

ChatGPT Practices: Finance and Banking Domain

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Abstract This paper reviews the practice of ChatGPT in the field of finance and banking through a natural language processing (NLP) system developed by OpenAI. We also discuss applications of ChatGPT in finance and banking, such as the detection of fraud, risk management, forecasting and analysis of the market, management of investments, chatbots for customer service, personal financial management, impact investing, and asset management along with its challenges, limitations and extremely encouraging future potentials. We also recommend taking necessary steps by the authorities to create and enhance ChatGPT-related legislation and regulations to avoid illegal and criminal offences. The paper concludes that ChatGPT will perform better and offer a better user experience for a variety of banking and finance sectors. It is worth remembering that in a relatively short period of time, ChatGPT has garnered significant attention from research, industry, and academia. This study will be helpful for policy makers, practitioners, and researchers.

Keywords: ChatGPT, Finance, Banking, Natural language processing (NLP), Chatbot

1. Introduction

Natural language processing (NLP) software, as well as the first chatbot in computer science history, was created in the 1960s by computer scientist Professor Joseph Weizenbaum from the Massachusetts Institute of Technology (Weizenbaum, 1966). The fast progression of artificial intelligence (AI) and NLP has resulted in the creation of ever-intricate and adaptable language models (Biswas, 2023a; Biswas, 2023b; Mathew, 2023; McGee, 2023a; McGee, 2023b). It might be clarified that ChatGPT is a language model built on the Generative Pre-trained Transformer (GPT) architecture rather than a Generative Adversarial Network (GAN) model (Arif et al., 2023; Kung et al., 2023; Taecharungroj, 2023; Wang et al., 2023; Zhong et al., 2023). Comprehending the inception and progression of ChatGPT is imperative in acknowledging its function in propelling scientific investigation (Bang et al., 2023; Biswas, 2023c; Gilson et al., 2023; Shen et al., 2023; VanDis et al., 2023; Wu et al., 2023). The ability of ChatGPT, an artificial intelligence-generated content (AIGC) model

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created by OpenAI, to handle difficult language understanding and creation tasks in the form of chats has garnered international interest (Wu et al., 2023). The foundations of ChatGPT lie in the study of NLP, an area of AI devoted to making it possible for robots to comprehend and produce human language (Eysenbach, 2023; Fijacko et al., 2023; Haleem et al., 2023; Michail et al., 2023). A large language model created as a conversational agent is OpenAI's ChatGPT. As a large language model, ChatGPT is trained on enormous amounts of data (Azaria, 2022). ChatGPT is a major issue at the most recent World Economic Forum (WEF) in 2023 because of its rapid rise in popularity and usage. The benefits and drawbacks of ChatGPT for the banking sector were examined. During a panel discussion on technology for a resilient world, tech titans, including Accenture, IBM, and Qualcomm, considered the introduction of ChatGPT and talked about its applications and implications for companies and society. Venture capital and technology companies are planning to use ChatGPT and generative AI technology. For example, according to sources, Microsoft intends to invest \$10 billion in ChatGPT's technology.

In this article, we offer a number of contributions that will aid scholars and fans in understanding ChatGPT. Several significant contributions include a thorough analysis of ChatGPT's current state, in-depth knowledge of the range of applications that ChatGPT can support, and a talk about ChatGPT's primary limitations and current issues. The objective of this study is to explore a wide range of understanding regarding the history of ChatGPT as well as its challenges, limitations, very uplifting future potentials and, at the same time, its applications in finance and banking.

2. Theoretical Framework

As of right now, ChatGPT, a brand-new AI invention from OpenAI that attracted a million users in just five days, is ambitious enough to advance this support (Haque et al., 2022). OpenAI's large-scale language model, known as Generative Pre-trained Transformer 3, or GPT-3, can generate text with 175 billion parameters. A large amount of data was used to train it (Brown et al., 2020). Identifying and reacting to input in natural language is one of the main features of Chat GPT. ChatGPT analyzes user input using NLP to generate relevant responses (LeCun et al., 2015).

The number of research on ChatGPT has been rising since its launch in November 2022. The bulk of those studies concentrate on writing abstracts and literature reviews and contrasting ChatGPT's output with human writing generally (Frye, 2022; Gao et al., 2022). They also cover a variety of academic fields, including education (Zhai, 2022), healthcare, medicine, and biological sciences (Aydın & Karaarslan, 2022; Cahan & Treutlein, 2023; Mann, 2023), and law (Choi et al., 2023; Perlman, 2022). In South Korea, a study was conducted to compare the knowledge and interpretation skills of medical students and ChatGPT. They conducted a comparison by giving ChatGPT and medical students a parasitology test. They discovered that medical students outperform ChatGPT in the exam in terms of knowledge and interpreting skills. One finding revealed that appropriate explanations and accurate responses to knowledge questions were related (Huh, 2023). A similar methodology was employed in other research, but they concentrated on different areas, such as law (Bommarito & Katz, 2022).

In fact, ChatGPT is a gold mine for students, academicians, and researchers, regardless of their subject or study. This OpenAI chatbot offers thorough responses to questions, and a high approval rate for the quality of the responses has been noted. Studies on the integrity of exams and the difficulties colleges have in identifying plagiarism in essays written by ChatGPT have been published (Armstrong, 2023; Frye, 2022; Hsu, 2023; Ryznar, 2020). A study on the moral implications of ChatGPT use in academic writing has been conducted (Jabotinsky & Sarel, 2022).

Instead of concentrating on writing an abstract and conducting a literature review, a study on ChatGPT for finance research was published in Finance Research Letters. According to the study, ChatGPT has clear benefits for idea development and data identification; nevertheless, it falls short when it comes to creating an effective and appropriate testing framework and conducting a thorough literature review (Dowling & Lucey, 2023). Another study uses ChatGPT to examine the possible uses of NLP in the financial industry. The whole work was written by the authors using ChatGPT, as they just organized and added relevant information (Zaremba & Demir, 2023). Further research compared ChatGPT's output with scholarly literature on the subjects of community finance,

alternative finance, and crowdfunding (Wenzlaff & Spaeth, 2022), reporting that the crucial feature of ChatGPT is its ability to provide customers with personalized and interactive assistance. User input enables ChatGPT to modify its responses and provide tailored guidance and support. The emergence of AI tools such as ChatGPT holds the capacity to fundamentally transform the way students approach their studies and the educational process. The use of AI technology to enhance learning has been demonstrated in related publications (Patil & Abraham, 2010; Pham & Sampson, 2022).

A series of research on a variety of subjects, including biology (Cahan & Treutlein, 2023; Reports, 2023), law (Choi et al., 2023), psychology (Uludag, 2023), and computer science (Chatterjee & Dethlefs, 2023), has been conducted based on the ChatGPT interaction. In this paper, we analyze the applications of ChatGPT in the field of finance and banking.

3. Methodology

3.1. Corpus

This study identified and selected works of literature (for review) that focused on the history, features, and applications of ChatGPT in finance and banking, along with its challenges, limitations, and future potentials. Literature from a range of sources, including journals, reports, proceedings, and other related items, were discovered for investigation by exhaustively screening both electronic and non-electronic databases. Literature searches from electronic databases were primarily conducted on Science Direct, Springer Link, Google Scholar, Inder Science, Blackwell, Science Citation Index, and Social Science Citation Index using a variety of keywords related to history, features, applications of ChatGPT in finance and banking, challenges, limitations and future potentials of ChatGPT, 4IR, and AI.

3.2. Procedure

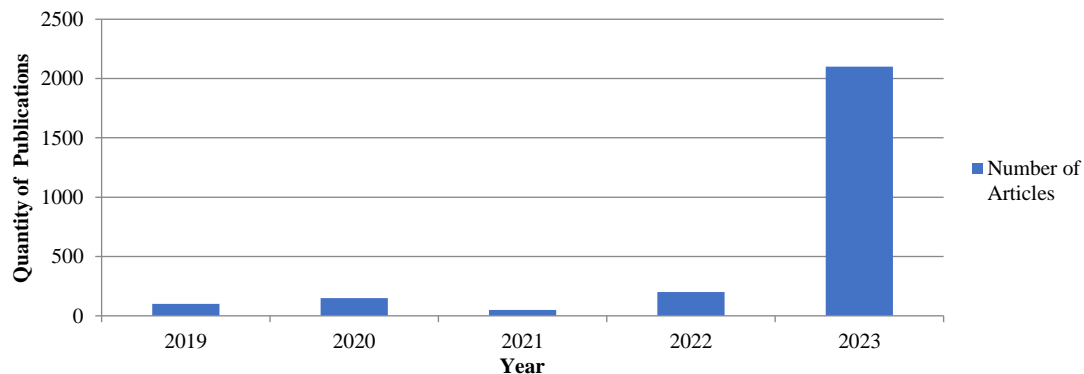
The full texts of major studies were collected, and references to the literature were looked for. We also searched the websites of the organizations known to have carried out this kind of study for pertinent documents and reports. Both manual and electronic searches were aided by a network of colleagues who provided relevant books and documents. This study examined the body of relevant literature and offered data, conclusions, and evidence in those areas. The study's findings and analysis are based on information, data, and proof that are now available from published literature and articles.

4. ChatGPT in Research

The expansion of ChatGPT throughout the research field is tremendously increasing. More than 3000 articles, reports, and news have been published in various journals, conferences, newspapers, blogs, and media reports as of March 2023, according to Google Scholar. Based on the number of publications that have been indexed on Google Scholar in recent years, Figure 1 illustrates the expansion of research interest regarding ChatGPT (Ray, 2023).

Figure 1

Annual Papers Indexed on ChatGPT in Google Scholar



5. History of ChatGPT

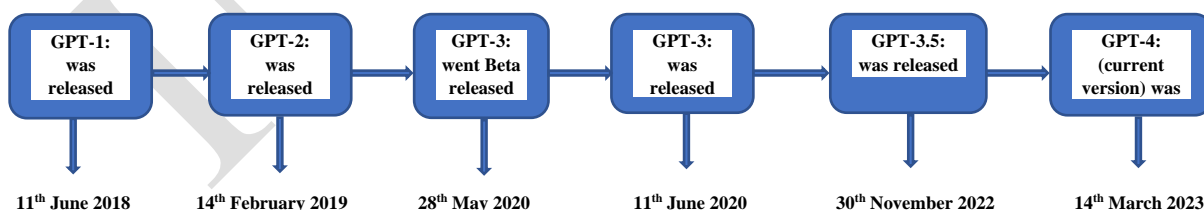
Numerous conversational AI applications, such as chatbots, virtual assistants, and customer support platforms, can make use of ChatGPT. In addition to producing human-like replies to user inputs, the model may be used to answer queries, provide suggestions, and carry out other conversational activities (Lo & Singh, 2023). The goal of GPT models is to produce natural language writing that is coherent and consistent with human language, including phrases, paragraphs, and full papers. GPT models' primary strength is in their capacity to pre-train on copious volumes of textual data and then subsequently refine on targeted downstream tasks, including text categorization or question answering. Pre-training is training the model in an unsupervised manner on a sizable corpus of text data, such as books or web pages. This eliminates the need for the model to require explicit labels or annotations on the training data (GPT Evolution, 2023). The goal of OpenAI is to advance artificial general intelligence (AGI) for the good of humankind. OpenAI, which was founded in 2015 by Elon Musk, Sam Altman, and others, has been at the vanguard of AI research and has created a number of ground-breaking models, including GPT-2, GPT-3, and ChatGPT. As a result of OpenAI's ongoing research and development, which built on the success of GPT-3, ChatGPT, which is based on the GPT-4 architecture, was created.

A chatbot called ChatGPT (Chat Generative Pretrained Transformer) creates AI-generated content that resembles human speech based on user input. In November 2022, OpenAI released a version that they had built. The origins of ChatGPT may be found in NLP, a subfield of AI that focuses on enabling robots to comprehend and produce human language (Eysenbach, 2023; Fijacko et al., 2023; Haleem et al., 2023; Michail et al., 2023). The goal of developing ChatGPT was to produce a very intelligent and adaptable AI language model that could help with a wide range of activities, such as data analysis, translation, and text creation. The evolution of the Transformer architecture, first shown in Ref, is the basis of ChatGPT (Vaswani et al., 2017).

5.1. Launch of ChatGPT

Figure 2 demonstrates GPT-1, the first iteration, which was released on June 11th, 2018. The foundation of ChatGPT is the GPT-3.5 architecture, an updated iteration of the GPT-3 model made available by OpenAI in 2020. GPT-3.5, which has 6.7 billion parameters as opposed to GPT-3's 175 billion, is essentially a scaled-down version of GPT-3 (Alkaiissi & McFarlane, 2023; Borji, 2023; Frieder et al., 2023). GPT-4, the most recent version, was issued on March 14th, 2023. Using the most recent version of the program, lengthier documents, longer texts, and longer discussions may all be handled without losing context.

Figure 2
Emergence of ChatGPT



Source Link: <https://www.tooltester.com/en/blog/chatgpt-statistics/>

5.2. GPT-3.5 vs. GPT-4

Although at different scales, GPT-4 and GPT-3.5 share many similarities in that they both rely on a comparable Transformers architectural paradigm (Ouyang et al., 2022). The key distinction between GPT-3.5 and GPT-4 is the capacity to comprehend various kinds and amounts of information (Table 1). Maximum context length for requests of GPT-3.5, GPT-4-8K, and GPT-4-32K are consistently

4,096, 8,192 and 32,768. The number of English words, along with the number of single-spaced pages of English text, has been highlighted in Table 1.

Table 1

Distinctions between GPT-3.5 and GPT-4

	GPT-3.5	GPT-4-8K	GPT-4-32K
Maximum context length for requests	4,096	8,192	32,768
Number of English words	~3,000	~6,000	~24,000
Number of single-spaced pages of English text	6	12	50
Input types	Text	Text and images	Text and images

Source Link: <https://www.tooltester.com/en/blog/chatgpt-statistics/>

5.3. Users of ChatGPT

According to a UBS estimate, ChatGPT had more than 100 million monthly active users as of the end of January 2023, just two months after its inception (Raffel et al., 2020). On the basis of the data presented in Table 2, one million new users joined ChatGPT in the first week after it was launched. This established a record for the consumer application with the fastest-growing user base ever. An estimated 1.66 billion visits to the ChatGPT website were made in the preceding month (down 9.73% from the 1.85 billion visitors of the month before but up 66% from February 2023). Currently, it is unclear how many users are actually logged in. Our best estimate places the number at roughly 100 million. Users of ChatGPT come from all over the world, with the United States accounting for the majority (an estimated 12.12%). With about 7.61% of users residing here, India is estimated to have the second-highest percentage of users.

Table 2

User's Percentage of ChatGPT

Country	Percentage (%) of ChatGPT Users
United States	12.12%
India	7.61%
Japan	4.17%
Brazil	3.32%
Columbia	3.16%
Other	69.62%

Source Link: <https://www.tooltester.com/en/blog/chatgpt-statistics/>

5.4. ChatGPT in Different Countries

According to OpenAI, ChatGPT is currently supported in 161 nations. All nations, with the exception of the following, offer it: China, Ukraine, Venezuela, Iran, Russia, Belarus, and Afghanistan.

5.5. Languages with ChatGPT

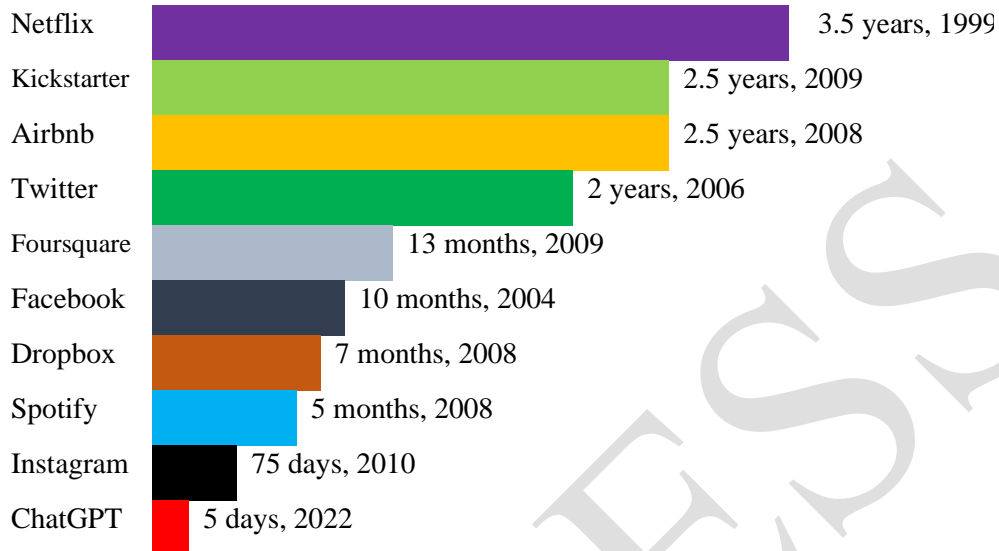
Although ChatGPT mostly works in English, SEO.ai claims it can also understand 95 other languages, including French, Spanish, German, and Chinese. Python was used as the primary computer programming language to create the model. According to OpenAI, it can comprehend a variety of programming languages, including Python, C++, Java, PHP, Swift, SQL, JavaScript, C#, Ruby, Go, TypeScript, and Shell.

5.6. Practice of ChatGPT in Comparison to Other Platforms

In comparison to other well-known platforms, ChatGPT has expanded very quickly, as represented in Figure 3. It took just only five days to gain a million users, making it the second-fastest platform to hit that milestone after Instagram. Spotify, Dropbox, Facebook, Foursquare, Twitter, Airbnb, Kickstarter,

and Netflix acquire one million users consecutively within 5 months, 7 months, 10 months, 13 months, 2 years, 2.5 years, 2.5 years, and 3.5 years.

Figure 3
Time to Reach 1 Million Users of ChatGPT in Comparison to Other Platforms



Source Link: <https://www.tooltester.com/en/blog/chatgpt-statistics/>

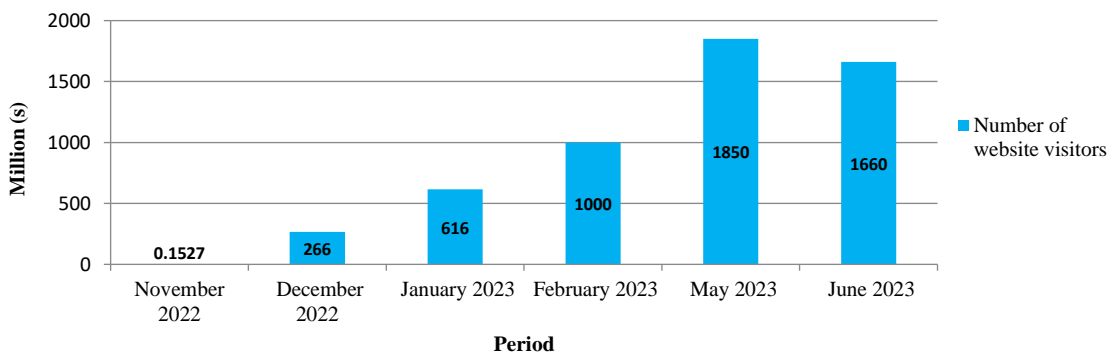
5.7. Earning from ChatGPT

By the end of 2023, according to OpenAI, ChatGPT’s revenue will be about \$200 million, and by the end of 2024, it will be \$1 billion. The tool will have earned an average of \$547,945 per day in 2023 and \$2,732,240 per day in 2024 if these projections are accurate. According to Semafor, Microsoft intends to invest \$10 billion in OpenAI, giving the company a \$29 billion market value.

5.8. Trend of ChatGPT Website Visitors

According to Figure 4, 13 million unique visitors per day, or more than twice as many as in December 2022, visited ChatGPT on average in January 2023. In the previous month, the site’s traffic increased by an average of 3.4% every day. Over 35 million people per day, or an estimated 1 billion visitors, used ChatGPT in February. There were an estimated 1.85 billion visitors to ChatGPT in May. In June, the number of visitors fell to 1.66 billion, or 55 million per day. This is the first time that the website’s traffic has decreased month over month.

Figure 4
Website Visitors of ChatGPT



Source Link: <https://www.tooltester.com/en/blog/chatgpt-statistics/>

6. Fourth Industrial Revolution (4IR)

The Fourth Industrial Revolution (4IR) is the current and emerging environment in which emerging technologies and trends, such as the Internet of Things (IoT) and AI, are altering the way people live and work. An outline of chatGPT's features, advantages, and difficulties will be given in this paper. The utilization of diverse technologies helps the government and the private sector enjoy rapid growth. The four industrial revolutions that have occurred throughout history were driven by technology. The usage of technology in the present day helps to bring fresh notions and ideas to life. Virtual worlds, smart cities, big data, the IoT, and AI are just a few of the concepts that are influencing progress in the new era. The enhancement of life and the simplicity of conducting business and providing services are further similarities between these revolutions (Kayembe & Nel, 2019).

Although the phrase "Industry 4.0" is primarily used in the commercial world, it is also a name for the 4IR. Industry 4.0 is referred to as a collective term for technology used by value chain organizations (Hermann et al., 2016). Industry 4.0 focuses on increasing network integration and digitized system development. New systems will substitute machine labor for current methods of doing activities that require human labor in Industry 4.0 (Erboz, 2017).

7. Artificial Intelligence (AI)

Artificial intelligence (AI) is the branch of research that aims to provide machines with the ability to carry out tasks, including logic, reasoning, planning, learning, and perception. AI, then, is computer software that resembles human traits (Andreu-Perez et al. 2018). The goal of AI, a subfield of computer science, is to build intelligent machines that can think and behave like people. AI systems are created with the ability to learn from their surroundings and make judgments based on the information they are fed. NLP, driverless vehicles, and medical diagnostics are just a few of the complicated issues that AI can handle. Additionally, it can aid in lowering the original and ongoing costs of electrical systems, information systems (Wang et al., 2018), and customer service (Daqar & Smoudy, 2019).

8. Applications of ChatGPT in Finance and Banking Sectors

The newest and most potent big language model, ChatGPT, is transforming a number of Chinese sectors. Notably, it has also become more prominent in the financial industry throughout the past year, appearing in fields including banking, insurance, investing, and cooperative finance. Professionals often gather and examine data for financial analysis from a range of sources, including news items, market data, and financial reports. Financial models may then be developed using this data to forecast performance in the future. Due to ChatGPT's extensive training across several books from various sources, it possesses a comprehensive comprehension of financial ideas, strategies, and market data. This makes it possible to support financial forecasting and analysis by offering data and insights on a variety of financial subjects. Furthermore, ChatGPT can comprehend and respond to complicated queries because of its NLP capabilities, which facilitates financial professionals' access to the data they require to make decisions (Jiang, 2024).

Over the past few decades, NLP's use in finance has seen tremendous change. NLP was first applied in finance for relatively easy tasks like stock forecasting and sentiment analysis of financial news stories. However, the use of NLP in finance has grown increasingly complex and varied as a result of improvements in NLP methodologies and computing capacity. These days, a variety of financial responsibilities, such as impact investing, risk management, and asset management, are handled by NLP models (Lo & Singh, 2023).

ChatGPT is a major issue at the most recent World Economic Forum (WEF) in 2023 because of its rapid rise in popularity and usage. The benefits and drawbacks of ChatGPT for the banking sector were examined. Tech giants, including Accenture, IBM, and Qualcomm, discussed the launch of ChatGPT and its uses and ramifications for businesses and society at a panel discussion on technology for a resilient world.

Utilizing ChatGPT may be used to develop systems that can detect fraud and financial crimes. By analyzing transaction data and identifying patterns that may indicate fraudulent activity (Haleem et al., 2023), ChatGPT may be used to build systems that can spot financial misbehavior and fraud. ChatGPT helps financial institutions prevent financial losses by looking at transaction data and identifying patterns that can indicate dishonest behavior.

One possible usage for ChatGPT is to create risk management tools. ChatGPT assists financial institutions in developing strategies to reduce risks by analyzing financial data and identifying potential threats. Systems that help with risk management may be created with ChatGPT. ChatGPT may assist companies and financial institutions in creating risk-reduction plans by evaluating financial data and identifying possible hazards (Teubner et al., 2023).

ChatGPT may be used to evaluate vast volumes of financial data, spot trends, and patterns, and offer insights into the state of the market (Alafnan et al., 2023). ChatGPT may be utilized to create chatbots for customer service that can answer questions, suggest products, and handle transactions for clients (George & George, 2023).

Investment management assistance systems may be developed with ChatGPT. ChatGPT can assist companies and investors in making wise investment decisions by evaluating financial data and offering advice (Taecharungroj, 2023). ChatGPT may be used to create tools for consumers that will help them manage their debt, save money, and create budgets.

The observation of this study is that financial reporting support systems may be developed with ChatGPT. ChatGPT may assist businesses, finance, and banking through the analysis of financial data and the provision of insights into financial performance. NLP has already proven to be capable of handling a variety of tasks, including impact investing, risk management, and sentiment analysis. NLP is positioned to play an increasingly significant role in finance due to technological advancements in the field and the volume of financial data that is becoming available. Potential uses for NLP in the financial industry include fraud detection, regulatory compliance, financial analysis, and decision-making.

9. Concluding Remarks

The literature that addressed ChatGPT's history, features, and applications in banking and finance, as well as its difficulties and promise for the future, was found and chosen for review in this study. A thorough search of both electronic and non-electronic databases turned up a wealth of material for inquiry, including journals, reports, proceedings, and other relevant materials. This study included statistics, conclusions, and evidence in those areas, in addition to reviewing the body of pertinent literature. The information, evidence, and conclusions of the study are based on currently accessible information from published literature and articles. This study's goal is to investigate a wide variety of knowledge on ChatGPT's past, as well as its difficulties, restrictions, and exciting future possibilities. It also aims to investigate ChatGPT's applications in banking and finance.

As this review, ChatGPT has demonstrated significant potential in enhancing productivity, promoting teamwork, and spurring creativity across a range of applications and scientific research domains. According to Jiang's (2024) study, ChatGPT may be used in financial research in a variety of ways, including creating scenarios and simulations for financial models, spotting trends and patterns, and conducting literature reviews. In fact, ChatGPT provides financial institutions with a wide range of services, including data analysis, investment advice, account administration, customer support, and adherence to legal and regulatory requirements. Conversational behavior, continuous learning, customization, and interoperability are some of its distinctive aspects. Including financial robo-advisors, ChatGPT can handle activities such as asset management, investment management, and stock price prediction (Ali & Aysan, 2023). In this review, we found that as data, storage, and processing capacity have increased over the past few decades, NLP's application in finance has changed dramatically. These days, NLP (ChatGPT) is employed for many complex activities, such as the detection of fraud, risk control and management, forecasting and analysis of the market, management of investments, chatbots for customer service, fraud detection in banking, personal

financial management, investing risk management and so on. Lo and Sing (2023) made a claim in their research that these days, NLP is employed for many complex activities, such as impact investing, risk management, and asset management. This review has shown some limitations, such as data scarcity, its moral and legal ramifications, the intrinsic limits of NLP, apparent “hallucinations” of AI bots, and the incredibly promising future potential of ChatGPT. In his research, Jiang (2024) contends that even though ChatGPT has great promise in a number of financial fields, there are still obstacles and restrictions to its use in China’s financial sector. These include concerns with ethical dilemmas, real-time database updates, model fine-tuning, and data leaking.

It is necessary for the authorities to create and enhance ChatGPT-related legislation and regulations. Despite ChatGPT’s strength, using it entails a number of legal issues, including the possibility of data leakage, misuse of AI, dissemination of incorrect information, and stating “nonsense with a straight face”. Criminals may, for instance, intentionally “train” ChatGPT to produce phishing websites. The victims’ personal and property safety might be compromised as a result of being duped by the false information on those websites. Numerous legal matters must be resolved in the interim. For example, who will be legally liable if anything produced by ChatGPT is infringed? All of those need the establishment and improvement of comprehensive and cautious rules and regulations.

This study is limited in that Math and first-order logic difficulties are examples of precise logic problems that ChatGPT is unable to handle well. It continues to provide biased or factually wrong answers. ChatGPT performs a little below average in this area despite the fact that this is a problem inherent in generative AI models. ChatGPT is unable to do real-time online searches to find current and fresh information. Despite ChatGPT’s ability to provide secure and innocuous answers, it is nevertheless susceptible to assaults such as prompt injection and instruction attacks, which cause the model to follow erroneous instructions that result in unlawful or immoral behavior (Zhou et al., 2023). Additionally, ChatGPT has several restrictions. For instance, despite having been trained on a vast corpus of text data, it is still unable to comprehend context completely and frequently generates replies devoid of emotional intelligence. Furthermore, biases in the training data may affect it, producing outputs that are imprecise or insensitive (AlZu’bi et al., 2024). We also found a few of ChatGPT’s drawbacks, including the training data’s inherent biases and its inability to distinguish between factual correctness and incomplete or out-of-date information. In addition, the approach has issues with creating visual material, conversational context, ethical reasoning, and contextual awareness. Moreover, ChatGPT could have trouble responding to requests that aren’t acceptable, adjusting to user skill levels, and giving tailored feedback.

In conclusion, this evaluation has given a thorough overview of ChatGPT’s quick development and its ability to participate in a variety of communication scenarios. In contrast to other research, the study presents the ChatGPT topic from a new angle. One may argue that ChatGPT is only the beginning; with greater database integration and processing capacity, it can be used for more than just creating content. Research into ChatGPT and its effects on other industries, including banking and finance, will continue in the future. Within the field of generative AI, a stir was created by the introduction of ChatGPT, an OpenAI chatbot. Although ChatGPT’s content creation and response capabilities have already been studied by academics, our research takes a unique approach by looking at its possible uses in the financial industry. Our focus on ChatGPT’s financial potential is intended to stimulate discussions about its possible applications and investigate the possibility of a wider revolution down the line. Regarding ChatGPT’s potential uses in the banking sector going forward, our findings based on each query provide insightful hints. To accomplish these goals, ChatGPT requires a lot of data, deep learning, and machine learning networks and algorithms. In several crucial areas, further study is still required:

- Among the specific logic issues that ChatGPT struggles with are math and first-order logic issues.
- ChatGPT has a number of limitations. For example, even after being trained on an extensive corpus of text data, it is still unable to fully understand the context and often produces responses that lack emotional intelligence.

- Other restrictions include challenges with multilingual inquiries, nonliteral language, inventiveness, and consistency in quality.

ChatGPT has had a huge influence on the financial sector. It benefits financial firms by lowering expenses, increasing productivity, and improving client satisfaction. Additionally, it gives clients a distinctive way to interact with the business and advances the financial services industry as a whole. The World Economic Forum is one of the international events where the introduction of ChatGPT has generated a lot of discussion, highlighting the significance of this technology for the financial sector. Nevertheless, ChatGPT is not without its difficulties, including data privacy, regulatory compliance, and cybersecurity flaws. Concerns over test integrity and plagiarism detection have also been brought up by the usage of ChatGPT in academic writing. Notwithstanding these difficulties, ChatGPT has the ability to revolutionize the financial sector by offering cutting-edge services and raising client satisfaction levels. ChatGPT has the potential to evolve into a potent tool for financial institutions and support the expansion of the financial industry with more development and database integration.

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