following the context, twitter data is used for identification of sentiment to gain a comprehensive picture of performance for particular stocks. On the other hand, Aldasoro et al. (2024) argued that advanced AI supports understanding financial scenarios through granular data of financial transactions and sentiment analysis for the development of the hypothetical scenario of a financial crisis. Referencing this, formulation of hypothetical scenarios based on sentiment analysis streamline the process of decision making for managers of financial institutions. Employees of financial institutions could make investment decisions based upon the sentiment shift analysed through GenAI. Apart from this, Aydın and Karaarslan (2023), sentiment analysis crested through GenAI like ChatGPT could be manipulated. This situation could raise potential challenges for managers in identification of actual and manipulated data for informed decision making. Therefore, GenAI is extremely important for identification of shift changes on market trends based on people's sentiment and to improve the success of investment in American financial institutions.

2.8.2 Enhanced customer experience

A positive customer experience is important for financial institutions to increase their research and boost profitability. In this regard, handling customer data privacy effectively, timely response supports in improving customer experience. As per research of Ali and Aysan (2023), ChatGPT provides onboarding, financial planning, customer service, and KYC for improving customer experience. Additionally, GenAI like ChatGPT is beneficial for providing complex queries to the customers; contrary, Chatbot is programmed with limited answers to frequently asked questions. On the other hand, Ahmadi (2023) has depicted that "Natural Learning Processing" of OpenAI improvised customers interacts with financial institutions through providing seamless and personalised experience to customers. This GenAI supports a customer for financial planning, answer to the queries and eases to approachable finance service. Therefore, GenAI like OpenAI platform streamline the pathway for customers in

comprehending finance services in an effective manner that simultaneously increases customer experience.

2.8.3 Trading and investment strategies

Financial professionals are always seeking effective investment strategies that consider risk assessment, portfolio optimisation, risk assessment. In accordance with Yusof and Roslan (2023), GenAI empowers banks to improve its portfolio management through providing crucial insight on potential risks and opportunities. A comprehensive picture on the market opportunities supports financial institutions to capture huge amounts of profits through effective strategy development. However, Ahmadi (2023) argued that data crunching ability of GenAI supports investors with personalised tips and algorithm driven for intelligent investment. Fintech's accessibility and the analytical prowess of OpenAI assist financial institutions to upscale investment strategies in gaining profitable return. Following the context, "ChatGPT" comprehends the current financial situation of the financial institution to provide the organisation with effective financial strategy. Apart from this, Remolina (2023) has depicted that integration of GenAI techniques in the financial sector helps in simulation trading scenarios for development of trading and investment strategies. GenAI tries to predict future scenarios from the market data and develop strategies based upon the identified data pattern. For instance, Deloitte rolled out a new GenAI technology named ***DARTbot*** for providing real time guidance in navigating accounting questions (Mitan, 2024). Therefore, GenAI is emphasis upon identification of market opportunity and comprehension of future scenarios for the development of effective trading and investment strategies for American financial institutions.

2.8.4 Audit and internal control

Audit of a financial institution refers to the verification and analysis of an organisation's financial status. Auditors mainly verify financial statements and records of an organisation in order to comprehend the financial situation of the organisation. As per the views of Bhattacharya *et al.* (2020), finance teams are utilising AI in audit and control environment in order to identify fraud, non-compliance and anomalies. Automate the process of audit and

control support in saving time for financial personnel along with improving accuracy. On the other hand, Mitan (2024), GenAI could expedite documentation for creation of work paper extracted from the financial data. Considering this, finance professionals could leverage GenAI support to save time regarding Audit and internal control. The recent advancement in the GenAI technology would support in pinpointing irregularities within financial data (Mitan, 2024). Therefore, integration of GenAI within financial institutions assists in identification of fraud, irregularities for efficient management audit and internal control.

2.8.5 Hypothetical scenario creation

Hypothetical scenario creation supports financial institutions in evaluating different scenarios to alleviate the propensity of risks. The ability of hypothetical scenario creation provides a vast range of possibilities for analysis which is not present in the historic data. Referencing this Oluwagbenro (2024) has depicted that GenAI could model risk scenarios by evaluating the possible future state regarding the finance market through hypothetical but plausible conditions. In this regard, financial institutions could undertake early measures like limiting investment for gaining a favourable outcome. Similarly, Ali and Aysan (2023) also illustrate that GenAI supports in creating synthetic data that supports simulating scenarios. Simulation of scenarios would provide a wide range option to the managers of financial institutions to generate hefty amounts of profit. However, risk of inaccurate decision or prediction is associated with GenAI driven simulation. Considering this, human intervention is extremely necessary for making wise choices that benefits financial institutions in the longer term. Therefore, the importance of using GenAI is to evaluate risk through simulating a wide range of possibilities that reduce the amount of loss and assist in capturing financial market opportunities.

2.9 Tactical application of GenAI in financial sector

2.9.1 Fraud detection

GenAI is considered to be revolutionising fraud detection technology by utilising synthetic data and enhancing accuracy in detecting threats. As per the views of Kalia (2023), GenAI is

extremely beneficial for helping financial institutes in meeting regulatory requirements through detecting illicit activity and money laundering. GenAI supports finding patterns among a large amount of data set in order to find out any suspicious activities within the American finance sector. Considering these GenAI ease the process of maintaining legal framework and regulatory compliance within fintech. On the other hand, Oluwagbenro (2024) argued that the GenAI model trained for identification of normal transaction behaviour which in latter terms supports in finding anomalies that might reflect fraudulent activities. Trained datasets of GenAI support the data algorithm of GenAI to develop similar transaction examples in order to comprehend the pattern among the normal data transaction to streamline the process of anomalies detection. Apart from this, Yusof and Roslan (2023), has demonstrated that application of GenAI is game changers in the current era in solving evolving risk related to credit fraud. Therefore, GenAI is applied by financial institutions for identification of data patterns for identification of fraudulent activities among transaction data.

2.9.2 Credit risk assessment

“Credit risk assessment” supports American financial institutions like banks to measure the capability of customers before lending money. This process involves evaluation of some factors like credit scores, debt level, and income stability in order to alleviate the risk of defaults. Referencing this Barde and Kulkarni (2021), has highlighted that GenAI supports enhancing accuracy in credit risk assessment by identifying hidden correlation among extensive datasets. GenAI diminishes the positively regarding overlook of crucial factors that might raise the concern for risk of default. On the other hand, Kalia (2023) argued that analysed social media activity of an organisation GenAI would be able to discern lifestyle choice, spending habits to understand credit worthiness. Building correlation between borrowers spending habits assists a financial institution to predict more accurate credit risk of that individual. Apart from this, Huang *et al.* (2024), demonstrate that AI-powered risk management models assist in the mitigation of different kinds of risks like “financial risk, credit risk, market risk”. Therefore, GenAI could be implemented within the finance sector tactically

in order to identify the capability of the borrower for credit risk assessment to eliminate the threats of default.

2.9.3 Predictive analysis

Predictive analysis signifies prediction of future occurrence depending upon the pattern found in historical data. Management of biases within data enable GenAI to widen its horizon for simulated outcomes. As asserted by Xu *et al.* (2024), predictive analysis of GenAI provides an effective risk and fraud management system along with better service for customers. Referring to this banking sector could easily pinpoint the pain point of customers through evaluating historical data and predictive analysis features of GenAI ease the process of new service creation within financial institutions. Predictive analysis eases the process of forecasting future scenario in gaining better result from investment. Apart from this, Bengesi et al. (2024) highlighted that introduction of “Generative Adversarial Network” within GenAI streamline the process of generating new data samples that closely relate with the trained data pattern. Following the context, GenAI emphasises predictive analysis based upon the present information to simulate future scenarios. Therefore, predictive analysis traits of GenAI applied in finance sectors to facilitate investment decisions through forecasting future scenarios based upon the present information.

2.9.4 Stress testing

Stress testing of a financial institution refers to the conduction of a hypothetical scenario in order to determine whether a financial institution possesses the capability to withstand a detrimental economic shock. GenAI supports simulating user interaction and simulates vast amounts of information during the process of stress testing. As per the research of Chen *et al.* (2023), a financial organisation that possesses less information for training the model or stress test; GenAI supports in the development of synthetic data for learning patterns from actual data. In this regard, synthetic data generation by leveraging GenAI helps to understand financial health of an organisation as a course of stress testing. On the other hand, Yusof and Roslan (2023) argued that GenAI is considered to be a valuable tool for test testing in which

GenAI simulates a wide range of financial scenarios that help to comprehend potential impact on portfolio. In this regard, American financial institutions like banks would be able to prepare a risk magnet framework through an analysis portfolio after stress testing. Stress testing also supports financial institutions for effective decision making through integrating GenAI in business operations. Therefore, GenAI allows opportunity to financial sectors to simulate different scenarios based upon historical data which simultaneously each the process of risk mitigation.

2.9.5 Real-time risk monitoring

Real-time monitoring supports financial institutions to undertake informed decision making that helps to generate positive results in the long term. Risk monitoring based on real time information increases validity of decision making and increases propensity for positive value generation during financial activity like trading, investing. In accordance with Rahmani and Zohuri (2023), AI algorithms are beneficial in identification of potential vulnerabilities and risk in real time through utilising the capability of predictive analytics. Real time risk monitoring efforts of financial institutions diminish the needs for costly intervention due to timely implication of risk management strategies. Apart from this Riemer *et al.* (2023), has highlighted that GenAI has become pivotal in banking and assurance for optimal monitoring, risk monitoring by utilising predictive AI. Predictive analysis eases the process of updating market conditions and its impacts on financial decisions made by the organisation in a real time scenario which increases response time in a tremendous manner. On the other hand, Gautam (2023), has argued that real-time risk monitoring driven by AI-systems possess the ability to analyse and monitor transactions in real time scenarios. GenAI evaluates vast amounts of data at high speed in order to find out any negative consequences from the provided information to be prepared for early measures. Therefore, GenAI goes through vast amounts of information in a short amount of period and predictive analysis streamlines the process of risk monitoring in real time.

2.10 Challenges that financial institutes face while using GenAI

2.10.1 Siloed data and incomplete information

As a highly data-focused sector, the financial sector can face serious challenges in terms of addressing a highly negative challenge towards gaining better governance. Financial decision-making largely depends on accuracy of data on customers and financial transactions to remain effective regarding planning. However, presence of incomplete data and siloed information can generate a biassed algorithm on part of GenAI inclusion for decision-making. Lack of sufficient information regarding underlying patterns and relationships among various factors in financial information can be a challenging part for considering harmonisation of data (Aldoseri et al. 2023). Inclusion of real time data can face a challenging situation due to limited time for data validation and cleaning. As a result, inaccurate prediction on financial operations can hamper proper consideration associated with GenAI inclusion in contemporary scenarios. Gaps in data processing can generate a challenging position towards addressing an insight into understanding market trends and records. Confinement of data in the financial industry remained a negative aspect in gaining a proper inclusion regarding accurate information. As evaluated by Patel (2023), data gaps are considered to be a recurring challenge in terms of impacting decision-making as well as risk management considerations for financial companies. As a result, suboptimal decisions can hamper algorithms associated with financial planning and forecasting. Data-driven landscape in contemporary business can be an important aspect to consider a better perspective towards addressing a positive approach towards ensuring real-time observation in the financial sector.

2.10.2 Unfair and biased discrimination

Databases are generally controlled by GenAI through maintaining proper algorithms and mathematical aspects in decision-making. Ethical consideration in data-based decisions plays an integral role to assess proper consideration associated with financial services. As evaluated by Truby et al. (2020), pain points in utilising GenAI into financial services can face serious consequences associated with biased and discriminated financial decisions. Changes in

algorithms often generate a challenging situation in terms of addressing a highly considerable solution in decision-making regarding finance. Unintentional bosses based on arbitrary characteristics of customers such as “their race, sex, or religion” can be challenging in order to consider a changing perspective in terms of considering algorithmic decision-making. Hence, fair-lending criteria along with anti-discriminatory insights are potential to consider a highly effective decision-making in a changing scenario.

Biased information on financial activities can be beneficial to address a high strategic approach regarding strategic consideration of technological development. Fairness of data can be a critical consideration to associate an insight into facilitating accountability and transparency for decision-making. Owolabi *et al.* (2024) evaluated that GenAI often results in biased decisions based on past lending practices that can generate a broader societal bias in terms of addressing contemporary aspects for dealing with technological procedures. Consideration of data security along with promoting trust can be an important measure to determine a positive aspect to consider strategic decision-making in terms of financial planning. Hence, ethical implementation of GenAI remained an important measure to assess considerable changes in decision-making.

2.10.3 Regulatory challenges

Ethical measures such as data privacy and transparency are potential in terms of addressing regulatory changes in dealing with data-driven approaches towards decision-making. Viability of financial services is considered to be potential in terms of maintaining a transparent approach while considering regulation. As elaborated by Padmanaban (2024), regulatory reporting can be an important party for considering a detailed perspective associated with real-world illustrations to determine a positive approach regarding decision-making. Data -driven regulation regarding “stream compliance reports and surveillance information” created an important part for considering an effective solution towards decision-making. Centralised platforms can have the potential to measure an insight into core decision-making as considered by AI-powered machine learning and technology.

Global financial structure faced serious consequences in terms of addressing a highly beneficial approach in terms of digital technology usage to address potential decision-making. Operating costs can be a beneficial part in terms of addressing an overview focusing on technological value creation and planning to determine employment procedures. As evaluated by Kshetri (2021), information processing regarding borrowing and lending can be beneficial in terms of addressing a beneficial solution in decision-making. Identification and analysis regarding AI algorithms can be a potential aspect to consider a beneficial aspect in terms of gaining better perspective associated with regulatory challenges. Hence, an understanding associated with implementation of financial professionals in terms of engaging better performance in decision-making.

2.10.4 Cybersecurity threats

Cybersecurity can be an important part in terms of assessing a highly effective solution regarding core decision-making on transparency and planning. Financial services in technological scenarios can be an important part to generate a potential aspect to consider changing the environment for considering ethical data usage. As evaluated by Dhake et al. (2024), the threat of “data breach and cyber-attacks” remained a challenging aspect to consider highly effective solutions in terms of considering security measures. Multifaceted technological landscape created a challenging space for considering a highly negative scenario to address accurate data forecasting. An insight into private and confidential data of customers in the banking sector can be monitored through ethical perspectives in terms of maintaining a strategic measure in financial decision-making (Padmanaban, 2024). Hence, an enhanced dependence towards AI inclusion can be potential to consider an effective and accurate solution in terms of maintaining core decision-making.

2.10.5 Lack of resources

Resource planning can be an important measure to determine a strategic approach towards maintaining solutions regarding AI inclusion and decision-making. However, the contemporary banking sector needs to be updated with changes regarding AI and ML inclusion to generate

effective results. As evaluated by Jameaba (2024), lack of access to advanced financial services can generate a challenging aspect in terms of addressing a potential solution towards decision-making. Lack of clarity in decision-making can be a negative part in terms of considering a better performance in addressing financial performance and decision-making. Apart from that, lack of proper knowledge in machine learning for employees often creates potential challenges to remain beneficial in decision-making (Dhake et al. 2024). Absence of skilled workforce as well as financial resources can create a challenging part for determining a potential solution regarding core decision-making.

2.11 Strategies that financial institute need to implement to improve GenAI

2.11.1 Identification of clear goals and objectives

Identification of technological patterns can be an important aspect to consider a potential solution towards maintaining an approach regarding decision-making. Consideration of GenAI can be positive towards maintaining a transparent approach for customer support. As evaluated by Mogaji and Nguyen (2022), clear depiction of financial concepts and technology integration can be an important part for considering managerial understanding. Apart from that, marketing-related strategies are beneficial to determine profitable solutions in terms of managing automation towards managing decision-making. Proper planning and strategizing can be a potential means to determine an overview while focusing on a changing perspective towards advancement towards core decision-making. Hence, a clear definition of goal remained beneficial for addressing changes in terms of financial decision-making.

Emergence of a potential decision-making framework can be beneficial for addressing a highly effective planning in terms of determining application of artificial intelligence in a changing scenario. On other hand, Suhel *et al.* (2020) focused on identification of technological models for enhancing core competency of organisations to consider a positive aspect in terms of decision-making. Objectives regarding implementation of intelligence remained beneficial for addressing increased quality of customer service. Matching pattern strategies can have potential in terms of addressing a better performance in financial decision-making and

planning. Hence, implementation of financial management helps in considering artificial intelligence in an advanced scenario.

2.11.2 Loss probability estimates

Financial forecasting plays an important role for financial sectors in terms of maintaining profitable outcomes to ensure strategic consideration regarding effective decision-making. Availability of data can be effective to consider economic transition in terms of associating “advanced computer vision, speech recognition, image classification and the ability to construct 3D scenes and assets out of 2D images” (Kanbach et al. 2024, p. 1193). Improved pattern recognition can be potential for addressing an inclusive approach towards maintaining effective solution and decision-making in terms of managing a strategic consideration associated with decision-making. Generative capability as well as pattern recognition in financial activities is potential for associating specific domains in addressing responsive approaches towards planning. Innovation as well as core decision-making created a potential solution to consider risk management dynamics to incorporate planning as well as estimation of probable profit. As evaluated by Christodorescu *et al.* (2024), reliable estimates of financial loss and risks can be beneficial for considering proper transparency regarding decision-making. Uncertainty management through GenAI remained beneficial for addressing an insight into strategic decision-making. Transparency regarding financial decisions can be a potential solution regarding better maintenance to ensure strategic performance and planning. Correlation regarding financial planning and decision-making remains an important part in terms of maintaining a highly productive performance towards addressing better performance. Hence, it can be an important aspect for considering a productive solution based on financial decision-making.

2.11.3 Automating routine tasks

Automation in banking activities of financial as well as operational performance remained in terms of assessing core resource planning for routine tasks. Automation in decision-making remained an important aspect in terms of maintaining a solution in terms of assessing financial

planning. As evaluated by Jingrong et *al.* (2024), controlling operational tasks can be an important solution in terms of maintaining strategic solutions in terms of addressing operational efficiency and professional effectiveness. Efficient management of financial aspects in terms of considering potential planning in terms of assessing a potential solution for enhancing decision-making. Risk management as well as digital transformation remained effective in order to generate a potential solution towards operational efficiency. GenAI gradually remained an important part in terms of addressing a highly effective solution in terms of "active engagement and cognitive engagement" (Alavi et al. 2024, p. 21). These mutual aspects can be beneficial to address the knowledge management process regarding knowledge management and planning. Knowledge management processes as well as transparency in decision-making created a highly effective solution towards performing core operations and mechanisms. Hence, it can be evaluated that adaptation of GenAI within an organisational framework can have potential for addressing a strategic solution through maintaining productive outcomes.

2.11.4 Mobilisation of investment opportunities

Technological advancement in industrial scenarios can be beneficial in terms of association and a potential solution based on core decision-making. Expenditure and investment opportunities in the financial sector can be potential to address a highly beneficial solution to determine a strategic measure in order to create better performance. As evaluated by Demir *et al.* (2022), savings, consumption expenditure and business investment can be potential in terms of assessing a highly potential performance to address financial decision-making as well as strategic performance to remain successful in a complicated scenario. Various aspects of technology in forms of "Artificial Intelligence and metaverse" can be a potential aspect for considering economic growth directed towards economic growth and decision making.

An inclusion of technological advancements remained beneficial to address strategic solutions in terms of managing a potential performance to remain profitable in a changing scenario. As evaluated by Aloulou et al. (2024), investment towards enhanced technological approach

regarding financial operation to generate a positive view to address automated solutions to incorporating a potential solution. Building wealth through diverse investment portfolios can be a beneficial solution in terms of considering a diverse range of assets. Hence, an insight into better fintech adoption and investment remained beneficial in terms of assessing a strategic solution in decision-making.

2.11.5 Communication with stakeholders

Communication and collaboration with stakeholders remained a potential aspect to remain an important measure for financial institutions in engaging technological solutions. Financial supply chain management can be an important part for considering a collaborative aspect in terms of considering risk management. As evaluated by Adeoye *et al.* (2024), collaboration between stakeholders such as “financial policy makers, fintech companies” can have the potential to address a detailed perspective focusing on a changing business scenario. Financial inclusions can be beneficial for addressing a detailed solution to consider strategic performance to remain successful in decision-making. As evaluated by Aldboush and Ferdous (2023), inclusion of stakeholder communication can be potential towards maintaining a strategic approach in terms of addressing a beneficial approach in decision-making. Data analytics and AI inclusion remained beneficial to determine a high-quality performance in terms of addressing a highly effective performance in contemporary scenarios. Hence, ethical as well as privacy concerns in terms of maintaining a strategic solution in terms of addressing customer trust.

2.12 Literature Gap

This literature review focused on exploring the importance of GenAI in terms of considering a highly beneficial solution for financial institutions as a part of decision-making. However, some of the literature was not beneficial in considering a detailed perspective regarding challenges and strategies based on AI implementation in the financial sector. Journal articles such as “Riemer *et al.* (2023) and Aldasoro et al. (2024)” were beneficial to address a highly effective problem in order to create considerable changes in terms of AI implementation in the financial

sector. However, these journals were not potential in terms of considering challenges associated with AI usage for financial decision-making. Apart from that, journals of “Truby et al. (2020) and Owolabi *et al.* (2024)” were considered to be beneficial in implementing financial decision-making to ensure proper planning and strategy implementation. However, these journals did not focus on considering an inclusive practice to determine strategic decisions for assessing stakeholder management in addressing human-centric approaches. Hence, these gaps would be mitigated through associating strategic measures in AI inclusion for financial planning.

2.13 Summary

From the above discussion it can be highlighted that GenAI supports undertaking effective decisions based upon its predictive analysis and simulation on historical data. Integration of GenAI technology eases the process of gaining a comprehensive picture in customers’ needs to enhance customer experience. Strategic planning in banking information created a potential solution in terms of assessing considerable change in decision-making. It can also be summarised that GenAI has developed real-time data management practices through optimising capabilities in financial operation within an autonomous manner. Additionally, GenAI allows opportunities in the financial sector regarding credit risk assessment, stress testing, and real time risk monitoring. These mutual aspects can be beneficial to address the knowledge management process regarding knowledge management and planning. Considerable changes in decision-making are beneficial for assessing a highly effective solution in terms of addressing AI implementation in financial sector. However, lack of real time data, biased data, and cyber security threats are making challenges for implementation of GenAI within financial institutions. Therefore, stakeholder communication and identification of clear objectives could be implemented to maximum capability of GenAI financial institutions of America.

CHAPTER III: METHODOLOGY

3.1 Introduction

Research methodology has played a crucial part in this study to determine that the research objectives and questions are met in accordance with the main research context while achieving the deliverables accordingly. Quantitative research design helped this study to gather relevant information related to the positive impacts of GenAI on the financial institutions of North America through reliable primary sources. The present chapter ensured legitimacy of the research work while ensuring significant findings through an effective data analysis method related to the impacts of GenAI on North American financial institutions. This chapter has supported this study to identify the most suitable methods for this research such as philosophy, approach, design of this research, data collection, and review of the research problem, questions, sampling, and data analysis. Methodology also helped this study to operationalise the key theoretical constructs related to the research context to provide more comprehensive knowledge and understanding. Reviewing the research problem in this chapter has been beneficial for this study to arrange the most appropriate instrumentation for resolving a certain issue related to GenAI application and generate effective findings related to positive impacts of GenAI. Lastly, this present chapter was also focused on defining the key research design limitations that often-created hurdles during the data collection or analysis procedures.

3.2 Overview of the Research Problem

Customer data privacy issue and displacement of human workforce due to GenAI inclusion has been identified as two of the most major problems for North American financial institutions. GenAI uses a huge set of data in executing different business activities which enhances the risk potential of encountering consumer data privacy concerns. As per the views of Shi (2023), generative artificial intelligence is often misused to spread false information, commit illicit activities and achieve other malicious goals by hackers. This indicates that the North American financial institutions are exposed to the threat of data leakage which is crucial to its customers that can affect their customer loyalty further. On other hand, Wach *et al.* (2023)

narrated that generative AI might be applied to create false news or even to spread propaganda content which could impact the opinions of the public. This indicates that any individual or group of people with illicit goals of demeaning any financial organisation in North America can use GenAI to spread false information about its business. This false information can further be used to affect its brand reputation and manipulate the target audience. Thus, issue of GenAI comes with a greater risk of poor customer data privacy and exposure to false information regarding the financial brands of North America.

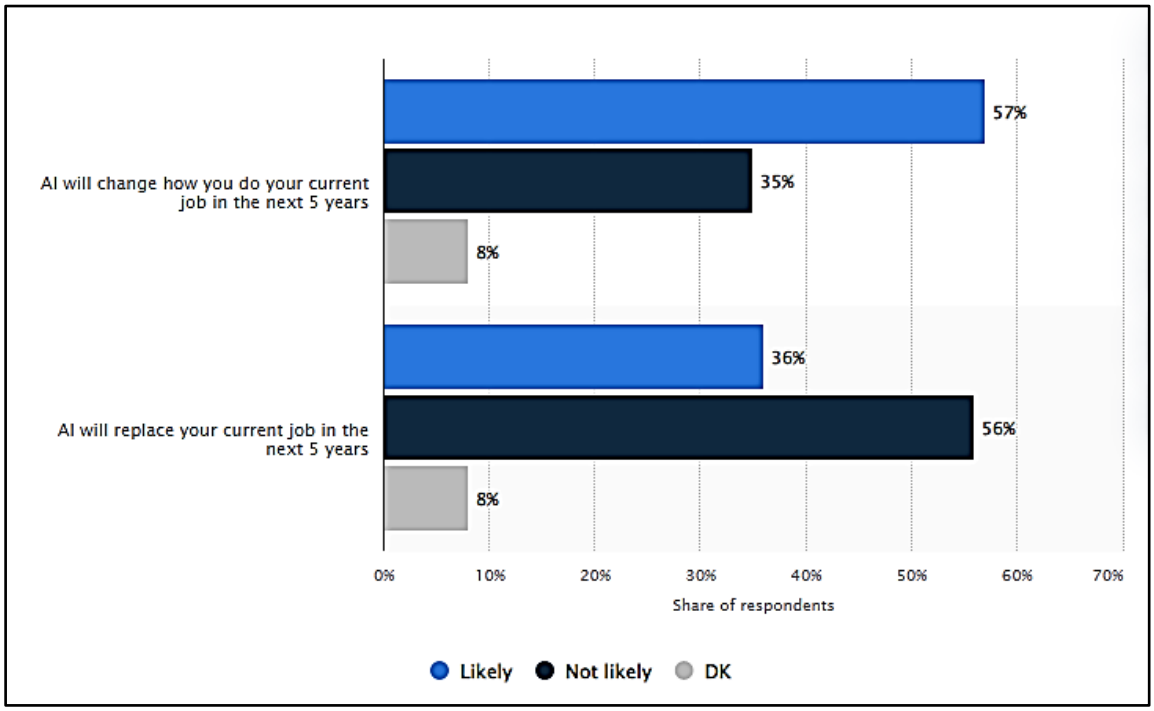


Figure 3.1: Change or replacement of jobs by AI in business worldwide to 2028

(Source: Thormundsson, 2024)

Above established figure highlights the change of replacements of jobs by AI technology in business across the world by the end of 2028. For example, it was analysed that around 57 % of employees stated that AI would likely change the ways in which current jobs are done within the next 5 years (Thormundsson, 2024). This reflects that AI can ensure more efficiency than human workforce and achieve business goals in a much more effective and faster way which would negatively impact human employment. On other hand, it was assessed that

nearly 36 % of the employees said that it is likely for AI to replace their current job in upcoming years (Thormundsson, 2024). Offering higher operational excellence and efficiency has been among the key reasons for incorporating GenAI in the business activities of financial institutions. It can affect the overall unemployment rate of North America while lack of human assistance in GenAI can damage the long-term business achievements of these financial institutions. Affecting the employment rate within a country can also lead people to become unaffordable in terms of purchasing the products offered by companies while keeping up with developing GenAI trends. Hence, this potential of displacing the human workforce can create significant challenges for the financial institutions in North America through reducing the inclusion of human knowledge and expertise in line with their employment.

Absence of human labour from the activities of financial institutions in North America due to the inclusion of GenAI can enhance the potential of machine bias in line with data misinterpretation as well. AI systems are effectively employed to automate repetitive activities which pose the risk of job losses in different industries including the financial corporation of North America. As opinionated by Lazaroiu and Rogalska (2023), GenAI can be an effective technology inclusion in terms of human job displacement due to the more accurate outcomes ensured by the technology inclusion. Considering the direct issue of company's human expertise reduction along with an increase in unemployment rate make this issue significant in contemporary financial business environments. Additionally, Wach *et al.* (2023) narrated that there are different sociological and ethical consequences of using Generative AI due to the bias in algorithms, false content, and leakage of sensitive data caused by security issues. The financial companies in North America can lose their loyal customers in case the integration of Generative AI becomes unable to meet the required security standards. Thus, this study has been initiated to resolve these identified research problems through authentic primary quantitative data generated from the survey of key stakeholders.

3.3 Operationalisation of Theoretical Constructs

Theoretical constructs have also been equally crucial in this study which ensured the adequate use of deductive approach in this study. As evaluated by Okoli (2023), in deductive theorising, research begins from a theory and later infers the potential of data on the inferences from that certain theory. Application of a deductive method has helped this study to test a wide range of theories to deliver generalised conclusions in line with significant quantitative data effectively. The used theoretical perspectives to provide generalised conclusions included *Theory of Reasoned Action (TRA), Technology acceptance model (TAM), Theory of planned behaviour (TPB), Diffusion of innovation theory (DIT), Information systems Theory (IST) and Expectancy-Value Theory (EVT).* For example, Cartwright *et al.* (2021) narrated that “theory of reasoned action” defines that the decision of an individual to involve in certain behaviour is based on the results the person expects that would come as an outcome of that behaviour. Individual behavioural aspects of TRA can benefit the North American financial institutions in terms of determining their behaviour through the intention of using Generative AI to generate more effective business results. Thus, the theoretical constructs have been an important area in this study to initiate the adequate execution of different stages of the research in accordance with theorising.

Implementing the technology acceptance model in this study has also been highly relevant considering the incorporation of Generative AI in the financial institutions of North America. Application of TAM through incorporating GenAI has been beneficial in this study as perceived usefulness of Generative AU can be useful in identifying the acceptance of that technology in the North American financial institutions. As opinionated by Shaker *et al.* (2023), TAM is a significant theory which models the keyways through which users accept as well as use a certain technology. Factors related to TAM can help the North American financial institutions to map the keyways which can help them to integrate Generative AI to ensure higher business efficiency, significant outcomes and competitive advantage. On other hand, the use of theory of planned behaviour can help the financial corporations to understand the ways in which

individuals behave in diverse settings or scenarios to map the positive impacts of generative AI. Key behavioural intentions of financial managers, employees of North American companies can be taken into consideration while incorporating Generative AI to manage different business activities. Thus, the theoretical constructs related to the different dimensions of research context helped this study to generate effective findings through testing of the theories.

Testing diffusion of innovation theory helped in establishing the belief that there are five key elements of a new idea such as innovation, adopters, communication mediums, time along with a social system. Adhering to these aforementioned can help the North American financial institutions to execute generative AI in advancing their business activities. Min *et al*. (2021) suggested that pro-innovation along with personal blame bias are the main criticism related to the principle of diffusion of innovation theory. In light of this, the attitude and behaviour of North American financial institutions might be changed due to the influence of societal, cultural and external aspects while deploying GenAI. However, Information systems Theory (IST) was another theoretical incorporation in this study which dealt with the transformation of data and can also be considered as a theoretical foundation of applying generative AI. The North American financial institutions can obtain significant business outcomes through ensuring safe and secure data transferring through deploying of IST. Finally, application of Expectancy-Value Theory can be effective through defining the motivation of financial institutes to integrate the advancements of generative AI to ensure higher business efficiency. Thus, following the deductive approach of testing theories related to research variables have been significant inclusions in this study to generate effective findings and answer the research questions.

3.4 Research Purpose and Questions

Purpose

Purpose of this research was to generate key findings related to the positive impacts of Generative AI on the financial intuitions of North America. This research focused on assessing different areas of Generative AI application such as its challenges, strategies, and influencing

factors in line with relevant theoretical perspectives which helped it in achieving its purpose accordingly. Conducting a survey to gather primary quantitative data on Generative AI' impacts on North American financial intuitions have also been another core part of the main purpose of this study to answer the research questions accordingly. Thus, inclusion of real-life data gained from stakeholders of North American financial institutions has ensured that the research purpose was fulfilled successfully.

Questions

- What are future repercussions of Generative Artificial Intelligence (GenAI) for American financial institutions, with a specific emphasis on the optimistic effects?
- How to handle GenAI's predicted matters, such as intellectual property pressures, employee abuse, and conceivable financial facility mistakes in financial institutions of North America?
- What is potential assistance of GenAI to increase operation accuracy, effective economic risk analysis, and enhanced procedures in the areas of speculation banking and retail treatment of accounts in North American financial institutions?

3.5 Research Design

3.5.1 Research philosophy

Research philosophy refers to the belief about the way information regarding a phenomenon needs to be collected for research. Research philosophy is mainly to develop a foundation for research that tremendously affects follow up procedure like data collection, design, interpretation process. There are different philosophical options such as "pragmatism, positivism and interpretivism" that are presented for performing the research. ***"Positivism philosophy"*** was utilised for performing the research due to its ***objective nature*** to observe the phenomenon of Gen AI's impact on North America's institution. As per the research of Junjie and Yingxin (2022), positivism philosophy emphasises observable and measurable factors in order to understand cause and effect of a phenomenon. In this regard, the reason for Gen AI utilisation within could be measured through assessing real information through the

lens of positivism philosophy in financial institutions of North America. Observable factors like customer satisfaction, risk assessment, credit scores evaluation were evaluated to understand the beneficiary of Gen AI within North America's financial institution in which positivism plays a substantial role. On the other hand, Turyahikayo (2021), depicted that positivist beliefs, people's opinion, values might be false without scientific basis. In this regard, positivism only emphasises upon gaining information on real life experience while using Gen AI within the financial institutions of North America. Perception of bank managers or their own opinion was not considered during the data collection process as it adhered to positivism philosophy. Therefore, positivism philosophy was chosen to conduct the research by considering its objective natures for greater credibility that were founded on a scientific basis to develop accurate interpretation.

Interpretivism philosophy was not incorporated for performing the research as it emphasis upon subjective basis for data collection. This kind of research is extremely useful for performing research associated with culture compared with Gen AI's impact on financial institutions. However, the research mainly emphasises the benefits of Gen AI within financial institutions of North America in which measurable factors appear to be most credible to reach a sound conclusion. As asserted by Junjie and Yingxin (2022), interpretivism philosophy might be associated with subjective bias of researchers whereas positivism philosophy maintains emotional neutrality through an objectivist viewpoint. Following the context, the subjective nature of Interpretivism philosophy might develop concern of bias for achieving research objectives of Gen AI's impact on North America's financial institutions as it could deviate from its research aim for using interpretivism. In contrast, positivist philosophy puts strict focus on data without being influenced by interpretation of bias of humans (Alharahsheh and Pius, 2020). These characteristics of positivism help to stay focused on objective factors that enhance authenticity of research. Following the context, positivism supports keeping research on Gen AI's impacts on financial institutions of North America's institutions on track whereas interpretivism philosophy increases concern for human bias in research results. Therefore, positivism philosophy was selected over interpretivism philosophy as it paves the way for

generating sound conclusions through objective observation on Gen AI's impact on financial institutions.

The main idea of pragmatism philosophy is depending upon the practical point of view in which knowledge is not fixed. As per the opinion of Turyahikayo (2021), pragmatism philosophy emphasises people's generated knowledge, decision, beliefs based upon organisational situation. In this regard, pragmatism, philosophy would place more emphasis on exploring the way bank employee's knowledge; organisational norms are changed due to integration of Gen AI within North America's financial institutions. Although pragmatism philosophy covers aspects of people's knowledge and organisational infrastructure change, it creates a knowledge gap on Gen AI's practical implication that benefited customers. Apart from this, Positivism philosophy emphasises every measurable and observable factor that is influenced due to integration of Gen AI within North America's financial institutions. Therefore, positivism has been chosen over ***pragmatism philosophy*** as pragmatism creates concern for the knowledge gap on Gen AI' real world impact within North America's financial institutions.

3.5.2 Research approach

Research approach refers to adaptation of general plan and procedures to carry out research. Research approaches play a substantial role for developing the foundation for data collection and interpretation. There are research approach options like "Inductive, deductive and abductive" were present for performing this research. ***"Deductive research approach"*** was incorporated to understand the cause-and-effect phenomenon for Gen AI implantation within North America's financial institution. As per the research of Okoli (2023), deductive approach starts with a generic concept and inferred data from that concept. The purpose of deductive approach is to contradict or support a generic concept through evaluating empirical evidence for making specific conclusions. In this regard, the research starts with the concept of Gen AI's impacts on financial institutions in which deductive approaches are used to assess its impacts like stress testing, credit scores assessment in North America's financial institutions. On the other hand, Earl Rinehart (2021) depicted that deductive process required active

decision regarding utilisation of evidence for conducting a particular study. Following the context, empirical evidence was utilised for assessing factors like personalised financial advice, investment decision, regulatory reporting, market analysis leveraged by financial institutions by using Gen AI. In this regard, evidence works as support to prove impacts of Gen AI within North America's financial institutions by leveraging deductive approach. Therefore, Deductive approach was selected for performing the research as evidence utilisation increases credibility of research results which make this approach appropriate for the research.

Inductive approach was not incorporated for conducting the research as it needs meticulous attention to select and organise data to reach a sound conclusion regarding GAI's implementation within the financial institutions. In this regard, the research could go in the wrong direction for inappropriate collection of information on GAI's impacts on financial institutions. As asserted by Okoli (2023), Inductive approaches place more emphasis upon theory development beyond just a descriptive framework. In this regard, inductive approaches are considered to explore the phenomenon of Gen AI within financial institutions. Gen AI is still a new concept within financial institutions in which incorporation of an inductive approach could be challenging for this research. Additionally, this research does not focus on theory development, instead descriptive analysis of GAI's impact on the financial institutions of North America. On the other hand Park *et al.* (2020) depicted that deductive approach is associated with positivist methodology that aims to objectively test phenomena. Referring to this, the phenomenon of GAI's integration within North America's financial institutions was evaluated effectively through building causal relationships between concepts like detecting fraudulent activities, enhancing customer experience with variable Gen AI. Therefore, deductive approach was selected over inductive approach for conducting the study as it supports Gen AI's benefits on North America's financial institutions quantitatively.

Abductive approach was also not considered while planning to perform the research of Gen AI's impact on financial institutions. Abductive analysis aims to diminish issues associated with inductive and deductive approaches by undertaking a pragmatist perspective. As per the

research of Kistruck and Slade Shantz (2022), abductive approach iterates between induction, abduction and deduction in a cyclic process for generation beliefs regarding phenomenon. In this regard, applying the “abductive research approach” appears to be extremely complex for this research as it focuses upon both theory development and concept testing. Additionally, abductive approach is also considered to be incoherent due to lack of solid foundation like deductive or inductive in this regard, employing abductive approach leads to developing serious errors in terms of data interpretation. Therefore, deductive approach was integrated over abductive approach due to its robust framework that assists to generate specific conclusions based on empirical evidence.

3.5.3 Research strategy

Research strategy is regarded as a step-by-step procedure for a plan of action that provides directions for research to reach objectives systematically. Research strategies develop a roadmap for researchers through influencing their thought process for planning, executing and monitoring the research steps. There are different research strategies choices such as “qualitative, quantitative and mixed methods” available for conducting this research. ***“Quantitative research strategy”*** was chosen for conducting research on the impact of Gen AI on North America’s financial institutions. As per the view of Dehalwar and Sharma (2024), quantitative research is considered to be an empirical and systematic investigation that employs mathematical, statistical techniques for collection and interpretation of data. In this regard, numerical data assist to understand the way trends change for integration of Gen AI within financial institutions of North America over qualitative data. Additionally, quantitative data offers outcomes based on numbers rather than subjective judgement that make the results more accurate. Furthermore, one gets better visualisation over GAI’s impacts like financial facility mistakes on financial institutions of North America. On the other hand Barroga *et al.* (2023) depicted that deductive approach is used to disprove or prove factors in quantitative research. Evaluation of evidence through deductive approach supports Gen AI’s impact on finance. Previously it has denoted the utilisation of deductive approach for this

research that makes quantitative methods more compatible for research on Gen AI's impacts in North America. Therefore, Quantitative research was incorporated for this research to get better visualisation and increase data credibility regarding interpretation of Gen AI's impacts on North America's financial institutions.

Qualitative research was rejected from this research for being time consuming, difficult to analyse and subjective in nature. Qualitative data is mainly emphasised upon evaluating phenomena to gain rich insight on people's beliefs and attitudes. As per the research of Dehalwar and Sharma (2024), qualitative strategy deals with non-numerical data and subjective exploration of meaning regarding a particular context. Referring to this, trend change in the financial institutions of North America could not be quantified due to its subjective way of exploration. Similarly, Hameed (2020) demonstrated that qualitative research is also associated with "focusing problem, boundary problem, ethical issue, triangulation problem and problem of authenticity". In this regard, qualitative strategy would explore Gen AI's implication on the financial institution on a description basis and subjectively that makes research results less reliable. On the other hand, ***quantitative strategy*** utilised structured instruments for objective measurement and numerical data evaluation regarding a phenomenon (Dehalwar and Sharma , 2024). Following the context, beneficiaries of Gen AI within financial instruments could better visualise through qualitative measures by leveraging quantitative strategy. Therefore, qualitative strategy was rejected from this research due to its less reliability and subjective nature of data interpretation.

Mixed research strategy refers to utilisation of both quantitative and qualitative data for evaluating impacts of Gen AI on North America's financial institutions. As per the view of Dehalwar and Sharma (2024), researchers integrate mixed methods to enrich findings depth to understand a study comprehensively. However, integrating mixed methods for this research appears to be time consuming that makes "mixed methods" rejected from the research. Therefore, "quantitative research strategy" was selected over mixed or qualitative methods for performing the research of GAI's impacts on the financial institutions of North America.

3.5.4 Research Choice

Research choice refers to the number of data types utilised to carry out research. There are three types of research choices such as “mono choice, mixed choice and multi choice” available for conducting the research. As per the research of Al-Ababneh (2020), mono method is regarded as utilisation of single data collections techniques such as qualitative or quantitative. The research only integrates quantitative data for performing the research that denotes single kind of data utilisation which indicates the research utilises ***“mono research choice”***. The Mono method appears to be extremely useful for research ***having a lower number of variables***. Following the context, this research reflects variables like Gen AI, North America’s financial institution that makes mono choice most appropriate for the research for having lower numbers of variables. On the other hand, Multi and mixed methods are considered to be most appropriate for research that possesses a higher number of variables. As asserted by Nanthagopan (2021), multi and mixed methods are superior to mono methods when it comes to pluralism. Therefore, Mono methods were integrated for this research to evaluate a lower number of research variables like Gen AI succinctly for research of GAI’s impacts on North America’s financial institutions.

3.5.5 Research method

Research methods refer to analytical approaches and techniques selected by researchers to carry out a research in a logical, coherent way. ***“Descriptive research method”*** was integrated to identify patterns and characteristics across data sets to comprehend GAI’s impacts on financial institutions of North America. As per the opinion of Mohajan (2020), descriptive research is utilised within a quantitative study in case little is known about a phenomenon. Diverse dimension of Gen AI within the financial sector is yet to be discovered that indicates little information is present regarding GAI’s impacts on North America’s financial institutions that make mono choice most appropriate. Additionally, descriptive research aims to illustrate variation and trends in the impacts of Gen AI like operational accuracy to identify its causal effects on North America’s financial institutions. Therefore, a descriptive research

method was utilised to elucidate, describe and interpret impacts of GAI on financial institutions of North America by leveraging quantitative data.

3.6 Population and Sample

Population and sampling play an important role in “primary quantitative research” while focusing on real time data collection from industry experts. This research on financial institutions as well as technology inclusion such as GenAI created an overview associated with strategic approach within business. This study’s population was based on financial institutions’ employees as well as important stakeholders in a competitive scenario. Andrade (2021) noted that research on population generated practical implications associated with inferential analysis from responses. Target population in an academic research can have a major impact over assessing financial planning and decision-making within financial firms. Northern American financial institutions generated a potential impact on enhancing reliability and accountability of present research. Research can be enhanced through considering reliable respondents while focusing on expertise and decision-making capability. As evaluated by Eisele *et al.* (2022), comparable populations can be beneficial in terms of considering a perceived approach within creation of a reliable perception associated with decision-making. Evaluation of overall population within an academic research can have a major impact over final results associated with inclusion of AI within financial decision-making within Northern American firms.

Sampling techniques within research can have a major inclusion into generating a positive approach within involvement of respondents to gather specific outcomes in research works. “Balanced Topic-Aware Sampling” can have two components of “clusters on topic-based sampling” and “balanced pair wise margin” to assess information. In this context, Hofstätter *et al.* (2021) evaluated that a collection of queries covering completely different topics can be beneficial for gaining information in terms of enhancing experimental design through simple random sampling. Training sets as well as composed random queries can be beneficial in terms of enhancing information reliability in ensuring a balanced approach. Balanced sampling

can have a crucial aspect in terms of examining additional requirements as a part of associating knowledge distillation to generate a positive approach in decision-making. Positivist research philosophy is beneficial for gaining objective reality while focusing on ideological positioning. Baltes and Ralph (2022) elaborated that sampling design can be crucial in terms of determining external validity within a “positivist research paradigm” in a changing scenario to address proper analysis regarding a subject. Classifications of “probability and non-probability” sampling are essential to determine randomness within respondent-driven sampling. This research was completed through employing non-probability purposive sampling while engaging financial decision-makers in a technologically advanced backdrop.

Purposive sampling is considered as an important classification of non-probability sampling to enhance a positive dimension in terms of broader population framework. Benefits of this kind of sampling include an inclusion of “expert judgement, representation of specific dimension and subjective identifications” (Baltes and Ralph, 2022). Information-reach considerations can be a crucial aspect while generating an insight into an accessible approach into enhancing data-driven decision-making in a research paradigm. “Purposeful sampling techniques” can be crucial in terms of addressing an overview associated with collection of data through employing a diversified approach in research activities (Stratton, 2021). This research on financial institutions’ inclusion of GenAI helped in addressing core approaches for representing identification of specific participants and experts. Respondents with the knowledge of financial as well as technological skills can have a crucial dimension while focusing on recruitment of participants. Hence, an insight into non-probability purposive sampling in this research helped to address changing dimensions for data definitions and results.

3.7 Participant Selection

Selecting appropriate respondents for this survey was beneficial in terms of assessing a positive insight into convenience within the academic outcome of this research. Selected demographic as well as professional background such as “age, professional expertise and

designations" can have a crucial impact over designing target population's inclusion within a research as a part of inclusive knowledge. Modifiers can have a strong impact over the entire target population in enhancing selection of participants within a wide base of target population. Probability of participation weighting can have a crucial dimension in the form of trial study population in engaging core decision-making (Ling *et al.* 2022). Comparison within estimated observation as well as standardisation can be beneficial to address changing dimensions for associating reliable inclusion associated with decision-making. Participants were chosen as per professional designation through a sorting process of online databases. Validation of work as well as increased credibility can be a beneficial approach for enhancing strategic findings to overcome fundamental biases. Hence, it can be evaluated that observational study within financial decision-making is beneficial for participatory engagement as well as trial response analysis as well.

Selection of participants is an important dynamic while focusing on expert data commentary as well as enhanced business performance in decision-making. Collection of data is beneficial in terms of validation of work through enhancing distribution of interpretation in order to generate assumptions associated with research findings. Participation within the survey needs to be consented from individual respondents in terms of enhancing an overview based on ethical considerations. As noted by Unger *et al.* (2021), participation within metal analysis can be biased while considering different dynamics in terms of associating community engagement. Present study on financial decision-making and inclusion of GenAI created a potential measure for enhancing an overview associated with agreement in gaining real time data. Industry experts such as financial advisors, CEOs of financial firms along with tech experts can be the target population for this study to enhance data quality through inclusion of a primary data source. Hence, this study utilised financial stakeholders as chosen participants while focusing on an expert-based inferential analysis regarding GenAI's inclusion into present decision-making.

Participants within this study are selected on the basis of research design stages to determine crucial dimensions in terms of evaluating exploratory approaches. Inclusion of significant

stakeholders inside American economic institutions, such as CEOs, directors, and material knowledge authorities remained an important aspect for decision-making. Controlling roles within financial firms can have a crucial influence over addressing a crucial dynamic as a part of dealing with core decision-making. Hossain *et al.* (2024) evaluated that participation within studies can be crucial in terms of considering real-time data inclusion as per consideration based on phenomenological approaches. Data collection as well as saturation can be effective in terms of enhancing a strategic approach for the financial sector and technological inclusion within the North American finance sector.

3.8 Instrumentation

This study has utilised ***survey questionnaires*** as its main instrumentation in the methodology to ensure that the primary data analysis generates sound research outcomes in line with the research objectives. A survey questionnaire including ***10 close-ended questions*** related to both demographic and research context helped this study to gather significant primary quantitative data through evaluation of the survey responses of stakeholders such as CEOs, directors, and material knowledge authorities. As stated by Taherdoost (2022), questionnaire is considered to be the main and most effective way to collect primary and quantitative data which makes the data collection procedure more standardised. Using the questionnaire has helped this study to gather key insights from the stakeholders in a faster as well as more accurate way to meet the research objectives. Thus, the instrumentation has played an integral role in this study which enabled the application of a questionnaire to collect primary data related to impacts of GenAI on North American financial institutions.

Research instrument is used to measure, collect and analyse data based upon research interest. Stakeholders like CEO, directors of North America's financial institutions are selected for conducting surveys for collection of relevant information that address research questions. In this regard, ***"questionnaires"*** were utilised as the research instruments during ***surveys*** for collection of participants real life experience while utilising Gen AI within their financial institutions. The main objective of this instrument is to gather information regarding impacts of

Gen AI on financial institutions of North America. Literature themes and research objectives were followed for designing the research instrument to gain comprehensive knowledge on Gen AI's impacts in finance. As per the research of Aithal and Aithal (2020), questionnaire is considered to be a pivotal instrument that assists in collection of quantitative data in a structured way to ensure its internal consistency, coherency for analysis. Consideration of Gen AI, response format creation, revision was conducted to formulate final questions for the research. Therefore, survey questionnaire was used as research instruments in which research objectives were considered for development of question sets.

"Questionnaire research instrument" could be categorised under four types of research question like "matrix questions, cascade questions, open ended questions and closed ended questions". This research only utilised ***"closed ended questions"*** for designing survey questionnaires to assist information accumulation of GAI's impacts on financial institutions of North America. As per the research of Taherdoost (2021), participants need to choose answers from a specific range of options in response to close ended questions. Following the context, most of the questions had five options such as "firmly agree, agree, neutral, disagree, firmly disagree" for designing the research instrument questionnaire. This questionnaire holds about a total of ***10 questions*** for conducting the research in order to capture the response of every participant on Gen AI's impacts on financial institutions of North America. Apart from this Aithal and Aithal (2020), illustrated that questionnaire development needs to follow the rule of simple and short questions to eliminate difficulty for respondents. Following the context, neutrality and straight languages were maintained effectively to pave the pathway for participants for answering questions effectively. Therefore, closed ended questions were selected for designing survey questionnaire for its being simple to utilise for collection of relevant information that address research objectives.

3.9 Data Collection Procedures

Data collection constitutes an important juncture within academic research for enhancing the quality of findings to gather insights regarding the topic. This study on technological

advancements of GenAI and financial institution's decisions created a majorly effective impact in terms of assessing sample participants to address recommendations for further activities. Data for academic research is generally collected through either primary or secondary sources to obtain ample information meeting research aims and objectives. Taherdoost (2021) commented on the data collection process as a scientific way to determine an explanation associated with high quality of achieving results in a changing scenario. Both qualitative and quantitative strategies are linked with academic research to ensure a systematic research procedure in terms of achieving proper results. Primary data collection is generally conducted through questionnaires, interviewees, survey, focus group observation and activity sampling techniques. However, secondary data include sources such as "books, journal articles, e-journals, magazines and government records" that can be used as credible sources to gather relevant data (Taherdoost, 2021). This research on financial information gathering and inclusion of AI-based analysis needed to be done by engaging a positive approach while incorporating an ideation associated with core decision-making.

Primary data collection for this research generated an overview as a part of considering methodological quality as well as planning in decision-making. Assessment of primary data analysis remained effective while focusing on inclusion of GenAI in driving effective solutions towards ensuring strategic aspects. As evaluated by Ma *et al.* (2020), cross-sectional observation can be analytical while focusing on descriptive studies as a part of enhancing findings as well as evaluative measures. Alternative interventions in identification of resources can have a major influence in research completion as a part of evaluating strategic dimension in decision-making. Data collection processes as well as Quality assessment of collected data through survey can have an important inclusion to determine a strategic approach while focusing on an evaluative aspect. Face-to-face quantitative data collection can have a major impact on transitional aspects of primary data collection processes (Lobe *et al.* 2020). Inclusion of primary data instead of secondary sources can have a positive impact over decision-making in enhancing decision-making. Professional as well as competency aspects can be crucial in enhancing primary data collection modelling for individual respondents.

Survey strategy used in this study was undertaken through designing 10 closed-ended questions while focusing on 35 chosen participants belonging to a professional background of financial firms.

Data collection as well as planning can have a crucial influence in terms of associating an insight into financial planning while assessing analytical dimensions in the financial setting. Individual participants are effective in terms of assessing real-time data based on primary sources of financial stakeholders belonging to North American firms. As analysed by Pandey and Pandey (2021), a primary source can be considered as “the only repository of a historical datum” while keeping an original record of important occasions. Extensive use of primary data collected through Survey Monkey in this study helped in addressing financial advisors’ insight into technological aspects within financial decision-making and associated planning. As a result, secondary data collected was discarded in this research to gather real-time and updated technical data from industry experts. Primary data collected through survey strategy was beneficial in evaluating interpretation associated with GenAI’s inclusion towards financial decision-making.

As a result, a positivist philosophical paradigm along with deductive approach generated a potential inclusion to ensure a primary quantitative study to meet objectives. Operationalisation of theoretical constructs created a crucial aspect in terms of using a deductive approach for evaluating theories as well as hypothesis in terms of engaging a more effective aspect for generalised conclusion. Primary data collection through survey as well as statistical data analysis process helped in terms of enhancing a real-time analysis while focusing on financial planning as well as technological value creation. Ethical considerations such as informed consent and data confidentiality remained an important part for analysing proper changes in further validation of this research.

3.10 Data Analysis

Data analysis has been one of the most prominent techniques used in this study to determine accuracy and relevancy of collected data which helped in answering key research questions

effectively. Data analysis is a key method used in this literature work on GenAI to improve credibility of data and link the study and findings with real life scenarios in line with used theories. Three key data analysis techniques used in research works include *"statistical analysis, thematic analysis, and transcript-based analysis".* This study utilised ***"statistical data analysis method"*** which has provided a systematic and objective approach to decision making while reducing impact of bias in data interpretation. As stated by Rahman and Muktadir (2021), statistical data analysis helps studies to examine a huge volume of quantitative data to generate key findings related to the topic context. Application of statistical data analysis method helped this study to define the results related to impacts of GenAI gained from the survey of stakeholders from different financial corporations of North America. Application of statistical data analysis has benefited this study through enabling it to answer the research questions through the responses given by survey participants. Thus, selection of statistical data analysis has been useful in this study to assess primary quantitative data related to positive impacts of GenAI on the financial corporations of North America.

Statistical data analysis can be conducted through several data collection processes such as survey, SPSS and others to resolve the main problem identified related to research context. This study has conducted a survey through preparing a questionnaire from Survey Monkey to gather the responses of survey participants related to GenAI application in North American financial institutions. As per the views of Godwin *et al.* (2021), statistical data analysis provides keyways to link the research questions with collected quantitative data in reference to the assumptions related to analysis. Statistical data analysis techniques have helped this study to recognise key patterns, trends and insights related which enabled the use of regression analysis on the examination of GenAI in current business activities of financial institutions in North America. On other hand, this research discarded the use of other data analysis tools such as thematic analysis and transcript-based analysis as they did not align with the criteria of present research. Thematic analysis was discarded from this study as it did not facilitate the collection of secondary data from existing journal articles related to GenAI impacts on American financial corporations. Thus, utilising statistical data analysis has helped this

research to assess the response of a wide range of survey respondents which included CEO, directors and other stakeholders of financial corporations in North America.

Transcript-based analysis was also excluded from this study which generally helps a study to arrange and manage data while dealing with huge volumes of data, mainly gained from interviews. Considering the inclusion of survey and quantitative data collection, this study did not match the requirements of transcript-based analysis to meet the research questions adequately. However, application of statistical data analysis has helped this study to assess the numerical data gained through primary quantitative survey conduction which ensured authentic and unused data. It helped in using MS-Excel to generate significant graphs and charts to evaluate the research context and answer the research questions in line with visual reports on data insights specifically. Mohajan (2020) stated that statistical data analysis ensures effective analysis of quantitative data in line with the testing of theories to provide most accurate results. Application of statistical data analysis ensured objectivity to this research through providing systematic approach towards theory testing, decision making while reducing the potential risk of data bias. Hence, incorporation of statistical data analysis has helped this study to define the collected quantitative data related to the questions used in the survey in relation to GenAI's positive impacts on North American financial institutions.

3.11 Research Design Limitations

Economic as well as Using positivist research philosophy for survey strategy and statistical data analysis processes can be crucial for getting a quantitative and numerical representation of gained data for evaluating effective analysis processing. However, using "primary data" limited the possibilities of including scholarly insights on technological advancements as well as financial decision-making. Recognition of limitations within study can have originated accomplishments in terms of Theoretical analysis from previous studies can be beneficial in enhancing empirical quality of this study for engaging a positive dimension in planning as well as motivation. Primary data used in this study helped to determine an overview in terms of engaging real time and updated information from the financial sector. However, inclusion of

insights from individual experts often generates a risk of bias in observation in terms of financial decision-making. Population-based research processes in this context can be biased leading to a generalised conclusion regarding financial planning and technological value creation. Hence, it can be evaluated that limitations such as assembling secondary data to address an overview associated with theoretical perceptions.

3.12 Summary

From above analysis, it can be summarised that assembling and presenting data needs to be properly collected as well as evaluated to ensure a valid approach. This research on financial decision-making due to the advent of technology-based advancements remained an important aspect while focusing on the changing dimensions of financial firms associated with planning. Evaluation of research problems was beneficial to incorporate an overview based on consumer data privacy as well as human workforce within the financial sector. Challenges such as “algorithms, false content, and leakage of sensitive data” are pertinent in the contemporary financial sector to address changing approaches in terms of core decision-making. This research was undertaken as a part of considering strategic dimension while engaging a crucial dimension as a part of real-time data collection.

CHAPTER IV: RESULTS

4.1 Introduction

This chapter has delved into evaluating the positive impact of GenAI on American financial institutions. The previous chapter, which is methodology, has discussed acquired approaches and techniques for analysing accumulated data. This chapter has developed based on the proposed methodology in the previous chapter for answering the research questions and satisfying the aim of this study. A primary quantitative data collection has been considered, and statistical analysis has been acquired in this chapter for in-depth analysis and to enhance the validity of research findings. Moreover, this chapter has also discussed the link with research questions with associated survey questions. Additionally, a regression analysis has also been included in this chapter for gaining a deep insight regarding the relationship between research variables. According to Arizmendi *et al.* (2023), regression analysis demonstrates the relation between research variables and is able to predict outcomes successfully. The key purpose of this chapter is to analyse accumulated and analyse information to satisfy research aims and objectives successfully.

4.2 Demographic analysis

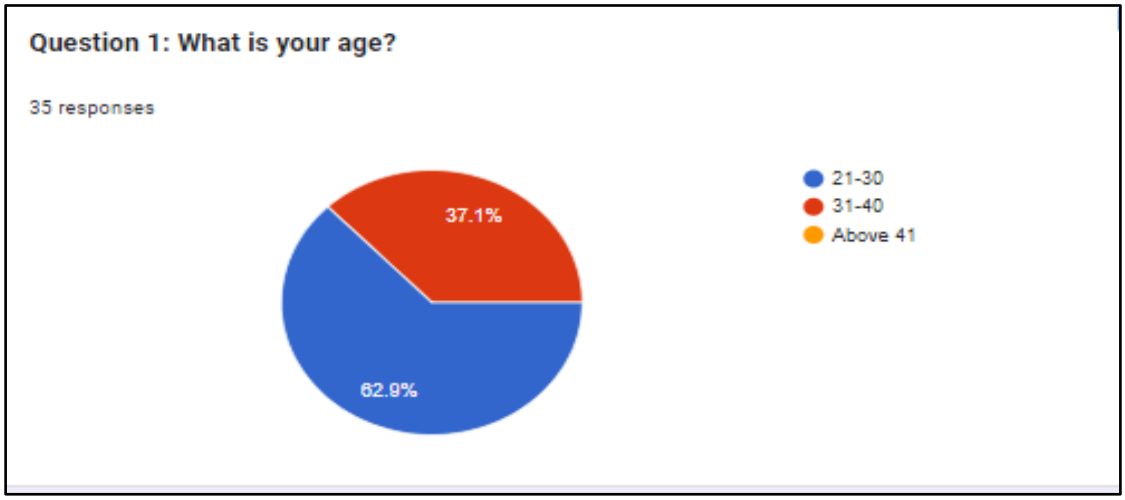


Figure 4.1: Age of the Participants

(Source: SurveyMonkey)

Figure 4.1 demonstrated the age of the participants or the respondents in this survey. Most of the participants that accounted for 62.9% were 21 to 31 years old. It is indicated that most of the candidates are young adults and it increased the chance to accumulate correct responses. As mentioned by Lemessa (2024), young adults are more aware of the application of modern technology and its impact due to exposure to technology at an early age. Following this, the study regarding the positive impact of GenAI on American financial institutions can generate valid and reliable results due to high awareness of young adults about this particular technology. On the other hand, 37.1% of participants or respondents of this survey were from the 31 to 40 years of age group. However, there were no participants above 41 years of age and it is an obstacle to get a perspective of people above 41 regarding the positive impact of GenAI on American institutions. Thus, most of the participants are young adults, which enhances the opportunity to gain relevant answers due to their knowledge in this domain such as regarding the positive impact of GenAI on American financial institutions.

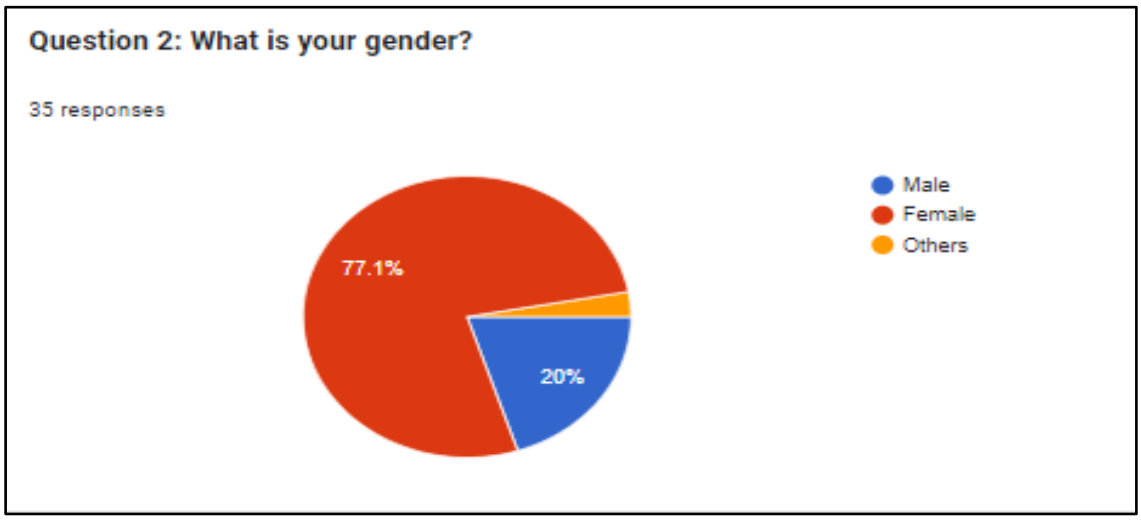


Figure 4.2: Gender of the Participants

(Source: SurveyMonkey)

Figure 4.2 mentioned the gender of the participants as a part of demographic analysis. Most of the survey participants, which accounted for 77.1% are females. On the other hand, 20% participants are male in this survey and there are no participants from other gender categories.

As mentioned by Link and Baumann (2023), higher gender imbalance and gender gap among web based survey participants can negatively impact the accuracy, reliability and validity of the information. On the other hand, it is also indicating gender biases that can negatively impact the findings of the study regarding the positive impact of GenAI in American financial institutions. However, ethical considerations have been acquired for minimising the bias in data findings that can improve reliability and validity of the findings successfully. Thus, despite the risk of bias in findings of survey results, the ethical and other considerations are able to enhance the reliability and validity of the findings regarding the positive impact of GenAI on American financial institutions.

4.3 Research Question One

"Survey Question 3: Do you agree that Generative AI would allow improving performance of American financial institutions?"

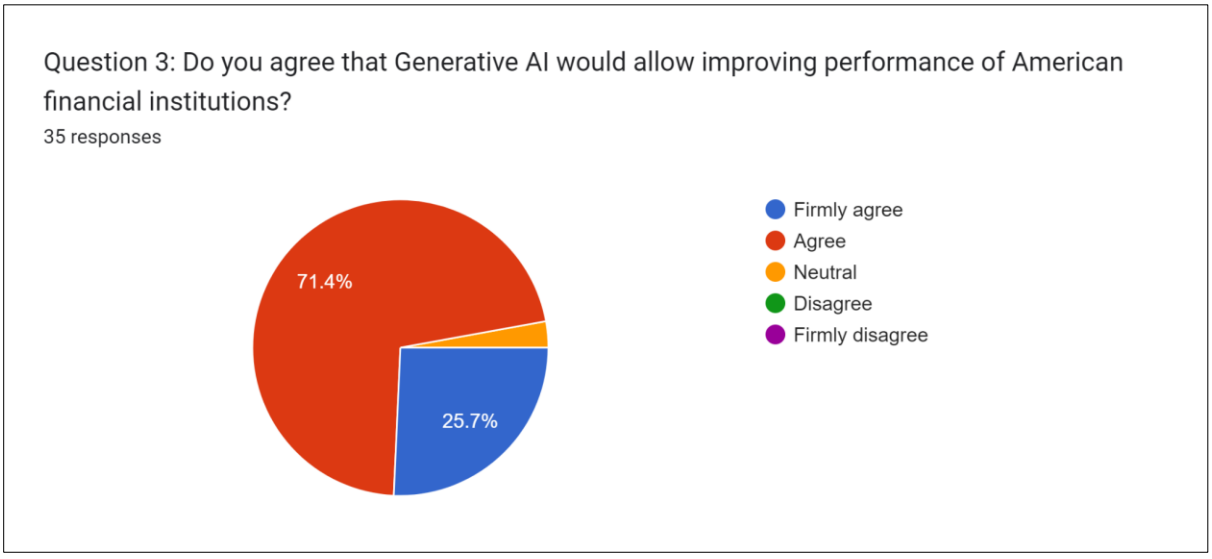


Figure 4.3: GenAI and improvement in performance of the financial institutions of North America

(Source: SurveyMonkey)

Figure 4.3 shows the responses of the participants regarding the significance of GenAI in contributing to the improvement in performance of the financial institutions. It can be seen that 25.7% participants have strongly agreed to the fact of the positive impact of GenAI on financial

institutions of North America. The application of Generative AI has significantly transformed the landscape of the financial institutions through improving its performance across various dimensions including trade detection and prevention (Ooi *et al*. 2023). Accordingly, GenAI has taken part in the detention of fraud through analysing vast amounts of transactional information of the financial institutions which has enabled the identification of unusual patterns. Besides, it has become possible to maintain real-time data tracking in the financial institutions in North America for detecting fraudulent activities. Thus, the capability of the advanced technologies like GenAI positively impact the performance of the financial institutions.

Majority of the participants (71.4%) have agreed to the significant contribution of GenAI in leading to the improvement in the performance of the financial institutions in North America. In this context, the use of Generative AI has played a crucial role in improving the customer services of the financial institutions along with offering customisation (Abrokwah-Larbi, 2023). Accordingly, it has become possible for the financial institutions to offer virtual assistance to its consumers with the use of AI-Chatbot. This further leads to increasing the quality of services through 24/7 availability along with delivering personalised recommendations to the customers as per their needs and requirements. In addition, it is also possible for AI tools to work on handling huge amounts of customer inquiries with better proficiency than the human workforce. This includes the activities of effective management of the complex financial advice along with basic account information of the consumers. As a result, effective management of customer services leads to improving customer satisfaction within the financial institutions of North America which further help in maintenance of positive performance.

As seen from the survey result, 2.9% participants have remained neutral to the survey question of the positive impacts of GenAI on the performance of the North American financial institutions. Generative AI has come with the opportunity of managing risks by simulating various economic scenarios (Mariani and Dwivedi, 2024). Accordingly, it has become possible for the financial institutions to determine the potential impact of the organisational activities on the financial portfolios. In addition, the financial institutions of North America can focus on proactive risk management with the integration of Generative AI due to its ability in developing

appropriate risk management strategy spending on available information. This can further lead to improving investment decision making associated with the management of the risks like financial frauds or others within the financial institutions. Therefore, the use of the GenAI is associated with reducing the likelihood of financial loss within the financial institutions of North America.

GenAI based algorithms are also beneficial in contributing to the development of advanced trading strategies through effective analysis of market trends and stock movements. AI algorithms are beneficial for financial institutions in predicting the current risks in the stock market (Mokhtari *et al*. 2021). Accordingly, this supports the financial institutions of North America to improve its investment decisions with the application of data-driven strategies. Besides, the improvement in investment decisions spending on AI algorithms also reflects on the better returns within the financial institutions. Additionally, the rise in the returns become beneficial for the financial institutions in maximising its competitive advantages in the highly competitive market of North America. Therefore, the survey responses have helped in determining the importance of GenAI maximising the performance of the financial institutions through effective investment risk management which respond to the requirements of first research question.

The use of the Generative AI is also associated with supporting the financial institutions in managing its regulatory compliances which further directs its performance. As per the opinion of Kurshan *et al*. (2020) the regulatory compliance within the financial institutions is automated with the application of Generative AI which helps in ensuring that the institutions are adhering to the regulations. Accordingly, the automated responses to the compliances and regulations help in leading to the efficiency of the financial institutions of North America. In addition, the requirement of excessive manual oversight is also reduced with the implication of the GenAI based compliances and regulation practices within the financial institutions of North America. As a result, it contributes to reducing the costs of operations along with fostering efficiency of the sector with reducing the possibility of risk of regulatory breaches. Therefore, the implication of GenAI is directly related with the reduction in the security breaches within the financial

institutions of North America along with contributing to the improvement in its performance in the competitive market.

The survey responses show no prevalence of disagreements from the respondents on asking the question associated with the optimistic effects of Generative AI on North American financial institutions. As highlighted by Moukadam and Sobrinho (2024) the application of Generative AI helps in automating the daily tasks of the financial institutions including data entry, reporting and reconciliation. Accordingly, the use of the GenAI helps in improving the operational efficiency of the financial institutions of North America. In addition, the data analysis capability of GenAI also helps in allocating more human resources to the strategic organisational activities including improvement in operational cost saving and productivity. Therefore, the responses of the participants in the survey directly reflect the requirements of the first research question with highlighting the optimistic effects of GenAI on the North American financial institutions.

"Survey Question 4: Do you believe Generative AI would be capable of large amounts of financial data in American financial institutions?"

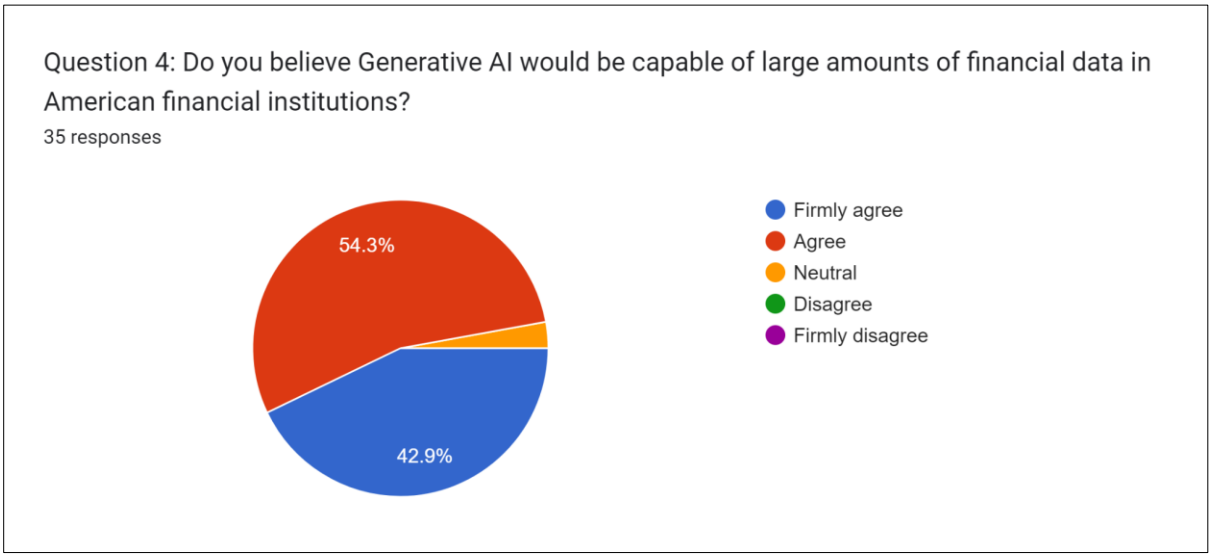


Figure 4.4: GenAI and large amount of financial data in the financial institutions of America

(Source: Created by author)

Figure 4.4 shows that the majority of the survey participants have firmly agreed or agreed about the repercussions of GenAI in the financial institutions with a specific focus on optimistic effect. It can be seen that 54.3% participants have agreed to the significant contribution of GenAI leading effective management of the huge amount of financial information. GenAI has become one of the crucial tools which has enabled the financial institutions in analysing large volumes of financial information through offering the advantages like enhancement in data processing. The study by Mandvika and Achanta (2023) has highlighted the role of Generative AI in leading to the automation of the process of data collection, cleaning, and integration. This includes both structured and unstructured information collected from various sources. Thus, the financial institutions of North America have analysed the information associated with marketing activities, transactions or other data with the application of the GenAI tool. Besides, the integration of the GenAI in large volumes of financial data management also helps in improving efficiency along with accuracy of data interpretation. Therefore, the features and activities associated with GenAI such as large volume of data analysis further contribute to the improvement in the performance of the financial institution of North America.

About 42.9% respondents in the survey have agreed to the significant contribution of GenAI in large volume data interpretation in the financial institutions. This reflects that the majority of the participants believe in the efficiency of GenAI in the management of complex and huge volumes of financial information for supporting the operations activities of the financial institutions. Generative AI has been found to be beneficial in recognizing complex patterns along with detecting anomalies within large datasets in financial institutions (Sabuhi *et al*. 2021). Accordingly, this supports the organisations in identifying the fraudulent activities, unusual activities in the mark*et al*ong with operational inefficiencies with the organisations. The contribution of GenAI in promptly identifying the suspicious activities helps in supporting the financial institutions to reduce financial losses. Besides, it also becomes beneficial in detecting irregularities within the financial institutions which are responsible for indicating potential risks along with allowing proactive mitigation. As a result, the performance and the operational effectiveness of the financial institutions are increased with the effective analysis

of a huge volume of financial information and its use in informed decision making as per the demand of the first research question.

In the responses for the survey question of GenAI in analysing large volumes of financial information of the financial institutions 2.9% of the respondents remained neutral. This reflects their confusions about the benefits and the disadvantages of GenAI with the application in the financial institutions. Generative AI is utilised within the financial institutions for performing predictive analysis (Che *et al*. 2024). Accordingly, as per the responses of the participants the choice of GenAI has significantly contributed to delivering data-driven insights for financial decisions making as well as strategic planning. Besides, GenAI has also offered financial institutions to work on anticipating potential risks and market changes. This has further contributed to organisational preparedness for responding to the financial risks through predicting future risks that are responsible for determining organisational performance. Moreover, the predictive analysis of GenAI in the financial institutions of North America has helped in predicting the needs and preferences of the consumers. Therefore, the integration of GenAI analysing large volumes of customer information has supported the management of customer satisfaction through personalised services.

The use of Generative AI has supported the financial institutions of North America to analyse market data at a higher speed for executing trades depending on predefined criteria. Survey respondents have majorly agreed to the contribution of GenAI the management of the large volume information. Generative AI has the capability of executing trades faster and with more efficiency in comparison to human traders through capitalising on market opportunities (Kuo *et al*. 2021). Accordingly, the algorithms trading of GenAI significantly contribute to the efficiency and productivity of the financial institutions of North America. Furthermore, the use of the GenAI has become beneficial in the reduction of human error within the fincade management. Besides, trading decisions of the financial institutions have been positively influenced by the algorithmic trading of GenAI. In addition, GenAI algorithms have become effective in the prediction of the needs and preferences of the consumers associated with financial institutions. As a result, effective decision making in response to the needs and

demands of the consumers has positively impacted the performance of the financial institutions of North America.

The large volume of financial data analysis with the use of Generative AI has supported the financial institutions in developing personalised customer insights. Generative AI comes with the opportunity of generating comprehensive customer profiles and forecasting future requirements and behaviours of the consumers through analysing client data (Verma and Kumari, 2023). Accordingly, as per the survey responses of the participants the development of customer insights through GenAI has allowed for the creation of customised financial goods and services. This has further contributed to tailoring the services for the improvement in customer services. Besides, it has also become beneficial for the financial institutions to improve customer satisfaction and loyalty along with leading with huge customer retention through effective analysis of information. On the other hand, Al-kfairy *et al*. (2024) have argued that the consequences like lack of data privacy and security have led to creating issues in the adoption of Generative AI. Likewise, it has become important for financial institutions to focus on the maintenance of the confidentiality and security of sensitive financial information at the time of using tools like GenAI. The concern for security and privacy lead to creating barriers to the time of adoption of GenAI on the basis of its importance of analysing huge amounts of information and lowering organisational performance. Thus, the responses of the participants in this survey question directly reflects the repercussions including the optimistic effect of GenAI in the financial institutions of North America as per the requirements of the first research question.

4.4 Research Question Two

“S*urvey Question 5: Do you believe Generative AI is effective in predictive matters like intellectual property pressures, employee abuse and conceivable financial facility mistakes?”*

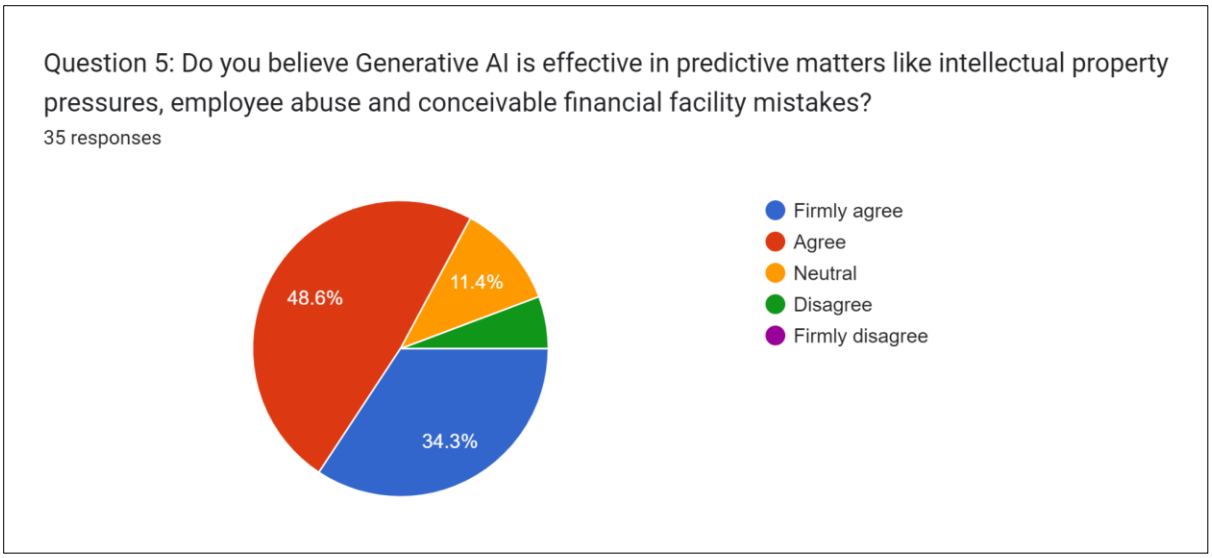


Figure 4.5: Generative AI effectiveness for predictive matter in managing intellectual property pressure and conceivable financial facility

(Source: SurveyMonkey)

From the above integration, information regarding generative artificial intelligence within financial institutions has been noticed that contains opportunities in maintaining their decision making process as well as managing predictive capabilities. This present analysis includes generative artificial intelligence in managing financial institution activity along with opening new avenues in managing decision making, and predictive capability of American Financial Institution. It is seen that 34.3% firmly agreed that generative AI is effective in managing financial facilities in reducing issues regarding intellectual property. Present analysis is also focused on the perception of industry in regarding stakeholder effectiveness in managing generative ai and predictive issues to manage intellectual property issues, potential financial mistakes, and employee abuse. As inspired by Kshetri *et al.* (2023), artificial intelligence significantly impacted societies, and organisations that offer systematic capability in managing input and learning activities to manage expected outcomes. Inclusion of AI managed structured activity in handling networking as well as pretrial machines, which helps to manage overall capabilities of organisational activities and operational process maintenance. Implication of discriminative algorithms along with application of deep learning also managed transformer architecture along with uses of different internet sources. In this context,

generative AI also focuses on financial initiatives maintenance, where major respondents have firmly agreed about this context.

High percentage of affirmative responses mainly suggests the importance of strong optimisation in handling the predictive capability of generative AI. As inspired by Kshetri *et al.* (2023), inclusion of this generative AI regarding financial activity maintenance can increase awareness as well as understanding of AI technology utilisation within the finance sector that demonstrates more accurate predictive application. In this context, it is needed to manage generative AI implementation and managing financial operation that contains positive influence in managing working activity as well as managed predictive matter to handle intellectual property pressure maintenance. From above data analysis, it is seen that 48.6% response has agreed that generating ai has effectiveness to manage intellectual property pressure as well as develop financial stability that contains impact in managing organisational operation. However, inclusion of generative AI required appropriate regulation inclusion in managing organisational practices that help to maintain overall financial initiative handling. As inspired by Avery *et al.* (2022), Along with each iteration of algorithm in using AI, Generative AI has benefits in checking the right path for legal professional increment. This is an effective tool in managing legal collaboration, which is efficient for financial activity maintenance legally. Inclusion of this generative AI also increases utility along with exploding compiling arguments for rethinking technological innovation in managing financial planning and decision-making process maintenance.

Implementation of generative AI has the ability to ensure a vast amount of information that helps to identify potential risks in managing intellectual property as well as recognising patterns related to potential risk within an organisation. As per the views of respondents, It is seen that Major responses are based on generative AI effectiveness to manage pressure related to intellectual property as well as financial facility development. However, 11.4% responded as neutral, that rate is quite higher than expected and contains an understanding of limitations of AI for further risk evaluation in using AI. In terms of intellectual property maintenance, generative AI effectiveness to predict data and information systems has noticed

that contents impact in managing financial activities of Organisation. On the other hand, as per views of Dwivedi *et al.* (2023), AI algorithms have capabilities to measure unstructured information such as raw text as well as images that are possible in handling further decision-making processes. Inclusion of AI algorithms such as reinforcement in working activities also trigger development, and growth of the information system as well as managing employees' working performance while handling their technological knowledge, and expertise. This positive response of generative AI to develop faster working environment maintenance along with maintaining inclusive work activities in preventing any negative behaviour.

The survey results helped to implicate generative AI within financial institutions where a major respondent that is 48.6% of response considering this, implementation of generative AI is effective. Along with this positive sentiment in use AI can develop technological activity to enhance predictive analytics of organisational information. As per opinions of Trim and Lee (2021), inclusion of AI based investment also encompasses training personnel in developing information infrastructure along with ensuring cyber-security measures that are effective in managing potential information sharing process maintenance. This function further focuses on potential bias analysis as well as evolving data integrity issues that contain challenges in managing ethical activity and postdoc transparency. However, implication of AI can develop continuous training for workers in using AI that develop ethical practices along with empowering staff confidence. On the other hand, as inspired by Budhwar *et al.* (2023), generative AI is also efficient in understanding the situation of the workplace environment such as the case of employee abuse. In this regard, appropriate monitoring of work activity and employee activity tracking process can manage a controlled working environment that yields valuable insight in managing practical applications of technologies. In terms of financial organisation, the implication of generative AI can manage employees' working environments that further help to manage more conceivable financial decisions to meet research contained in maintaining firm practices.

Analysis of information based on these present questions provides a positive outlook about the effectiveness of generative AI to handle predictive matters among the American Financial

Institute. Majority of respondents expressed confidence in regarding capabilities of AI in developing firm situations to mitigate predictive matters such as intellectual property pressure or employees have use from institutions. As inspired by Wiredu *et al.* (2024), along with acknowledging concern and fostering a culture of response, financial institutions leverage the benefits of generative ai implementation to ensure ethical practices that manage overall operational integrity. On the other hand, the financial landscape along with integrating ai has also noticed that safe future predictive analysis as well as handling potential risks in profound ways that are needed to maintain. Implementation of AI in sensitive areas such as employee monitoring is also crucial in fostering ethical practices within the workplace in the context of American Financial Institute that provide help to manage overall working practises. Further, ethical collaboration development with AI developers and regulatory bodies emphasise innovative solutions in maximising AI potential in respecting ethical consideration within an organisation.

"Survey Question 6: Do you believe leveraging key insight generated from Generative AI systems would assist the American Financial system to overcome challenges in operations?"

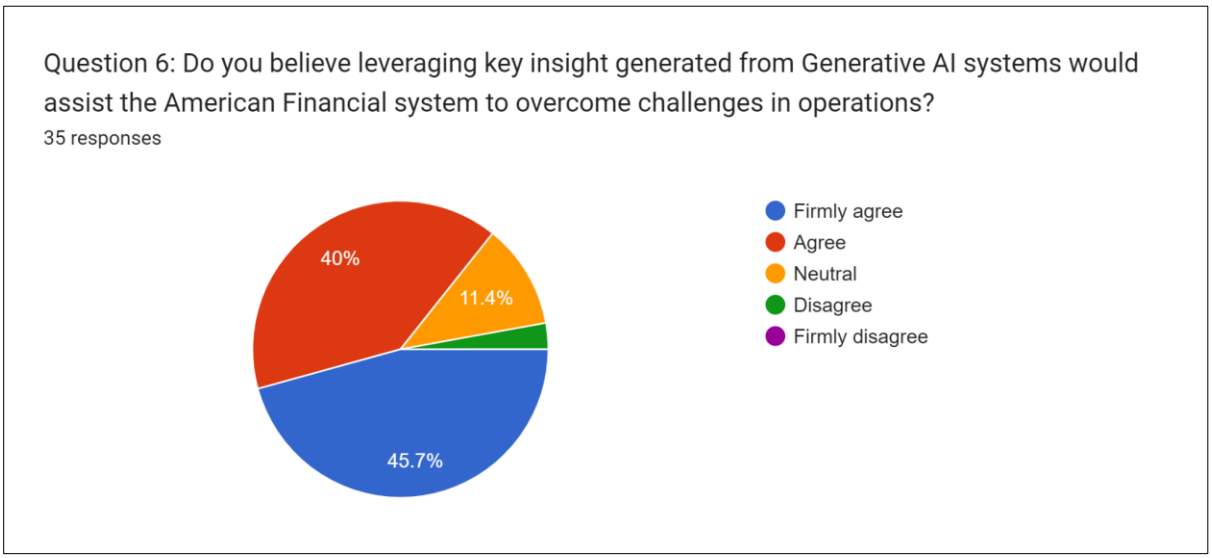


Figure 4.6: Leveraging insight that generated from Generative AI and assist American Financial system for overcoming challenges in operations

(Source: SurveyMonkey)

The Figure 4.6 has focused on analysis about key insight generated for using generative ai that helps to assist the American financial system in reducing issues to manage operational initiatives. It is seen that of the participants that 45.7% responded as firmly about generative ai system insight benefits in managing overall operational activity and access to the American financial system in managing their operational activities. Perception of industry stakeholder regarding potential of Managing business operations are possible to manage in using generative AI. On the other hand, another 40% responded, agreeing about the benefits of generative AI in managing the American financial system and overcoming issues in maintaining their operational practices. This result impressed major respondents, who are expressing confidence in regard to generative AI in managing further business operational activity and overall decision making process maintenance. High level of agreement within response suggests that financial professionals need to develop their awareness regarding generative ai that facilitate overall operational process and enhance decision making process to maintain business practices. Respondents likely answered in regarding generative AI include contribution towards American Financial Institute in using generative AI to develop their business potential in enhancing operational features.

Core strengths of generative AI include the ability to analyse vast information sets as well as generate actionable insight to maintain overall business practices. This capability allows to manage more appropriate informed decision-making processes and develop business strategic planning to maintain operational performance in using ai models in business. As inspired by Linkon et al. (2024), Generative AI includes the ability to produce original content along with different forms of content generation that leaves extensive database training in managing workers activity maintenance. Inclusion of AI based models also manage extensive data training for developing working activity that enable employees to generate images, audio,

and text in managing overall operational activity and financial planning maintenance in taking appropriate decisions. This data analysis further contains understanding of generative AI system implementation to overcome business issues that help to meet research questions. Further, implementation of multimodal models handles organisational milestones along with integration of accurate algorithms that are empowered to promote operational process maintenance. However, as inspired by Al Naqbi *et al.* (2023), generative AI streamline automates routine tasks in managing another compiling factor that influences a positive working environment. Along with leveraging AI, it can manage valuable human resources for maintaining strategic initiative that improve business efficiency as well as enable business to respond agilely that help to manage market changes.

Application of generative ai based on predictive analytics are crucial in navigating financial institutional landscape as well as maintaining regulatory changes to table of operational features. As influenced by Linkon *et al.* (2024), integration of generative AI helps to foster potential issues with identifying business opportunities that manage overall financial stability and operational activity maintenance. In this context, the financial institution has possibility in managing resources initiatives maintenance regarding operation in using data entry that is possible in use in ai technology. The American Financial Institute can use generative ai in developing their business operations that manage valuable insight to maintain operational features and business activity maintenance in the market. On the other hand, as per views of Kalia (2023), recent advancement regarding deep learning as well as availability of market information added development of AI files that expanded capabilities of the financial industry in putting additional and innovative products towards consumers. This activity helped to enhance overall business mechanism and protect their investment in reducing potential risk to manage overall financial stability of the organisation. In terms of the American Institute, advancement of generative AI continues to introduce algorithms, and techniques that expand the possibilities to generate realistic as well as divorce output with managing organisational operations.

The research survey findings highlight respondent mind set in regarding AI technology role in handling financial sectors operational activity. In this context, major financial institutes such as American Financial Institute need to prioritise generic AI in developing operational practice, and human expertise to manage overall financial stability of institutions. However, as inspired by Rana *et al.* (2022), issues in regarding information biases have been noticed in using AI predictive models that further needed to evaluate that contains impact in managing overall operational process updating. Inclusion of AI to enhance human decision making process rather than replacing it is efficient in growing acceptance of technology along with developing more efficient operational framework implementation. From the response, it is also seen that 3 responses, 14.3% of total response, recognize neutral and contains no impact in this aspect. However, major responses recognise potential benefits in using generative AI that contains impact in managing business operations of American Finance Institution. Addressing this concern is also crucial in managing financial institutions that emerge from operations and ensure high quality information that is essential in building trust within stakeholders. Therefore, it can be said that inclusion of generative AI contains a positive impact in managing finance organisation stability as well as managing operational practices efficiently.

Collaboration with AI technology is critical to maximise customised solution activity and features that address specific operational hurdles during business operation and enhance overall adaptability of AI. In this context, development of collaboration also leads cross-functional team activity, and combines expertise work to foster a more accurate working environment under consideration (Budhwar *et al.* 2023). Inclusion of generative AI within financial institutions drives significant activity in managing operational performance. On the other hand, fraud detection regarding financial activity maintenance has also been noticed that include Seamless operational performance maintenance in using predictive AI. In this context, organisations have the ability to respond as per market dynamics in using generative AI that enhance positive sentiment of users and handle ongoing exploration of operational features within the financial sector. The present survey result reflects strong belief regarding financial professional activity in use in generative ai within the American financial system that help to

overcome operational issues. However, in managing generative AI, it is needed to analyse complex data sets that record expertise, knowledge and activity in developing significant opportunities within financial institutions (Benbya *et al.* 2020). Along with addressing this concern, it is possible to foster collaboration along with managing financial institution's-based activity to increase overall operational activity along with mitigating ongoing challenges from the financial sector with Generative AI.

4.5 Research Question Three

"Survey Question 7: Do you think GenAI's system has provided an opportunity for American financial institutes to improve operational accuracy and effective economic risk analysis?"

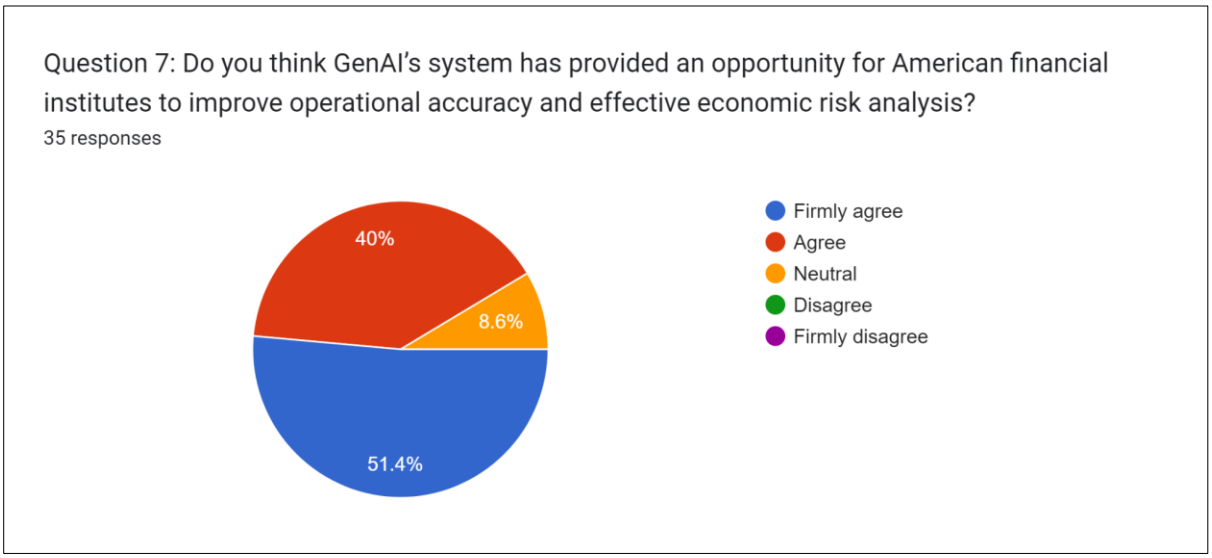


Figure 4.7: GenAI's system for American financial institutes to improve operational accuracy and risk analysis related to economy

(Source: SurveyMonkey)

The above survey analysis regarding generative AI related working accuracy and effective financial system management in reducing risk has been noticed in the context of the American financial system. In this aspect, 51.4% of respondents firmly agreed that the GenAI system is effective in managing significant opportunities regarding operational precision that contains impact in managing operational activity and overcoming challenges of organisation. In this

context, As inspired by Dhake *et al.* (2024), primary advantages of GenAI include the ability to analyse vast information with accuracy where financial institutions can operate complex information easily. However, issues regarding improper data set maintenance have been noticed that are needed to mitigate from financial institutes in monitoring data and information system management. Capacity in generating real time insight also includes informed decision-making processes to enhance operational efficiency as well as responsiveness of business in mitigating issues of operations. Economic risks analysis is also possible to develop along with using GenAI that assess overall business situation and manage further decision-making processes regarding finance.

GenAI has the ability to evaluate historical information along with comparison of that information with real time market conditions that allow more appropriate risk assessment. This activity further developed an advanced algorithm in generating economic scenarios that contains potential outcome generations for financial institutions in mitigating any uncertain issues that helps to meet research context. As per views of Benbya *et al.* (2020), development of financial situation recognition contains benefits in managing operational activity and analytical capabilities that are possible to manage in using GenAI within the financial sector. Inclusion of high-quality data management in using AI systems that develop transparency to build trust within stakeholders. It facilitates smoother integration of working activities and managing overall financial landscape of financial institutes such as the case of American financial institute.

In the survey response, about 40% participants have agreed to the contribution of GenAI in improving operational accuracy and effective economic risks analysis. The automation of the routine tasks by Generative AI has played a key role in leading toward operational accuracy (Al Naqbi *et al*. 2024). Accordingly, it has become possible for financial institutions to easily complete repetitive tasks like data entry and others with the use of GenAI within a limited amount of time. Besides, the likelihood of human errors has also been reduced due to the use of GenAi within the financial institutions which has further contributed to the operational accuracy. In addition, it has become possible for the financial institutions to focus on cutting

operational costs by reducing the number of human resources engaged with the manual operations. On the contrary, Keleko *et al*. (2022) have argued that Generative AI has helped in leading to predictive maintenance of the financial institutions through analysing data from various operational systems. Likewise, GenAI has come with the opportunity of predicting potential failures or the maintenance activities that are needed before any risk occurs. In addition, it has helped in minimising unexpected downtimes as well as operational disruptions. Thus, the predictive maintenance of the financial institutions of North America has contributed to the operational efficiency.

Generative AI has played a key role in managing economic risks within the financial institutions of North America, however, 8.6% of the participants in the survey have remained neutral regarding the contribution of GenAI toward the management of economic risks. Generative AI works on analysing vast amounts of economic and financial data for identifying potential risks including market volatility, macroeconomic changes as well as credit risks (Cheng *et al*. 2021). Accordingly, the quick identification of the risks allows the financial institutions to focus on the development of the strategies that help in assessing the risks and its impact. This further works as a preparedness factor for the financial institutions of North America to deal with future economic risks through real-time risk analysis. However, credit risk modelling is one of the crucial contributions of Generative AI which helps in the analysis of the behaviour of borrowers along with their financial health (Edunjobi and Odejide, 2024). Likewise, the reliability of the financial transactions in the financial institutions of North America is increased due to the application of GenAI in risk modelling. In addition, the likelihood of loan defaults through better credit risk prediction is also increased due to the selection of Generative AI. Besides, it has become possible for the financial institutions to make informed lending decisions along with balancing between risks and rewards. Thus, the economic risks analysis has become one of the major parts of Generative AI which has improved based on the analysis of huge amounts of financial data.

"Survey Question 8: Do you think enhanced procedures of financial transactions can be applied through utilisation of the GenAI system in American Financial Institutes?"

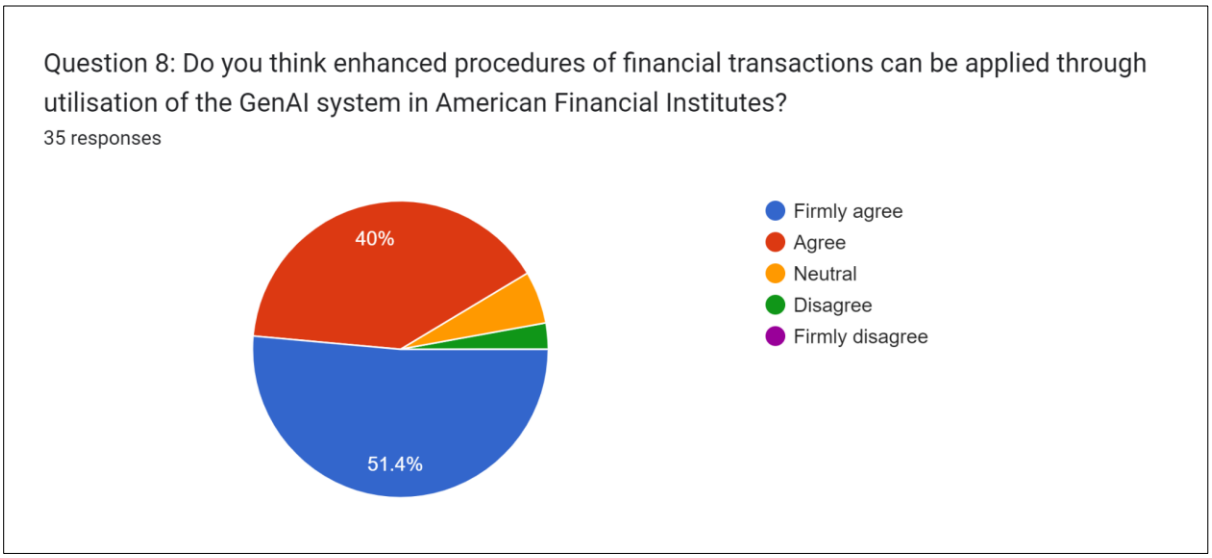


Figure 4.8: Opinion about the efficacy of GenAI system in enhancing financial transaction procedures in American Financial Institutes

(Source: SurveyMonkey)

The above-mentioned figure depicts that majority (51.4%) of the survey participants strongly agreed that GenAI system can play an effective role in improving financial transaction procedures in American Financial Institutes. In addition to that, the same opinion about effectiveness of GenAI system is also followed by 40% of the participants, while only few stayed neutral during providing the same answer and least number of participants disagreed about the efficacy of the GenAI system. Therefore, on the basis of survey results it can be inferred that most of the employees prefer integration of GenAI system at the workplace in American Financial Institutions. The technological advancements related to generative AI assists the professionals in financial fields in analysing huge amounts of regulatory data and market insights to obtain necessary details about market characteristics. The financial professionals can get significant help about complex regulations in the aspect of financial

transactions, and they also can stay aware about recent challenges in the same field. The automated compliance reporting and filing of necessary client data using GenAI system application can help in maintaining the advanced rules in this context. The survey result portrays a positive overview about integration of innovative technology such as generative AI systems in the financial institutions. As per the study of Anica-Popa *et al.* (2024), the rapid growth along with disruptive progress in AI is responsible for dramatically transforming several aspects related to professional and personal lives of employees in financial sector. The GenAI system is quite helpful in leveraging critical competitive advantages for the auditing as well as accounting professionals (Agrawal, 2023). Integration of AI in day-to-day work has helped the financial professionals in obtaining suitable solutions in their job role. The regulations related to financial transactions are observed with significant changes in recent era and financial professionals need to stay aware about new regulations to avoid mistakes during financial transactions. The GenAI system is helpful enough to assist the professionals in performing correctly through reducing the risk of mistakes in the context of financial transactions. Therefore, it can be stated that a comprehensive framework of GenAI system application can help the financial sector by guiding them in providing best quality organisational presentation.

The GenAI system offers personalised business evaluations along with customised advice for the individuals on the basis of existing data along with user behaviour and financial professionals can provide personalised recommendations to the consumers in this aspect. It basically enables the financial professionals in enabling standard optimisation of the portfolios as well as analysis of obtained data, latest trends, risk factors and market updates (Demmou and Sagot, 2021). The utilisation of the GenAI system in the American financial institutes can assist in improving accuracy and reducing errors by extracting relevant data from invoices, bank statements and receipts irrespective of source format. The positive survey responses support the efficacy of generative AI systems in smooth and easy fusion of financial documents for making accurate decisions. The automation in accounting also helps in reconciliation of client amounts and proper classification of several financial transactions and

it results in reduced pressure of the financial professionals and error free outcomes of the financial transactions also.

Some of the survey participants were observed in staying neutral and minimal of them disagreed about the efficacy of the GenAI system in financial transactions. According to Reece *et al.,* (2024), GenAI system in financial transactions has some negative aspects also such as security breaches that lead to unauthorised access towards sensitive information of consumers, financial fraud and disruptions in data privacy also. Apart from that, algorithmic bias and vulnerable data can create significant issues in outcomes of GenAI system and it can affect the AI predictions in several ways. Here the viewpoints of survey participants who disagreed with the efficacy of GenAI system can be justified. Generative AI decisions on the basis of low quality and unchecked data can generate negative results such as economic losses as well as messy market moves. Irrespective of such negative outcomes of generative AI application in the aspect of financial transactions, it can provide a lot of help to the financial professionals in the American financial institutions. The benefits of technological innovations can be occupied by the professionals to offer best quality financial insights to the consumers by staying alert about the authenticity of data sources. Hence, it can be stated that high quality and complete authentic data can help professionals in the financial sector in obtaining advantage of GenAI system. The employees in American financial institutions would be able to enhance the efficacy of financial performance in terms of transactions with best level accuracy and proper utilisation of regulatory compliances.

"Survey Question 9: Do you agree that the application of a comprehensive framework over the tactical application of Generative AI would guide towards better quality?"

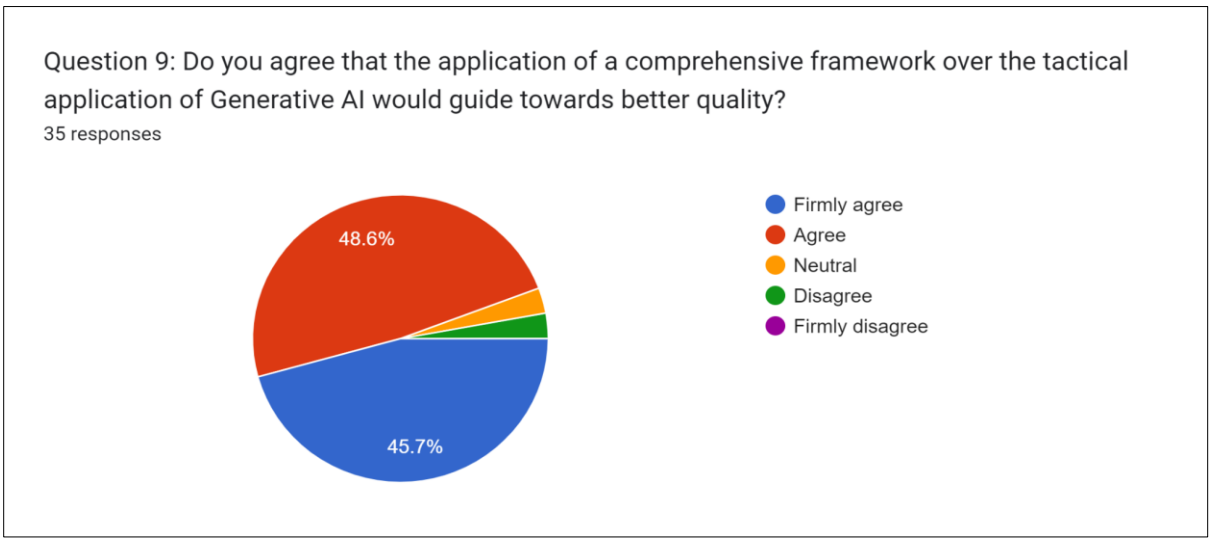


Figure 4.9: Opinions about effectiveness of comprehensive framework over GenAI tactical application in obtaining better quality outcomes

(Source: SurveyMonkey)

The above-mentioned figure depicts that most of the survey participants (45.7%) strongly agreed that a comprehensive framework would be more beneficial than tactical application of GenAI system for obtaining better quality insights. Apart from that, the next highest population (48.6%) of the survey participants also agreed respectively. Least number of participants stayed neutral and also disagreed with this specific statement. The comprehensive framework of generative AI applications can be helpful in empowering the professionals in terms of financial reporting and accounting also. As per the study of Anica-Popa *et al.* (2024), the specific GenAI comprehensive framework is able to perform tasks like planning, research activities and development of products and services for the consumers. It has been observed that GenAI based frameworks are not responsible for replacing human experiences and judgements, rather it helps the professionals in improving quality of financial insights provided by them to consumers. The tactical application of GenAI system can help in improving selected parameters of the workflow of financial institutions in America, while a comprehensive

framework can help in guiding the overall outcomes of the financial institutions in this scenario.

The technology related to the large language model (LLM) has helped in obtaining rapid advances in terms of GenAI applications (Li *et al.,* 2024). The specific framework can help in accelerating the speed of financial reporting and accounting through processing relevant documents and it can help the professionals in getting proper insights analysed from huge amounts of information. The comprehensive framework in the aspect of generative AI system refers to the set of ideas, rules and beliefs and it can be used to make suitable decisions to address the problems related to financial transactions. This particular framework is supportive in combining the relationship between the concepts of financial professionals and it can help in performing the tasks together for the financial firms in America. It can help in proper synchronisation of the workflow among different financial firms and the employees can accomplish their tasks in the right direction. Changes in the regulatory compliances having relevance with financial transactions can be established properly with the help of a comprehensive framework in this aspect and the financial institution irrespective of different locations can follow the updated rules in this aspect. Hence, it can be stated that a comprehensive framework for financial institutions can perform better than individual use of tactics of GenAI system in the financial sector in America.

On the other hand, a comprehensive framework related to the GenAI system is equipped with outcomes of different research works and ongoing research processes. The constant changes towards improvements of framework capabilities is helpful for financial professionals in obtaining better quality outcomes (Mandigo, 2024). Robust analysis of market insights, error free financial transactions and significant market forecasts with the help of this framework enables financial professionals in providing best quality productivity for the consumers in this particular sector. The employees in the financial institutions need to input proper data sources related to financial transactions for better outcomes through this comprehensive framework. It is quite helpful in storing huge amounts of data using cloud memory and professionals can

access necessary data about user transactions irrespective of place and time in this scenario. It can aid the financial professionals in making data-driven decisions.

Moreover, it allows the professionals to reduce mistakes in the aspect of financial transactions due to implementation of advanced rules and regulations with the help of this comprehensive framework. The issue related to this comprehensive framework is that every financial institution needs to be a part of this comprehensive framework, otherwise the actual efficacy of this framework cannot be obtained by the professionals in the financial sector. Apart from that, it needs continuous development such as updates in rules and regulations and enhancement of cyber security features. The advanced security features are helpful in enabling this framework in preventing phishing activities and eradicating other data privacy concerns also. Therefore, it can be stated that the comprehensive framework would be highly effective rather than GenAI system tactical applications in guiding the financial professionals for better productivity. The comprehensive framework is also crucial for utilising financial facilities and for maintaining better quality organisational presentation for the financial sector in America.

"Survey Question 10: Do you believe GenAI can guide American Financial Institutions to achieve a lower operating cost in business operations?"

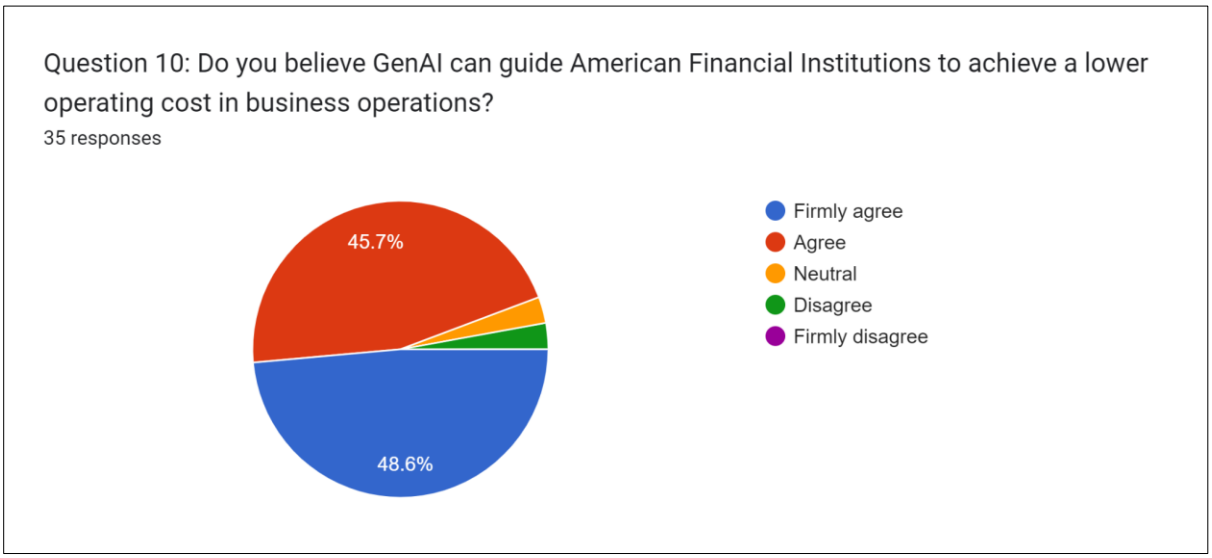


Figure 4.10: Opinions about GenAI system guidance for American Financial Institutions in achieving a lower operating cost in business operations

(Source: SurveyMonkey)

It has been observed from the above-mentioned figure that majority (48.6%) of the survey participants strongly agreed with the statement that GenAI system application is helpful in achieving lower cost business operations for the American Financial Institutions. Following that, 45.7% of the survey participants also agreed on the same point. The minimal number of survey participants stayed neutral in this aspect and no disagreement from survey participants has been observed in this aspect. As per the study of Anica-Popa *et al.* (2024), GenAI system helps the financial institutions in integrating automation and efficiency in their business operations. The automation in data processing has helped the professionals in analysing huge amounts of client data within a short time period. In addition to that, GenAI system also helps in rectification of client data for further reference in the financial works. The processing of the documents in an intelligent way and use of OCR through GenAI application helps in reducing the errors in financial documentation and it leads towards lower operating cost in the aspect of business operations. The automated accounting and bookkeeping procedure help in reducing the workload of professionals and in making analysis in less time (Anica-Popa et al., 2024). Completing work in less time and completing analysis of huge amounts of data in reduced time helps in lowering the overall operational cost for the financial institutions. The streamlined reporting of financial documents and implementation of regulatory compliances is most helpful in reducing manual errors and exceptions in this regard.

The simulation of financial scenarios by the GenAI system application is quite helpful for strategic planning and it helps in recognising optimal strategies of investment for the clients. Apart from that, the streamlining operations related to treasury management operations is quite helpful in reducing the expenses of the financial professionals as well as of their clients also. Hence, it can be stated that GenAI system application plays a crucial role in lowering the cost of business operations for the financial institutions (Reece et al., 2024). The proper

budgeting approach and improved financial planning with the help of business analytics has helped the financial institutions in executing their tasks without any error.

It has been observed that the integration of virtual assistants through GenAI system application has helped in reducing the load of manual pressure. The chatbots are arranged for customer support and query resolution in this aspect. The virtual financial advisors can help the clients in providing personalised guidance (Reece et al., 2024). As the services are provided through GenAI system application, it helps in reducing the workload as well as cost of workforce for the financial institutions in America. Apart from that, the management of documents and retrieval of documents with the help of GenAI system application helps the financial professionals in performing their tasks without any error. They are enabled to make data-driven decisions with the help of this GenAI system application in this scenario. On the other hand, improved customer experience can be obtained by the financial professionals in this aspect by using the GenAI system application.

The efficacy of GenAI system application lies also in real-time monitoring of risks along with alert systems. The regulatory compliances are integrated successfully while executing the tasks by the financial professionals and GenAI system offers significant alerts if there is any violation of the rules and missing of the documentation that is necessary for accomplishment of the relevant tasks (Li et al., 2024). The automated compliance reporting facility and proper filing of the documents with the help of GenAI system application can help the financial institutions in America in staying alert about identifying and reducing mistakes. The improved diligence along with Know Your Customer processes are quite helpful in this scenario for the financial professionals. It helps out the employees in financial institutions in lowering the occurrence of mistakes and also helps in reducing the work expenses by providing smart presentation of their tasks (Reece et al., 2024). The automation in the aspect of processing of accounts payable and receivables also helps in hassle free financial transactions. The predictive financial forecasting along with budgeting recommendation with the help of GenAI system application is helpful for the financial institutions in lowering the cost of their business operations and proper presentation of the outcomes. The improved efficiency and productivity

can help in obtaining more profit from the business operations and the financial professionals would be encouraged in making proper decisions with the help of GenAI system application. The improved decision making, and strategic planning would be highly helpful for the financial professionals in obtaining best quality productivity. Use of advanced technology such as machine learning, natural language processing, and deep learning is quite useful for financial professionals while using GenAI system applications during executing their tasks. Use of cloud computing along with APIs is also helpful in maintaining secured storage of client sensitive data. The financial institutions basically reduce their operation cost through implementing automated service for their clients such as implementation of chatbots for customer care and resolving queries, analysis of huge amounts of client data within very short time and data-driven decision making procedure has enabled the financial institutions in America in offering better quality organisational performances and lower functioning costs also. Therefore, it can be stated that tactical application of GenAI system is highly important for American financial institutes to increase their operational efficiency.

4.6 Regression analysis

Regression Statistics	
Multiple R	0.910774488
R Square	0.829510167
Adjusted R Square	0.82449576
Standard Error	0.288125478
Observations	36

Figure 4.11: Regression statistics

Above table on primary data analysis of this research is elaborate regression analysis testing interrelationship among different variables of this study. This research was mainly based on evaluating financial decision-making and modernised changes after the advent of technical inclusions such as GenAI in contemporary scenarios. Estimation of relationship between one dependent and other independent variables is important while considering an overview as a part for associating linear relationship. Comprehension of interrelationship among variables

such as “customer security, financial decision-making, GenAI, challenges of GenAI and security strategies” can be crucial for addressing interrelationship within descriptive aspects. Prediction associated with different factors of variables is beneficial to incorporate an insight into influence of GenAI on financial decision-making in terms of evaluating changes in planning. The R square value of “0.8295” represents the proportion of variance in terms of the dependent variable of “use of GenAI” with other variables of “privacy concerns, financial decision-making and consumer security”. This value of R square between -1 and +1 is beneficial for perfect fit within data for assessing an overview associated with variables analysis. Correlation among coefficients in this study is evaluated in the value of “0.8295” while focusing on a changing paradigm to consider an interrelated approach within predicting coefficient-based interrelationship. Hence, it can be evaluated that regression analysis on coefficient analysis in contemporary settings can be effective in terms of enhancing proper expression in research.

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	13.733	13.733	165.4254	1.28832E-14
Residual	34	2.822554	0.083016		
Total	35	16.55556			

Figure 4.12: ANOVA table

Above table on ANOVA analysis is beneficial to assess an overview associated with indication associated with statistical approach while focusing on decision-making. Anova function is beneficial for comparing regression models as well as reports while considering a differentiated measure in terms of assessing interrelationship among different variables. Generating an insight into statistical modelling can be crucial in order to assess two-way factorial analysis to associate an overview on decision-making. Components associated with dependent and independent variables within this research on GenAI and financial decision-making is crucial for addressing an overview based on statistical decision-making in contemporary American firms. Hence, it can be evaluated that assessment of planning in

components can be crucial for assessing ethical aspects in testing variables for achieving aim.

F value “165.4254” is elaborative of the large value of regression model as compared to prediction of mean while focusing on dependent variable’s inclusion into calculating theoretical distribution. “Between-group variability as well as within-group variability” can be crucial in terms of explaining variance to generate a strategic aspect to address theoretical distribution of planning. Obtained statistical value of different variables can generate an insight regarding strategic approach for considering an insight into enhancing data visualisation. Various populations within p value remained an important aspect for considering differences within critical value as well as critical analysis. This positive coefficient is an indicator of the factor that the value of the independent variable increases when the dependent variable increases. Test of hypothesis as well as calculation of variables proved that the dependent variable of GenAI is positively linked with other independent variables within this study.

4.7 Summary of Findings

Most of the participants of this survey belonged to 21 to 31 years old, indicating that most of the candidates are young adults. Age of participants indicates the increase of chances for accumulating correct responses about the given context of positive impact of generative AI on American Financial Institutions. The outcome of the first survey question indicates that young adults are most aware about the application of modern technologies along with its impacts due to the exposures of technology in American Financial Institutions. Age of participants enhances the outcomes of generative AI in the growth of American Financial Institutions. Most participants are young adults that increase opportunities for gaining adequate answers about the positive impact of Gen AI on American Financial Institutions. Thus, Generative AI is helpful for maintaining financial information in institutions and organisations for developing customer satisfaction.

Most survey participants are female who are involved in Generative AI on the American Financial Institutions. Female, male and other gender groups that had participated in surveys

for providing information associated with Generative AI over American Financial Institutions. Collected information from diverse genders related with the data analyse associated with the positive impact of Generative AI use in different aspects that indicates validity of information. Percentage of male participants is very low for this survey response that leads to a positive impact on American Financial Institutions. Participants of this survey indicate the awareness of female individuals about the positive impact on American Financial Institutions.

Generative AI assists higher operations accuracy, greater sanctuary for information and confidentiality safeguards. There is an important gap in the resolutions of GenAI associated with the concerns such as intelligence property employee's manipulation and intimidations. According to Ooi *et al*. (2023), the application of Generative AI has transformed the landscape of financial institutions through developing its performance across various dimensions involved in trade prevention and detection. Generative AI has taken part in the detention of fraud through analysis of vast amounts of transactional information of financial institutions that has enabled addresses of unusual patterns. On the other hand, it has become possible to maintain real-time information tracking for financial institutions in North America to detect fraudulent activities. Generative AI has played a crucial role for developing customer services for financial institutions along with offering customisation. Thus, capability of advanced technologies such as Generative AI positively impacts on the growth of American Financial Institutions.

Most survey participants have agreed that Generative AI contributes to the leading improvement of performance of financial institutions in North America. Use of Generative AI has played a major role for developing customer services of financial institutions for offering virtual assistants to customers with the use of AI chatbots. As per the view of Abrokwah-Larbi (2023), GenAI plays a crucial role for developing customer services for financial institutions for managing virtual assistants for customers. Increasing quality of services through 24/7 availability and delivery of personalised recommendations for customers as per their demands. It is possible for AI tools to work on handling a wide range of customer inquiries with better proficiency than human resources. It has been found from a third survey question that

Generative AI allows to develop performance of American Financial Institutions. Activities of effective management of complex financial advice and basic account information of customers can be maintained through use of Generative AI. Effective management of customer services leads to development of customer experiences and satisfaction in the American Financial Institutions that further benefit for managing positive performance in the marketplace. Thus, Generative AI holds a positive impact on American Financial Institutions for developing customer satisfaction.

Generative AI in the banking sector enables for offering product personalised and recommendation services to achieve the future goals. GenAI with Chatbots have improved customer interactions through providing real-time assistance, customer interactions and facilitating transactions. It has enabled financial institutions for improving overall services operations for developing overall customer experiences. Generative AI impacts on the financial services from automatic tasks for developing customer experiences in the growth of business performance. As per view of Mariani and Dwivedi (2024), GenAI has come with the opportunity for maintaining risks in simulating various economic scenarios. It has been found that financial institutions of North America focus on the growth of risk management with integration of Generative AI due to the ability for improving risk management strategy spending on available information. This can further lead to the development of decision-making related with the management of risks such as financial frauds in financial institutions. Financial institutions of North America can focus on proactive risk management with the integration of Generative AI due to the ability for improving risk management strategy in customer satisfaction. Thus, Generative AI holds a positive impact on the growth of American Financial Institutions to achieve the future goals along with the customer satisfaction.

Generative AI projected optimised impacts on American Financial Institutions that measure both limitations and strengths that support the needs of existing study. Growth of global trend in Generative AI in banking sector that is important for good taking in the American Financial Institutions. It has been found that GenAI as a useful tool to refine transactional correctness for financial risk valuable and maintain the marketing accounts process. Generative AI is

helpful for finance related investigations, report groups and business partnerships. Based on the observation of Mokhtari *et al*. (2021) AI algorithms are helpful for financial institutions for predicting recent risks in the stock marketplace. GenAI help in improvement in performance for financial institutions of North America in financial related investigations in the growth of customer satisfaction. It has been found that Generative AI is associated with the concern of intelligence property intimidations that helps in developing American Financial Institutions. Generative AI is helpful for developing financial management in the American Financial Institutions in the growth of customer satisfaction. Thus, survey responses indicate the growth of the positive impact of Generative AI on the American Financial Institutions that develop customer experiences and satisfaction in the banking sector.

GenAI has financial institutions that influence its economic stability management in the American Financial Institutions. Survey participants believe the financial institutes are unable to utilise Generative AI capabilities to analyse financial information. Through survey responses, it has been found that Generative AI holds a positive impact on financial management in the banking sector. Participants have less knowledge that impacts on providing survey responses that indicates positive and negative stances in survey questions. Generative AI has ensured the machine learning algorithms that are valuable insights and new data for assisting making most informed financial decisions. As opined by Kurshan *et al*. (2020), Generative AI in finance has developed volume of data management and reduced cost in the financial sector with the ability of synthetic data mitigating risk with developed financial decision-making process. It has been found that GenAI is a strategy for evaluating financial decisions making and performance management strengths development in business organisations. Assistance of Generative AI has benefited economic stability and effective integration of risk management to financial institutions effectiveness. Thus, GenAI is capable of storing large amounts of financial information in American Financial Institutions.

Generative AI in the banking sector enables for offering product personalised services to develop the financial performance of business. GenAI with Chatbots focuses on developing customer interactions through providing real-time assistance and facilitating transactions.

Generative AI has a positive impact on the growth of financial institutions in North America that maintain financial information. Moukadam and Sobrinho (2024) have stated that GenAI impacts on the growth of financial services of business along with the operational costs. It can be summarised from key findings that generative AI to banks and financial institutions is more attractive to build cyber hacking tools. Generative AI uses a wide range of information that is susceptible to bias, potential loss, unauthorised access and low quality. Loss of intellectual property of financial sectors that is associated with the confidential information of customers that would be breached. Thus, GenAI would be capable of a wide range of financial information in American Financial Institutions.

GenAI created novel content with analysis of existing information in the financial sector in North America. GenAI is an important technology that has a wide range of modalities that has potential for developing accuracy and efficiency for developing the population of bang and financial sector. According to Kurshan *et al*. (2020), Generative AI in finance is helpful to provide adequate services and satisfaction to customers. The Potential of GenAI for the integration of innovation can gain a competitive edge for the financial sector to maintain the economic system. It can be summarised from key findings that application of GenAI in financial institutions can lead to the growth of the overall market of business effectively to deliver adequate services to customers. GenAI in the organisation helps to manage financial information of customers that is beneficial for the banking sector to develop organisational outcomes. Generative AI solutions enable financial institutions for improving democrats of information access and understand the full value of unstructured information in organisations. Therefore, survey respondents believe that Generative AI is capable of a wide range of financial information in American Financial Institutions.

GenAI has facilitated the risk factors of financial management along with the proactive risk management for developing overall risk management effectiveness for American Financial Institutions. Adoption of GenAI in monetary services has been of major importance for adding value in the variety of economic management and business operations. As per view of Mariani and Dwivedi (2024), the role of Generative AI in leading to automation of the process of data

collection, cleaning and integration impacts on the growth of business. Structured and unstructured information gathered from various sources that maintain financial conditions of organisations. It can be summarised from key findings that Generative AI is capable for maintaining a large amount of financial information in American Financial Institutions. Integration of GenAI in a large volume of financial data management helps for developing efficient and accurate data interpretation. Activities and features related to GenAI contribute to the development of performance in the financial institutions of North America. Most survey participants believe that Generative AI has a positive impact on managing large amounts of financial information for developing activities of financial institutions. Therefore, Generative AI holds the ability to maintain a wide range of financial information for financial institutions in North America.

Generative AI financial institutions have the opportunity for managing their decision making tier decision making process and maintain predictive capabilities. GenAI in maintaining financial institutions activities and operating new avenues helps for decision making and predictive capabilities of business. Generative AI is effective for maintaining financial facilities for reducing issues regarding intellectual property. This is focused on perception of industry about the stakeholder's effectiveness for maintaining generative AI and predictive issues for managing intellectual property. As per view of Kshetri *et al*. (2023), AI impacted on the organisations and societies that offer systematic capabilities for maintaining input and learning activities for managing expected outcomes. Inclusion of Generative AI maintains structured activities for handling networking and machines that helps for maintaining overall capabilities of business activities along with the operational process maintenance. Thus, Generative AI is effective in predictive matters such as intellectual property pressures, conceivable financial facility mistakes and employee abuse.

Inclusion of discrimination in the workplace along with application of deep learning maintained transformer architecture and use of various internet sources. GenAI focuses on the financial initiatives maintenance that led to the future goals of business with effective management of financial situations. Based on observation of Avery *et al*. (2022), each iteration of potential

generative AI has benefits for managing legal professionals that are an effective tool for maintaining legal collaboration. It is efficient for financial activity maintenance along with the legal factors of business. Inclusion of Generative AI increases utility and exploding compiling arguments to rethinking technological innovation for managing financial planning and decision making processes in American Financial Institutions. Most survey respondents agreed with the context that Generative AI is effective for predictive matters for managing intellectual property pressures and conceivable financial facilities. It has been found that GenAI contains impacts on the evolution of further risk evaluation for using AI in financial institutions. Use of GenAI can benefit to develop organisational financial conditions and achieve the future goals of business through customer satisfaction. Thus, participants believe that financial organisations are still unable in maintaining prediction for mitigating problems associated with the financial calculations.

Implementation of Generative AI is effective for developing outcomes of organisations along with the management of business operations. Positive sentiment in use of AI can improve technological activities for developing predictive analytics for business information. This function further focuses on the potential bias analysis and evolving data integrity issues that contain challenges for managing ethical activities and transparency. According to Trim and Lee (2021), inclusion of AI based investment encompasses training personnel for developing information infrastructure and ensures cyber-security measures that are effective to maintain potential information sharing process management. Implication of Generative AI can improve continuous training for workers for using Generative AI that develop ethical practices and empower staff confidences. Besides this, Budhwar *et al*. (2023) have stated that Generative AI is efficient for understanding workplace environment situations such as cases of employee abuse. It has been found that the implications of Generative AI can maintain working environments for employees in the workplace that help for maintaining conceivable financial decisions for firm practices. Appropriate monitoring of working activities in financial institutions tracks processes that can maintain a controlled working environment that is valuable for

maintaining practical application of technologies. Therefore, Generative AI is appropriate for predictive matters to maintain intellectual property pressures and conceivable financial facility. Analysis of information based on the impact of Generative AI provides a positive outlook in the American Financial Institutions. Major respondents of the survey expressed confidence about capabilities of Generative AI for developing firm situations for overcoming predictive matters such as intellectual property pressures in the growth of financial institutions. As per view of Wiredu *et al*. (2024), fostering a culture of response, financial institutions leverage generative AI for ensuring practices in the financial sector. Financial landscape and integrating AI has noticed the safety of future predictive analysis and handling potential rigs in profound ways that are effective for growth of financial performance of American Financial Institutions. Budhwar *et al*. (2023) claimed that GenAI is effective for understanding the financial situations of workplace environments such as employee abuse. Financial landscape and integration of AI focuses on the safe future predictive analysis and control of potential rigs in profound ways in the management of business. It has been found that development of Generative AI insensitive areas such as employee monitoring is major for fostering ethical practices in the workplace of American Financial Institutions. Growth of ethical collaboration with Generative AI developers and regulatory bodies empathise innovative solutions for developing AI potential for respecting ethical considerations in the financial institutions. Thus, individuals believe that Generative AI is effective for predictive matters such as employee abuse, intellectual property and conceivable financial facility mistakes.

“Generative Artificial Intelligence (GenAI)” is widely used in American financial institutions for various reasons such as fraud detection, risk analysis, and accurate results. GenAI uses machine learning technology to create something new or innovative through utilising existing data or information. This research has also elucidated regarding the effectiveness of GenAI in predictive matters such as intellectual properties, employee abuse and conceivable financial mistakes. Research question 5 has been satisfied through the key findings from the survey outcomes and analysis. It has been identified that most of the participants have agreed and agreed with this question. GenAI positively impacts American financial institutions through

managing intellectual property issues and employee abuse. It is possible through advanced data analytics mechanisms within GenAI. Moreover, GenAI is also able to learn from the existing information and offer an accurate prediction. Following this, the effectiveness or the positive impact of GenAI is connected with accuracy in prediction through analysing existing information regarding client data.

The research has concentrated on the effectiveness of GenAI systems in American Financial Institutions through leveraging key insights to overcome operational challenges. This survey question is associated with answering the research question two that asks the way GenAI handles predicted matters successfully. It has been identified that most of the survey participants firmly agreed with this question while some remained neutral but no one disagreed with this question. GenAI is able to handle a wide array of tasks through its data analysis and predictive techniques. Prediction of GenAI based on available information helps American financial institutions to gain a key insight on the operational challenge. It is indicating that an insight regarding operational challenge helps American institutes take actions and it eliminates the obstacle in operational flow. Most importantly, the accuracy in prediction helps to identify the operational challenges effectively in American financial institutions. It has a positive impact on the American financial institutions as it helps to enhance the operational efficiency through prediction of challenges beforehand. It has also been identified that GenAI streamlines automated autotune tasks and it is one of the main influencing factors to drive a positive environment (Al Naqbi *et al.,* 2023). It is indicating that American financial institutions can gain a positive impact through GenAI not only through prediction accuracy but also in creating a positive working environment successfully.

GenAI in American Financial institutions can drive positive impact through its advanced data training model. It has been observed that GenAI is able to generate original content through leveraging on existing information that can manage workplace activities successfully (Linkon *et al.,* 2024). American Financial Institutions can manage the risk associated with operations through its advanced predictive systems. Considering predictive models within GenAI and its capability to predict by analysing existing data helps to mitigate the operational risk within

American financial institutions and it is one of the positive impacts. Human professionals within American financial institutions can identify risk beforehand through GenAI. Accurate predictions about unforeseen challenges by humans help to consider required action at the right time, which positively impacts the American financial institutions. It has also been identified that data training models and continuous presentation of new dataset improves prediction accuracy and quality extensively. Thus, it can be stated that integration of GenAI in American financial institutions helps in reducing operational risk by considering actions successfully.

The survey question six has also queries regarding the ability of GenAI regarding improving operational efficiency as well as offering effective economic risk analysis, this question is linked with research question two of this study that asks regarding the effectiveness of GenAI in financial institutions of America. Most of the survey respondents have firmly agreed to this survey question. It has been identified that the key success factor of GenAI lies in the ability to ease complex tasks through accurate prediction and analysis (Dhake *et al.,* 2024). It is indicating that the overall operational efficiency of American financial institutions can improve through integration of GenAI. It is indicating that GenAI is able to improve the operational efficacy of American financial institutions through its predictive analysis and accuracy in data analysis. However, it has also been observed that poor data quality or improper maintenance of data sets are challenges for data monitoring. It can be mitigated through effective maintenance of data sets and consistent data training integration for improvement of operational efficiency within American institutions.

GenAI has improved the operational efficiency of American Financial institution's, and it is indicating a positive impact through its wide array of benefits such as predictive analysis but considering existing information. For instance, representative data entry led to produce incorrect results, but human professionals are prone to make mistakes. On the other hand, integration of GenAI is able to mitigate the challenge of human error by demonstrating the mistakes beforehand. Most importantly, GenAI is able to automate the tasks, and its advanced mechanism reduces the challenge regarding mistakes. Following this, the business efficacy

increases significantly within American financial institutions. Moreover, it has been observed that repetitive tasks such as data entry can be automated through GenAI in American Financial institutions. It reduces the time of data entry, reduces the risk of errors and most importantly increases productivity within American financial institutions. Therefore, it can be stated that integration of GenAI has a positive impact on American financial institutions through improving operational efficacy as it reduces time, increases productivity and most importantly minimises errors.

Most of the survey participants firmly agreed that the enhanced procedures of financial transactions can be applied by utilising the GenAI system in American financial institutions. This survey question is associated with research question three that concentrated on identifying potential assistance of GenAI in terms of increasing operational accuracy, risk analysis within American financial institutions. It is indicating that GenAI has the capability to enhance the financial transactions successfully. It has been identified that GenAI is responsible for the drastic change in the financial institutions all across the world. American financial institutions can integrate the GenAI system for enhancing the financial transactions and improve customer satisfaction. Following this, financial institutions of America are able to optimise its operational accuracy through integration of GenAI successfully. It has also been identified that financial institutions can gain competitive advantage through adaptation of GenAI systems. Higher competitive advantage along with enhancing the transaction procedures are positive impacts on American financial institutions in terms of integrating GenAI. Besides, it has also been identified that GenAI systems are able to reduce the risk of mistakes by assisting professionals. On the other hand, standard optimisation of the portfolio is also possible through GenAI through obtaining data, analysing risk and considering latest trends. This claim further gets validity as most of the participants firmly agreed and agreed with these questions, while the number of disagreements is less. Therefore, it can be stated that integration of the GenAI system has a positive impact on enhancing the financial transactions, which is able to make customer satisfaction and improve competitiveness for American financial institutions.

The survey questions also delve into the factors associated with identifying the application of a comprehensive framework over the tactical application of GenAI in American financial institutions to guide towards a better quality. This survey question is associated with research question three of this study and it is indicating that analysis of accumulated information can help to answer the third research question of this study. Most of the survey participants firmly agreed and agreed with this question. It is indicating that integration of a comprehensive framework based tactical application of GenAI is effective for enhancing the quality of outcome. It has been observed that GenAI has a positive impact on financial institutions through predicting the risk associated with stock markets (Mokhtari *et al.* 2021). Moreover, the predictive analysis and identification of risks through evaluating existing data sets help to mitigate the risk successfully. It is indicating that American financial institutions are able to optimise its operational efficiency through integration of GenAI. On the other hand, it has also been found that regular compliances are important for GenAI integration as it supports in eliminating the risk of legislative complications. American financial institutions can adhere to legal laws and regulations through considering regulatory compliances of GenAI. Thus, it can be said that GenAI has a positive impact on American financial institutions due to its risk analyst mechanism, but it is required to integrate through adhering to regulatory compliances for eliminating further legal risk in future.

It has been identified that a comprehensive GenAI framework is able to accomplish tasks such as planning, research activities as well as development of products and services for the consumers. It is indicating that GenAI framework integration of a comprehensive GenAI framework is able to drive a positive impact on American financial institutions substantially through improving planning, research activities and development of high-quality products and services. Additionally, it has been identified that the comprehensive GenAI framework does not replace human expertise, judgements and experiences. Instead, a comprehensive framework helps in integration of GenAI through assisting professionals to improve the quality of financial insights within American financial institutions. Despite this, it has been observed that tactical application of GenAI is also beneficial for improving the selected parameters

regarding workflow of American financial institutions. However, most of the participants mentioned that a comprehensive framework is effective in terms of applying GenAI within American financial institutions. Following this, LLM models are effective for obtaining rapid advancement of GenAI (Li *et al.,* 2024). Considering this, it can be stated that a comprehensive framework not only helps in effective application of GenAI in American financial institutions but also helps in advancement, which ensures sustainable positive impact on financial institutions of America.

The survey questions focused on analysing the ability of GenAI in terms of reducing the entire operational cost of business operations. This question is associated with the third research question regarding the impact of GenAI in increasing the operational effectiveness of American financial institutions. It has been identified that most of the survey respondents agreed that American financial institutions are able to reduce the cost of business operations successfully. It has been identified that GenAI can automate the entire data processing, and it assists professionals to analyse huge volumes of client information within a short span of time. It is beneficial for improving customer satisfaction and improving the competitive edge for American financial institutions through integrating GenAI. It is also indicating that implementation of GenAI is effective for driving a positive impact on American financial institutions. On the other hand, streamlining financial documents and adhering to regulatory compliances are beneficial for minimising human errors. Thus, the entire operational efficiency is improved through integration of GenAI, which drives positive impact for the American financial institutions.

4.8 Conclusion

From the above analysis, it has been identified that GenAI is effective for American Financial institutions in terms of improving all its business operations. The core strengths of GenAI depends on the accuracy in predictions about the risks, Risk analysis helps to consider right actions at the right time, which mitigate the challenge and keep the operational flow intact. On the other hand, the reduction in flaws or errors within the data entry reduces through GenAI.

Moreover, it helps to reduce the operational cost successfully. It has been identified that GenAI is able to reduce the operational cost as well as reduce the risk of errors. Moreover, the survey analysis has identified those repetitive tasks such as data entry can be automated through the GenAI. It has been identified that predictive maintenance is also possible through GenAI. The integration of GenAI within American Financial institutions is able to improve the business operations as well as streamline the process successfully.

CHAPTER V: DISCUSSION

5.1 Introduction

The discussion chapter includes understanding of the research context, and interpreting overall research findings to add this present research is focused on generative AI in managing American Financial Institution. This present research explains the significance of generative AI and its importance in managing overall financial decision-making process maintenance that contains appropriate links with research questions. This discussion part also helps to compare research results and literature review in evaluating information regarding generative artificial intelligence impact on financial institutions and managing further informed decision-making processes in using this innovation within the workplace. This discussion chapter also provides understanding about financial institutions recruitment of implementing ai and its related significance in managing business resources and finance maintenance to devolve overall industry growth.

5.2 Discussion of Results

GenAI has played a crucial role in adding value within the financial sector of North America. The integration of GenAI comes with the opportunity of maximising business performance of the financial institutions along with increasing profitability (Statista, 2024). Besides, the findings from literature review have mentioned about the significance of GenAI in contributing to the innovation like “Customer emergency interactive voice response” within the banking sector. In addition, it has become possible for the financial sector of North America to undergo diverse digital transformation due to the inclusion of technologies like GenAI. On the other hand, the findings from the survey responses have mentioned the contribution of GenAI in boosting performance of the financial sector of North America. GenAI has contributed to the ability of the banking sector in trade detection and prevention along with fostering its performance (Ooi *et al*. 2023). In addition, the survey findings have mentioned the positive contribution of GenAI to the performance of the financial sector of North America through

increasing the efficiency of the industry. Therefore, GenAI has proved to be beneficial for the financial sector in maintaining its sustainability in the highly competitive market.

The products and services of the financial industry have been significantly modified with the integration of advanced technologies like GenAI. GenAI has the ability of capturing customer voice, advancing the methods of research as well as gaining insights about the competitors in the finance sector (Kanbach *et al.* 2024). Accordingly, the financial sector of North America has received the opportunity of offering innovative products and services to the customers with the integration of GenAI. Besides, the credit score management activities within the banking sector has also been improved with the choice of technologies like GenAI. The findings from literature review have mentioned the way credit managers of the financial sectors have utilised GenAI for gaining insights about the crucial financial information. In contrast, GenAI has come with the opportunity of improving the customer services of the financial sector through the introduction of customisation (Abrokwah-Larbi, 2023). The findings from the survey result have highlighted the importance of GenAI in contributing toward the introduction of virtual assistance services within the banking sectors. This has further enabled the customers to receive services at their comfort. Thus, GenAI has created an optimistic effect on the activities of the financial sectors including the banks of North America.

The application of “Theory of Reasoned Action (TRA)” has been found to be beneficial in developing understanding about the factors that contribute to the adoption of new technology. Literature review findings have mentioned about the application of TRA in developing understanding about the intentions of the banking individuals regarding the adoption of GenAI. The possible actions undertaken by the individuals can be predicted with the use of “Theory of Reasoned Action” (Ajzen, 2020). Accordingly, it has become possible to understand the consideration of the benefits of GenAI within the financial industry before the application of the technology in its operations. However, GenAI has become beneficial in predicting the risks within the financial sector (Mokhtari *et al*. 2021). The investment decisions of the banking sector of North America have been significantly influenced with the integration of valuable data produced by GenAI. In addition, it has also become possible for the financial sector to improve

its spending on AI algorithms depending on the benefits driven by the technology. Therefore, the positive impacts of GenAI within the financial institutions of North America have included the improvement in investment decisions making as well as focusing on the spending on algorithms.

The attraction as well as the retention of the right talents in the financial sector is dependent on the use of GenAI. Financial sectors work on utilising GenAI for strategic decisions for the welfare of the business operations in the complex financial industry (Christodorescu *et al.* 2024). Accordingly, it has become possible for the financial sector to improve its business operations and performance by making predictions based on the GenAI algorithms. Contrastingly, the findings from the survey data have mentioned the significance of GenAI in contributing to the management of the regulatory compliance within the financial institutions of North America. The regulatory compliance within the financial sector has been automated using GenAI (Kurshan *et al*. 2020). As a result, it has helped the financial institutions of North America to come with the rules and regulations at the time of supporting consumers. In addition, the automated responses to the consumers have positively contributed to the overall efficiency of the financial institutions of North America. Besides, the integration of GenAI has also contributed to the reduction in the need for manual management of the regulatory compliance within the financial institutions which has further contributed to the management of the ethical business activities. Henceforth, GenAI in the financial institutions has come with the opportunity of maximising the efficiency of operations.

The use of “Technology Acceptance Model (TAM)” has helped in understanding the adoption of technology based on its contributions. “Technology Acceptance Model (TAM)” helps in understanding the usefulness and the perceived ease of use of technology among the organisations as well as the individuals (Na *et al*. 2022). The findings from the literature review have highlighted the significance of the considerations of usefulness of technology in attracting the individuals in adopting the advanced technologies like GenAI. In addition, based on the detection and prevention of financial frauds, advanced technologies like GenAI are adopted within the financial institutions of North America. On the contrary, the survey findings have

mentioned the increasing task complexity within the financial industry of North America due to the integration of technologies like GenAI. In this context, the regular monitoring along with the activities like data entry, reconciliation and reporting contributes to the rising responsibilities of the individuals in the financial institutions. Thus, the working responsibility is increased among the employees of the financial institutions of North America due to the integration of technologies.

Generative artificial intelligence is effective to handle predictive situations related to employee abuse, conceivable facility mistakes, intellectual property pressures and others that contain impact in managing overall business practices. In this context, integration of generative AI has contained significant attention within the American financial system to enhance predictive capabilities and overall decision-making process. This information also includes emerging response-based understanding to evolve multifaceted perspectives about generative AI in managing intellectual property pressure and in operational inefficiencies that contain impact in managing overall financial decisions. As influenced by Kshetri *et al.* (2023), inclusion of artificial intelligence contains significant impact on social design organisations that offer systematic capability to manage input and help to maintain overall expected outcomes. It emphasises the importance of data driven insight for informing decision-making process, where it helps to analyse vast data sets and identify overall information patterns in reducing uncertainty. As inspired by Vuletić *et al.* (2024), implementation AI based working structure also manages organisational capabilities and operational activity maintenance that contains impact in managing the right decision-making process. Utilisation of generative AI also leads to more informed strategies maintenance that is effective to devolve financial stability along with mitigating issues of intellectual property.

Inclusion of generative AI helps to manage technological preparation that streamlines the process of decision making in managing overall business performance of the financial sector. Application of GenAI is effective to manage financial adviser services that mainly assist investment strategy and enhance transparency in managing AI power intelligence systems within an organisation. As inspired by Huang *et al.* (2024), the GenAI mainly helps to maintain

financial adviser service in optimising investment strategy with power ai intelligence system implementation. This generative AI also helps to assist portfolio management along with providing financial recommendations that help to analyse economic interpreted and historical market information handling. Inclusion of this AI activity also improves diversification along with maintaining rigs exposure that enhance overall business returns in using generative AI. In this aspect, Information system theory (IST) mainly associated with transforming information that helps to maximise communication within the workplace. As inspired by Pearlson *et al*. (2024), utilisation of information system theory is beneficial to manage market decisions that is effective to analyse personal responsibilities and overall financial activities in business. Therefore, it can be said that personalised adversaries in using generative AI are possible in managing market database working activity maintenance that manage for the decision-making process of managers within the American finance sector.

Operational efficiency helps to manage overall organisational activity that can be maintained in using generative AI integration processes to optimise overall business workflow. In this context, there is the possibility to manage automated routine tasks in managing human resources allocation that allow financial institutions to focus on strategic initiative rather than any manual operational process maintenance. As inspired by Linkon *et al.* (2024), It is seen that generative AI has ability to manage original content along with different forms of content generation that help to maintain overall working activities of business. In this context inclusion of an AI model is also effective to handle database training that develop overall workers motivation of working, and main further prediction of data maintenance for developing financial planning. Further, this research result helps to evaluate multimodal activities in using GenAI to handle business milestones along with integration of appropriate algorithms that empowers in promoting organisational process maintenance. In this context, concerns of AI model implementation are effective in managing ethical implications of AI deployment as well as managing financial structure of the institute.

GenAI has influence in managing financial decisions evaluation, where the sentiment analysis has obtained with evolution vast amounts of textual information to identify customers'

sentiments. As inspired by Aldasoro *et al.* (2024), advanced AI supports financial scenario understanding along with evolution information regarding financial transaction and sentiment analysis that include a hypothetical scenario to manage financial crisis. In this context, Employees within financial institutions can make appropriate decisions based on the shift of technological innovation in using generative AI that is effective in managing more appropriate data analysis. Businesses are needed to focus on innovative working attributes as well as infrastructure maintenance in managing business planning that is efficient in maintaining overall business activity, and decisions. Therefore, implementation of AI technology helps to enhance the appropriate decision-making process within the Financial Institute that is efficient in managing further business activity maintenance. Positive consumer experience is also possible to maintain in use in GenAI that increases overall business profitability along with managing customer motivation. Data privacy and timely response are also needed to maintain customer experience that is possible to manage through using GenAI.

Utilisation of GenAI such as ChatGPT also helps to include complex query towards customers in understanding their motivation that devolve more appropriate experience for customers as well as managing financial planning within American financial institutions. Inclusion of a theoretical framework is effective to maintain technological innovation within organisation and develop further business attributes of the financial sector. As inspired by Wilson *et al*. (2021). Technology acceptance models have been obtained within the study that focuses on technological innovation implementation as well as developing overall initiative towards organisation. Implication of this framework helps to integrate seamlessly along with developing employee support that means an overall working environment as per consumer demand within the financial industry. There has been similarity between results and literature review section in terms of importance of generative AI, and its related significance in managing business practices. Implication of Gen AI helps to manage overall business practises along with an informed decision-making process that is efficient in managing business financial decisions.

Integration of GenAI within American Financial Institute helps to emerge a transformative force that contains impact in managing operational accuracy and transaction process within

business. It is seen that a major response has focused on the effectiveness of this artificial intelligence in managing operational management and risk assessment within a financial organisation that is efficient in managing further business planning maintenance. As inspired by Dhake *et al.* (2024), the capability of GenAI is not only aids to manage information analysis as well as help to automate the routine tasks that reduce the chance of human errors from organisational work and activity maintenance. Automation in information maintenance has become essential for institutes to minimise operational cost as well as erode efficiency in managing further decision-making processes. As inspired by Kalia (2023), the GenAI Pontins benefits to manage financial institute information as well as help to meet regulatory requirements in detecting money laundering. Implementation of GenAI supports large amounts of data sets to evaluate any suspicious activities that are needed to maintain overall data and security management. Inclusion of trend data set in using integrated ai system manage data algorithm that helps to develop similar transaction process along with managing data security that is effective in maintaining decision in regarding financial institution to handle further growth of organisation.

Along with doing repetitive tasks in using GenAI, employees can focus on strategic responsibility that improves overall business efficiency and operational performance within the financial sector. However, issues regarding improper data set maintenance have been noticed that led to incorrect information and decision-making process that is needed to mitigate in prioritising data governance. On the other hand, as inspired by Reece *et al.,* (2024), GenAI manages financial transactions however it contains negative impacts regarding security breaches that lead to improper access of sensitive information. “Theory of planned behaviour (TPB)” is an effective theory that helps an individual act rationally based on their behaviours and attitude along with subjective norms. As inspired by Yu *et al*. (2021), TPB framework explains behavioural intentions of individuals during engineering activities that helped to manage diverse settings for people. This theory helps to understand barriers in managing overall application of GenAI that are needed to mitigate in handling financial performance of American Financial Institute in using GenAI. This present research result is also focused on

research issues analysis and taking further initiative in maintaining business situations that are efficient in using this framework that contains relevancy with results. Implication of this framework helps to understand barriers in using gene AI and contains further planning to devolve overall working activities of financial institutions in using TPB.

Generative AI being the sunset of AI has tremendously helped in the using of real time data to perform various tasks. As per the result of survey question 9, the comprehensive framework has a greater role to play than the tactical application of Generative AI as evident from 61.9% of positive responses. The majority of respondents have agreed that the comprehensive framework of AI is supportive in performing various tasks for the financial institutions in America by synchronisation of workflow. GenAI frameworks are not especially intended to make replacement with human judgement but to improve the financial insights quality offered to customers. On the other hand, tactical applications of GenAI can be useful for optimization of certain parameters of workflow within any financial institutions, and the comprehensive framework fosters collaboration among the financial teams by effective employment of the financial resources for ensuring organisational effectiveness (Popa *et al.* 2024). Thus a comprehensive framework of Generative AI is helpful for improving overall outcomes. However, a comprehensive framework of GenAI is not effective until the financial policy makers prioritise interdisciplinary collaboration as well as comprehensive training programs to better understand the future impact of GenAI for financial institutions (Ali and Aysan,2023). Furthermore, improper understanding of the usability of GenAI especially in the area of mortgage data maintenance processing can be responsible for hiking the whole cost of management process while streamlining the financial operations development (Patel, 2023).Moreover, the implementation of **Technology Acceptance Model (TAM)** can be useful in understanding the importance of interdisciplinary collaboration as well as comprehensive training for policymakers as this theory emphasise acceptance of technology by the users which is influenced by perceived usefulness particularly in complex areas such as mortgage data processing. Thus, this theory highlights the fact that better training programs to the

employees of the financial sector are needed to ensure better outcomes from technology rather than just implementing technology.

The major factor of GenAI has been reducing the working time while analysing the bulk data that have helped in boosting the efficiency of the employees in the American financial sector (Anica-Popa *et al*. 2024). Furthermore, GenAI has helped in maintaining high quality data with the help of its predictive analysis feature to enjoy cost-saving as well as resolving various issues related to legal-compliance in the field of data management. However, it is also important to note that the extensive usage of GenAI could replace major human intervention in the financial sector and therefore be responsible for cutting down various job roles in the future (Huang et al. 2024). Henceforth, it is important to make use of GenAI at a moderate level to balance with human employment.

5.3 Discussion of Research Question One

The Generative AI applications have enhanced the performance of financial institutions through making robust development in threat detection and fraud prevention. As per the study of Ooi et al. (2023), GenAI applications have been playing a crucial role in identifying anomalies in consumer transactions through analysing user transaction patterns. The data related to the consumer, mainly the transaction history is quite significant in this scenario to understand the overall activities of the consumer in this aspect. The machine learning algorithm utilises consumer history data to identify unusual activities related to banking transaction, money transfer, unusual withdrawal of money and pin or confidential number change related to the consumer account. Apart from that, it has become possible for the financial institutions in America to maintain monitoring of real-time data related to user accounts and it has helped them in various ways to detect fraudulent activities. Hence, it can be stated that the future repercussions of Generative AI applications for American financial institutions would be positive in the aspect of business operations.

The utilisation of GenAI applications has played a significant role in enhancing the consumer services for the financial institutions. According to Abrokwah-Larbi (2023), the Generative AI

applications are helpful in offering customisation facilities for the consumers along with 24/7 assistance through using AI-Chatbot. The consumers get immediate services through applying the necessary services such as passbook update, monetary transactions in the banking applications in smartphones, computers. The specific transactions from user's end are fully safe and secured and the consumers can get the access to their accounts after successful authentication of the users in this scenario irrespective of time and place also (Abrokwah-Larbi, 2023). Thus, the specific emphasis of GenAI applications on optimistic effects for the consumers have been observed positively on behalf of American financial institutions. The AI applications are smarter than the human workforce in terms of handling vast amounts of consumer data and it also reduces the chances of errors while making the financial transactions. The robust emphasis has been noticed in the aspect of availability of financial services for the consumers. The enhancement in service quality has helped the financial institutions in America in engaging consumers properly. Offering attractive policies and providing 24/7 assistance has improved the consumer engagement for the American financial institutions.

The guidance about financial transactions and advice for financial investment through chatbot is quite helpful for the consumers in making decisions. As per the study of Kurshan et al. (2020), proper management of consumer services through GenAI applications has enhanced customer satisfaction for the American financial institutions. In another direction, the Generative AI applications play an important role in managing risks for the consumer accounts through simulating different economic situations (Mariani and Dwivedi, 2024). Financial forecasting with the help of AI applications has helped the consumers in making their investment decisions and suggestions provided by these applications assist the consumers in managing their financial portfolio properly. According to Mariani and Dwivedi (2024), financial forecasting about several stocks has helped the consumers in selecting and managing their stocks properly and it also reduces the chances of loss in this aspect. The risk management procedure by integration of AI applications in this scenario has leveraged the consumers of

American financial institutions in a positive way. Hence, it can be stated that Generative AI has strong relevance with financial management among the financial institutions in America.

The machine learning algorithms are quite significant for GenAI applications, and it helps in generating suitable outcomes about financial forecasting for the consumers of American financial institutes. According to Kurshan *et al*. (2020), the GenAI applications have helped in development of advanced trading policies for the potential consumers by effective assessment of movements of stocks and market trends in recent times. The prediction of risks in the stock market helps the consumers in making their product portfolio properly (Moukadam and Sobrinho, 2024). It has been beneficial for the financial institutions in America by engaging the consumers properly in the business operations and it results in greater productivity in this scenario. On the other hand, the financial institutions have been able to obtain competitive advantages in the highly competitive market in America in this aspect. Therefore, it can be stated that GenAI applications are quite important for American financial institutions and their consumers to avoid risks in financial investments and obtain suitable return from the investments.

It has been observed that regulatory compliances have been changing after a regular interval in this digital era to make the financial transactions more secure for the financial institutions and their consumers also. As per the study of Kurshan *et al*. (2020), the GenAI applications are enabled to maintain the regulations and it reduces the chances of errors in financial transactions and makes the job easy for financial professionals and consumers also. It has helped in establishing suitable relationships among the financial institutions in America and its consumers. The efficiency in financial forecasting has helped the financial institutions in managing their business operations properly as per market trends and it helps the consumer in making informed decisions about financial investment. Hence, the implication of GenAI application is robustly linked with reduction in security breaches within American financial institutions. Simultaneously, the improvement in banking operational efficacy of the specific financial institutions has made the role of AI applications quite significant in the context of gaining competitive advantages. Therefore, it can be inferred that the implication of Gen AI

applications can help in enhancing the banking operations in the upcoming future with better options to foster consumer satisfaction.

The implications of GenAI applications in the American financial institutions has enhanced the consumer experience by providing personalised services in terms of banking transactions, investment regarding stocks and other services. The financial forecasting after evaluating current market trends and previous history has helped the specific financial institutions in fostering suitable business policies in favour of consumers (Kuo et al. 2021). Apart from that, the risk management and improvement in credit scoring policies with the help of GenAI applications has helped the banking sectors in obtaining competitive advantages from the current market. The previous data of consumers are helpful in identifying the transaction pattern and demands respectively. The financial institutions offer personalised services according to consumer preferences in this aspect. The increased efficiency in banking operations and implementation of regulatory compliances has helped the American financial institutions in maintaining transparency in the aspect of banking operations. The consumers are properly aware of the charges and the returns they get back from these institutions.

The machine learning algorithm in terms of GenAI applications are helpful in better decision making for the financial investments and in obtaining greater profitability also (Verma and Kumari, 2023). The specific applications utilise predictive analytics in this aspect to foster suitable financial forecasts and financial advice. According to Al-kfairy *et al*. (2024), the main significance of the GenAI application lies in risk management of the financial portfolio. The consumers get proper updates about increasing trend of stocks and the advice related to stoploss has helped the consumers a lot by ensuring safe investment for them. The consumers here rely upon the financial institutions, and they tend to make financial transactions to make safe investments in this context. It leads towards establishment of suitable relationships among the consumers and financial organisations in America. The chatbots along with virtual assistants have assisted the consumers irrespective of time and place to make them comfortable in making financial transactions. In addition to that, the predictive analysis and risk modelling features of the GenAI applications are helpful in detecting fraud activities in the

consumer accounts. The benefits of implication of GenAI applications for the financial institutions are observed in cost reduction in business operations as the applications can handle huge amounts of financial data without any error in an easier way. The applications are helpful in generating proper outcomes quickly in comparison with the human workforce. The automated applications play a significant role in accomplishing the financial task without any error.

The aforementioned positive outcomes of Generative AI applications are quite significant for the American financial institutions in operating their business activities with greater efficiency. The future repercussions of GenAI applications in the aspect of performance of financial institutions are observed as positive as it helps in making profitable business decisions for the financial institutions and their consumers also. The suitable insights obtained from above-mentioned discussions depicts that the future use of GenAI applications would be quite important for the American financial institutions. The use of GenAI applications has changed the overall scenario in this context as it helps in fraud detection, prevents security breaches and corrects financial forecasting and monitoring of current regulations also. The information about efficiency of GenAI applications in terms of business operations of American financial institutions has addressed the first research question properly. In this regard, it can be stated that the implication of Generative AI applications in the financial sector in America entails positive outcomes in the context of overall business operations.

5.4 Discussion of Research Question Two

Survey questions five and six support the second research question related to GAI's positive impact on North American financial institutes. GAI not only supports enhancing organisation productivity but also comes with challenges like intellectual property pressure. Additionally, financial institutes also face challenges like mistakes in financial facilities, in this regard, GAI plays a substantial role in addressing such challenges by providing meaningful insight to bank management that streamline the process of efficient decision making. Intellectual property creates significant value for financial institutes of North America like trade assets, trademarks

in which meaningful insight of gen AI on local regulation and policy supports effective steps to handle such issues. The similarities finding between result and existing literature section that meaning data extraction for vast amounts of information for managing business operations in financial institutions. As per the research of Dhake *et al.* (2024), Gen AI is currently being utilised by policy makers and financial leaders for maintenance of financial advisory services to stay adherence to market trends. Intellectual property in financial institutions needs to be managed meticulously in which predictive matters of Gen AI illustrate every possible changing scenario associated with handling intellectual property matters of financial institutions by understanding current rule and regulation. Therefore, prediction matters of GAI unveiled possible risk and mitigation scenarios related to intellectual property pressure in North America's financial institution.

The result section highlighted that the majority of the respondents believed that Gen AI implementation is extremely beneficial for reducing IP related issues, employee abuse and financial mistakes. Additionally, the results section also highlights GAI streamline the process of decision making for banking leaders. This statement aligns with existing literature's findings that GAI provides real time data access to organisation staff that eases the process of effective decision making. For instance, Gen AI employed real time data accessibility for effective regulatory maintenance and risks (Himeur *et al.* 2023). Considering this, North America's financial institutes could take proactive steps in real time for management of its intellectual property rights. On the other hand, the predictive capability of Gen AI appears to be most effective in handling conceivable financial facility mistakes as it offers suggestions based on numerous data algorithms. In this regard, the result section highlighted that Gen AI incorporation makes people more aware about AI technology that possesses the possibility to significantly enhance prediction accuracy in the context of conceivable financial facility. Therefore, GAI integration provides real time data access, effective decision making, and greater accuracy in finance facility maintenance within North America's financial institution.

Employee abuse is becoming a major concern for North America's financial institutions as it significantly affects employee's morale along with organisational productivity. A detrimental

work culture is regarded as major influencing factors for employee abuse aspects. In the result section Wiredu *et al.* (2024), is illustrated that financial institutes leverage Gen AI to foster culture of response, ethical practices for management of operational integrity. Gen AI supports identifying employee lacking areas through putting information organisation work culture that supports to address employee abuse related issues of organisation. The existing literature demonstrated that Gen AI supports employees through text creation to make them aware about regulatory policies. Employees would be able to understand their legal right that supports protection from employee abuses. Therefore, Gen AI predictive matters provide meaningful insight on employees' rights and possible solutions for handling employee abuse aspects associated with financial institutions of North America.

The above discussion illustrates the linkage of decision making, meaningful insight creation, predict future scenarios aspects between literature review and result section. In this regard, bank manager staff exhibits the action of Gen AI utilisation in North America's financial institutions by leveraging the facility of quick decision-making process as per TRA. As per the opinion of Syed *et al.* (2021), TRA demonstrated the attitudes and subjective norms of individuals shaping their specific behaviour. Following the context, Gen AI benefits on management of financial operation like portfolio management is the reasoned action for banking staff for Gen AI utilisation. On the other hand, Gen AI also reduced employee effort, increased accuracy in financial management that changed the behaviour of North America's bank staff to use Gen AI as per TAM theory. Therefore, Gen AI's predictive matters utilisation is associated with application of TRA and TAM theory as it reduces employees' effort for North America's banking performance management.

North American financial institutions regularly face challenges relating to portfolio management, credit risk assessment that bring detrimental impacts on organisational productivity. Gen AI is capable of generating in text, sudden, image-based solutions through evaluation of vast amounts of data. This process might take a significant amount of time by employing human effort, contrary, Gen AI improving accuracy and response time to make strategic decisions. The result section highlights that Gen AI possesses the capability to

produce original content with different forms that generate actionable insight for effective maintenance of business practice. In literature review section Dong *et al.* (2024), depicted that GAI managed real time data for autonomous operation development in management of financial business processes. Referring to this, banking employees of an American financial institute could employ Gen AI to evaluate meaningful insight to timely address conceivable financial facility mistakes. Gen AI prediction capability assists to assess holistic view by analysing diverse scenarios which increase accuracy and reduce conceivable financial facility mistakes. Therefore, Gen AI supports navigating through vast data sets to derive meaningful insight and enable banking staff to make informed decisions by addressing potential challenges.

Operational challenges within financial institutions are also associated with regulatory changes in North America. These changes bring significant impacts to the financial institution landscape during effective management of operational features like customer's portfolio management. Banking staff could leverage Gen AI in creation of strategic plans which are adherence to updated governmental policy for North America’s financial institutions. For instance, ChatGPT supports draft AI related policies and implications measures to address legal risks (Rane, 2023). Following the context, financial institutions of North America could efficiently manage predictive analysis while incorporation in business operation management. Therefore, meaningful insight of Gen AI increases legal compliance, data management accuracy to overcome challenges in business operation of North America’s financial institutions.

Bank employees utilise Generative AI for implication of strategic planning by processing meaningful insight that develop through Gen AI. Gen AI assists bank staff to put attention on details, improve productivity and accuracy at the workplace that tremendously increases Gen AI’s use in financial institutions. In the literature review section Lin and Roberts (2020), illustrated that TPB assists in understanding the way an individual behaves in diverse scenarios. Following the context, diffusion of industry 4.0 technologies like AI is widely used by banking staff due to changing scenarios of demand for quick response and higher accuracy

within financial institutions. Apart from this, a surge in Gen AI utilisation in the banking sector of North America is associated with “diffusion of innovation theory”. In the literature review section Syed (2021), demonstrated that early adopter, innovator and early majority are three major pillars in the context of DIT. Gen AI adaptation is considered to fall under early adopter and early majority due to its diverse financial operation utilisation like invoicing, portfolio management in North America’s financial institutions. Therefore, meaningful insight creation is interlinked with application of TPB and DIT theory for overcoming business operation challenges of North America’s financial institutions.

The fifth survey question tries to explore people’s perception of the predictive capability of Gen AI for management of employee abuse, intellectual property issues, and financial facility mistakes. This survey question is directly linked with the second research question as it emphasises the way predictive matters of Gen AI handle the above mentioned three challenges. Gen AI supports in addressing rule and regulation that financial institutions could use to overcome film intellectual property pressures which answer the first aspect of the second research questions. Additionally, possible challenging scenarios and potential solutions can also be managed by leveraging predictive matters of Gen AI in context of intellectual property pressure. On the other hand, Gen AI utilised to foster a culture of ethical practice to inform employees about organisation integrity that supports the management of employee abuse issues within financial institutions. Additionally, employees could meticulously comprehend their rights by leveraging the text creation facility of Gen AI which answers second aspects of research questions. Lastly, Gen AI helps to gain insight on predicted scenarios that supports bank employees to make informed decisions that address the conceivable financial facility mistake of the second research question.

The sixth survey question tries to explore the significance of Gen AI developed key insight to overcome challenges associated with North America's financial institution. Gen AI navigates through numerous amounts of data while offering suggestions on contemporary financial management challenges within North America's financial institution. In this regard, North America's financial institution utilises Gen AI to draw valuable insight for financial activity

maintenance to answer the second question. Therefore, meaningful insight creation through analysing vast amounts of data sets is the answer to the second question which is identified in the result section.

5.5 Discussion of Research Question Three

Question three in this research is focused on assistance of GenAI in financial operations to ensure a positive measure for determining North American financial companies' competitive edge. Factors within third research are operational accuracy, effective economic risk analysis, enhanced procedures, speculation banking and retail treatment of accounts. Assistance of GenAI generated a potential advantage for financial institutions while focusing on intellectual measures to ensure a strategic approach in order to create competitive advantage. As a multidimensional sector, banking and financial service providers face major updates while focusing on the advent of technological innovations in the coming days. Primary survey analysis from industry experts was crucial in terms of obtaining first-hand data in enhancing implementation of support of GenAI. Validation of research questions on operational accuracy as well as risk management remained effective for enhancing strategic approach to ensure an insight into informed decision-making. Analysis of factors and codes within survey questions are crucial in assessing operational efficiency, risk management and speculative overview in financial decision-making in North American financial institutions.

Assistance of GenAI was crucial in terms of financial planning to ensure a crucial approach to enhance a crucial approach in decision-making. From survey analysis it was revealed that a majority of participant firmly agreed with GenAI's inclusion to improve operational accuracy and risk analysis. Financial sector needs to be effective in terms of improving accurate accounting processes to enhance reliability over financial services. Evaluation of past information along with real-time market information plays an important role for generating a strategic intervention in informed decision-making. However, against question 7 of the primary survey, almost 8.6% respondents remained neutral in their opinion on GenAI and accurate

planning in financial risk management. Findings of these questions remained beneficial for considering an overview as focused by industry experts in terms of strategic assessments.

Financial decision-making as well as GenAI collectively formed an important dimension in this study focusing on data accuracy and customer satisfaction. R square value of 0.43058 is representative of explanatory variables' significance over creating an insight in terms of determining predictive aspects in present research. Coefficient based interrelationship among operational accuracy and financial decision-making was crucial to address components associated with financial decision-making of North American financial institutions. Hence, comparison between regression models helped in terms of decision-making for assessing financial competency as well.

Third research question has a centralised idea of financial decision-making while enhancing usage of GenAI through ethical and appropriate manner. It can be evaluated that a number of respondents are either not aware of GenAI's overall advantage or not received accurate results from GenAI. Risk assessment through inclusion of GenAI is essential for considering an overview regarding appropriate risk assessment. Jejeniwa *et al.* (2024) evaluated that infusion of GenAI into real-time analytics can have a direct impact over optimisation of accuracy in financial analysis. Enabling paradigm shifts through enhancing financial transactions can be essential in terms of addressing data reconciliation, repetitive task management and error reducing practices. Survey responses also help in terms of establishing an insight into financial transactions through a reliable manner while meeting a third research question. It can be crucial for financial institutions of North America to ensure a positive measure in information processing as a part of ensuring accurate planning and decision-making. Hence, the seventh survey question meets the third research question partially while focusing on financial accuracy and risk assessment to ensure uninterrupted financial services.

Advent of GenAI is crucial in terms of evaluating a strategic dimension while focusing on utilisation of features such as operational management and planning. Effectiveness of GenAI remained essential to incorporate an overview associated with customer satisfaction at a long-

term as well. Depiction of the majority of survey participants represents a positive outcome in terms of considering financial transactions in a contemporary setting. Almost 45.7% of respondents agreed with a positive response over effectiveness of GenAI while focusing on participation of financial decision-making in terms of strengthening financial institution's competitive edge. However, challenges such as complex regulations as well as maintenance of innovative technology generated crucial dynamics in enhancing competitive edge for decision-making. Integration of GenAI can be effective towards evaluating authenticity of professional support in financial decision-making as a part of technological support. Hence, inclusion of GenAI for enhanced financial services can have a major impact on generating an overview based on the authenticity of planning.

Quality of financial information plays a major role to determine a potential inclusion while focusing on a strategic dimension while engaging authentic data. Lack of surveillance in data monitoring can be influential negatively over financial instructions to ensure a considerable change in regulatory compliances. As evaluated by Liu *et al.* (2024), maintenance of data-quality and integrity through GenAI remained an important aspect to consider changes in real-time monitoring while focusing on changing dynamics in terms of dealing with changes for customer engagement. Security and privacy issues within AI inclusion over financial organisations created a potential impact in terms of financial assessment towards core decision-making. Unauthorised access towards sensitive information can lead to a changing scenario for dealing with predictive success towards financial planning as well as data analytics. Survey responses also provide an insight into development of a communicational measure regarding financial decision-making as well as GenAI inclusion. Hence, findings from this survey question meets third research question partially while evaluating impact of quality and accuracy of transaction procedures in financial services.

Regression analysis and co-relational analysis helped to evaluate variability distribution as a part of statistical distribution in terms of evaluating different variables. Statistical data representation can have a significant impact over indication of theoretical distribution and variable evaluation in distribution. F value of 6.8056 is evaluative of calculation of mean square

between explained variables and unexplained variables of financial decision-making and GenAI's inclusion towards determining a statistical value to generate assumptions on research objectives. Advent of technological inclusion over financial planning was crucial for determining an overview based on technological value creation. Hence, it can be evaluated that financial decision-making with help of GenAI created a potential impact in terms of addressing customer satisfaction.

The leveraging or comprehensive framework of GenAI has a greater role to play in the financial sector especially in the part of planning research as well as product development. This framework is mostly encompassed with a set of guiding principles which provide assistance to the financial professionals especially during the time of decision-making related to financial transactions. With the collaboration of other financial institutions GenAI opens up the greater chances of enabling better adoption to sudden changes as per the regulatory compliance. Along with this, there is also the scope of robust market analysis as well as accurate forecasts of the market which ultimately help in improving productivity. On the other hand, the credit managers of any financial institution are also able to leverage GenAI to gain insights on the customer's trends, market conditions and others. GenAI has also proved to be effective for the employees of financial sectors in properly handling unstructured data which could be useful in boosting the customer experience since it is directly responsible in heightening customers' loyalty as well as satisfaction level. However, GenAI mostly requires continuous development in advanced security features to experience greater effectiveness in enabling the prevention of phishing activities and removing all other data privacy concerns.

The integration of GenAI into business operations has been found to significantly lower operating costs in the financial sector as GenAI mostly excels in all kinds of automating repetitive tasks, for instance, data entry as well as report generation. This tool is mostly useful in adjusting with the potential changes and formulating effective investment that is important for gaining higher returns from business operations with its features of predictive analysis. This predictive analysis feature is also helpful in decreasing the chances of financial losses from any predestined risks. Furthermore, the ability of GenAI in analysing and processing bulk data

in real time can also lead to significant cost efficiencies. The GenAI systems can also properly manage higher volume of customer enquiries, by offering on-time assistance along with freeing up human efforts for solving complex needs of the customers, thus helps in optimising employee costs. However, it is also important to note about the challenges of using GenAI as a lack of skilled workforce might create a challenging situation to leverage GenAI in the financial sector (Frey and Osborne (2023). For instance, the banks of North America have faced issues in upgrading the skills of existing employees as well as recruiting new employees who have expertise in AI as well as machine learning. This shows that unlocking the potential of GenAI in the Financial sector is dependent on the expertise of the employees.

5.6 Summary

It can be concluded that the implementation of GenAI in the American institutions has a greater role to play in offering a strategic pathway for enabling greater efficiency in both productivity as well as service quality. It has been useful in focusing more on gaining data insights to help the policy makers in identifying present financial patterns by analysing vast data sets. Moreover, one of the most important traits of GenAI is personalised advice to the financial managers in the American finance sector by utilising market data. It is also helpful to comply with the regulations to lower down the chances of errors in transactions.

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APPENDIX

Survey questions

Question 1: What is your age?

- 21-30
- 31-40
- Above 41

Question 2: What is your gender?

- Male
- Female
- Others

Question 3: Do you agree that Generative AI would allow improving performance of American financial institutions?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 4: Do you believe Generative AI would be capable of large amounts of financial data in American financial institutions?

- Firmly agree
- Agree

- Neutral
- Disagree
- Firmly disagree

Question 5: Do you believe Generative AI is effective in predictive matters like intellectual property pressures, employee abuse and conceivable financial facility mistakes?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 6: Do you believe leveraging key insight generated from Generative AI systems would assist the American Financial system to overcome challenges in operations?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 7: Do you think GenAI's system has provided an opportunity for American financial institutes to improve operational accuracy and effective economic risk analysis?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 8: Do you think enhanced procedures of financial transactions can be applied through utilisation of the GenAI system in American Financial Institutes?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 9: Do you agree that the application of a comprehensive framework over the tactical application of Generative AI would guide towards better quality?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree

Question 10: Do you believe GenAI can guide American Financial Institutions to achieve a lower operating cost in business operations?

- Firmly agree
- Agree
- Neutral
- Disagree
- Firmly disagree