

# THE USE OF ARTIFICIAL INTELLIGENCE IN FINANCIAL ADVISORY

David Michellini<sup>1</sup>

<sup>1</sup> Ing. David Michellini, University of West Bohemia, Faculty of Economics, e-mail: michelin@fek.zcu.cz, ORCID: 0009-0000-8405-7095

**Abstract:** This article analyzes the potential benefits and challenges of utilizing artificial intelligence (AI) in financial advisory based on a survey conducted among financial advisors. The results indicate that most advisors perceive AI as a tool capable of enhancing various processes, from data processing to financial planning and client service personalization. The study identifies key areas where AI can reduce administrative burdens, accelerate data analysis, and support better decision-making. However, respondents also expressed concerns regarding data security, the need for more reliability, and the transparency of AI algorithms, which could limit the broader adoption of these technologies. Although AI is a significant advancement, its full implementation in financial advisory will require a balanced approach combining technological solutions with human advisory. This research overviews the current state and highlights potential directions for AI development in financial advisory, emphasizing the need for an ethical framework and transparency.

**Keywords:** Artificial intelligence, financial advisory, efficiency, data security.

**JEL Classification:** G2, O33

---

## INTRODUCTION

Artificial intelligence (AI) is becoming one of the critical tools transforming the financial sector, with applications ranging from the automation of administrative processes to predictive analysis and personalized advisory. In recent years, AI has proven capable of accelerating and streamlining decision-making processes and making financial services more accessible to a broader range of clients (Mhlanga, 2020). Current studies indicate that AI, in the form of generative models and tools such as robo-advisors, brings a novel approach to financial advisory, enabling the processing of vast amounts of data and delivering personalized recommendations in real-time (Bhatia et al., 2021; Arenas-Parra et al., 2024).

However, implementing AI in financial advisory brings benefits and challenges. Financial advisors still face concerns regarding data security, algorithmic transparency, and maintaining trust between advisors and clients (Truby et al., 2020). Trust is particularly crucial when AI is used for more complex tasks, such as investment advisory, where clients continue to prefer human interaction. At the same time, more straightforward transactions are more amenable to technological solutions (Northey et al., 2022).

This study examines financial advisors' attitudes toward using AI and analyzes their perceptions of future opportunities and risks associated with AI in financial advisory. Based on a survey conducted among financial advisors, this study provides insights into how AI tools are currently employed and identifies areas with the most significant potential for development. The findings focus on AI's role in decision support, process efficiency, and service personalization while addressing the obstacles that could hinder the broader adoption of these technologies.

## 1. THEORETICAL BACKGROUND

### 1.1. Application of Generative Artificial Intelligence in Practice

Generative artificial intelligence represents a significant advancement in machine learning and automation, capable of generating new content or models based on data inputs. This approach is utilized across various fields, from art creation to technical design and scientific research. Typical generative AI models include Generative Adversarial Networks (GANs) and variational autoencoders (VAEs), which can produce realistic data similar to the training data used in their development (Liu et al., 2023; Shi et al., 2023). These models have applications across numerous industrial sectors, including materials science, medicine, and marketing (Dwivedi et al., 2021; Liu et al., 2023; Rasiwala & Kohli, 2021). Generative AI has proven especially valuable in automated text generation, graphic design, creating new materials, supporting research, and reducing development time (Liu et al., 2023).

One of the advantages of generative AI is its ability to process large volumes of data and extract meaningful patterns. This capability facilitates applications in automated writing, translation, and complex process modeling (Dwivedi et al., 2021; Manser Payne et al., 2021; Rabbani et al., 2023; Yasir et al., 2022). Additionally, generative AI is widely used in research fields to aid in developing new drugs or improving diagnostic tools in healthcare (Liu et al., 2023).

Generative AI models, such as ChatGPT, are becoming increasingly common in customer-company communication, enhancing customer support and overall customer experience (Rasiwala & Kohli, 2021). These tools can simulate dialogue or provide real-time support (Truby et al., 2020; Dwivedi et al., 2023). Consequently, generative AI is gradually becoming an indispensable part of industries that require rapid and efficient solutions when dealing with large volumes of data (Mhlanga, 2020).

Generative AI is also applied in the education sector, where its applications in teaching and learning processes are being explored. Generative AI can improve personalized learning and optimize educational processes, leading to better learning outcomes (Hooda et al., 2022; Dwivedi et al., 2021). In this context, GAI is used, for example, to create individualized study plans or to automate student assessments (Ivanashko et al., 2024; Hooda et al., 2022).

### 1.2. Application of Generative Artificial Intelligence in Finance

In the financial sector, generative AI is becoming one of the primary tools for service innovation and enhancing process efficiency. One of the most significant applications is automated financial advisory (robo-advisory), where AI systems analyze investment data and recommend optimal investment strategies (Bhatia et al., 2021). These systems are designed to broaden access to financial services, lowering entry barriers for small investors (Arenas-Parra et al., 2024).

Another significant benefit of generative AI is its role in predicting market trends. AI technologies enable the analysis of large amounts of historical data to forecast future market movements, thus improving decision-making for financial institutions and investors (Mhlanga, 2021; Shi et al., 2023). This process is crucial for portfolio management and enhancing investment performance (Arenas-Parra et al., 2024).

In credit risk analysis, generative AI plays a vital role by enabling financial institutions to assess clients' financial histories and predict their ability to repay loans. This approach is precious in emerging economies, where traditional credit risk assessment methods often fall short (Mhlanga, 2020; Rabbani et al., 2023). Through machine learning, alternative data such as publicly available information and social media can be analyzed, improving the accuracy of credit risk assessments.

Banks use AI tools to monitor real-time transactions and detect unusual activities, enabling quicker responses to potential fraud (Manser Payne et al., 2021; Rabbani et al., 2023). This approach enhances security for banks and their clients while reducing the costs associated with manual transaction monitoring.

Generative AI is also a valuable tool for improving customer experience. Chatbots and other AI-based services increase the efficiency and personalization of customer support, leading to higher client satisfaction

(Northey et al., 2021; Northey et al., 2022). Banks implementing AI systems have seen improvements in operational efficiency and customer trust (Rabbani et al., 2023). Studies show that while customers prefer human advisors for complex financial decisions, they favor the speed and efficiency offered by AI for more straightforward transactions (Ivanashko et al., 2024).

## **2. METHODOLOGY**

This study is based on quantitative research conducted through a survey distributed among financial advisors. The questionnaires were electronically distributed to financial advisory professionals with experience with AI technologies. The questions were designed to capture advisors' attitudes toward AI use, identify critical advantages and disadvantages of this technology, and assess its potential for future applications. The questionnaire consisted of two main sections. The first section included questions related to respondents' demographic data (e.g., age, years of experience), while the second section focused on evaluating the benefits and risks of AI in financial advisory and its potential future applications.

The study was conducted at an undisclosed headquarters in Southwestern Bohemia, within the largest advisory firm in the Czech Republic. The survey was distributed to respondents during the summer of 2024, and 61 responses were received.

The results of this survey are presented in charts and descriptions in the following section. A vital outcome of the study is a set of potential suggestions for the practical application of generative artificial intelligence among financial advisors, offering innovative ideas that could facilitate the work of professionals in the field.

## **3. RESULTS**

The survey results indicated that the majority of respondents perceive AI as a positive asset in the field of financial advisory. The specific survey results are divided into three sections. The first section covers the respondents' demographic data, the second assesses the current use of AI tools, and the final section focuses on the future potential and utilization of AI tools.

### **3.1. Respondent Demographics**

The demographic data of the respondents are presented in Table 1 below. Key demographic variables include gender, age group, and highest level of education attained.

Tab. 1: Respondent Demographics

Demographic and variable	Frequency, n (%)
<b>Gender</b>	
Male	37 (60.7)
Female	24 (39.3)
Other	0 (0)
<b>Age</b>	
Under 20	3 (4.9)
20 – 30 years	44 (72.1)
31 – 40 years	13 (21.3)
41 – 50 years	1 (1.6)
51 – 60 years	0 (0)
61 years and more	0 (0)
<b>Educational level</b>	
Secondary education with planned graduation	4 (6.6)
Secondary education with completed graduation	38 (62.3)
Higher vocational education	0 (0)
Bachelor	11 (18)
Master	8 (13.1)

*Source: Processed by the author, 2024*

The survey revealed that among the 61 participants, the majority were male (60.7%), while females comprised 39.3%; no respondent identified as another gender. The age structure of the respondents was predominantly younger, with 72.1% falling into the 20–30 age group and 21.3% in the 31–40 age range. Only 4.9% of respondents were younger than 20, and there was only one respondent in the 41–50 age category; there were no respondents in older age groups.

Regarding educational attainment, most participants had completed secondary education with a graduation diploma (62.3%). Additionally, 18% held a bachelor's degree, and 13.1% had a master's degree. Only 6.6% of respondents had secondary education without a completed graduation diploma, and no respondents reported having higher vocational education.

### 3.2. Assessment of Current Use of AI Tools

Table 2 below presents the respondents' answers regarding the current use of artificial intelligence in practice. Specifically, this section of the questionnaire focused on questions related to the current attitudes toward using AI tools, as well as the benefits and risks associated with their use.

Tab. 2: Assessment of Current Use of AI Tools

Assessment of Current Use of AI Tools and variable	Frequency, n (%)
<b>Attitude Toward AI Use</b>	
1 – None	1 (1.6)
2 – Low	1 (1.6)
3 – Medium	19 (31.1)
4 – High	25 (41)
5 – Expert	15 (24.6)
<b>Current Use of AI</b>	
Yes	35 (57.4)
No	26 (42.6)
<b>Frequency of AI Use</b>	
Daily	2 (3.3)
Several times a week	18 (29.5)
Several times a month	20 (32.8)
Less frequently	9 (14.8)
Never	12 (19.7)
<b>Purpose and Application of AI Use</b>	
Chatbots and virtual assistants	28 (71.8)
Robo-advisors (investment portfolio management)	0 (0)
Data analysis and financial trend prediction	7 (17.9)
Regulatory technology	3 (7.7)
Service personalization	4 (10.3)
Data processing	13 (33.3)
Creation of educational materials	19 (48.7)
Creation of business materials	12 (30.8)
Not in use	1 (2.6)
<b>What Are the Main Benefits of Using AI?</b>	
Increased work efficiency	41 (80.4)
Better data-driven decision-making	29 (56.9)
Improved customer experience	7 (13.7)
Reduced operational costs	4 (7.8)
Enhanced data processing	1 (2)
Improved material aesthetics	1 (2)
Inspiration	1 (2)
Useful advice	1 (2)
Idea and concept generation	1 (2)
Connectivity and experience	1 (2)
<b>Have You Encountered Any Risks When Using AI Tools?</b>	
Yes	36 (59)
No	25 (41)
<b>What Risks Have You Encountered When Using AI Tools?</b>	
Insufficient accuracy and reliability of tools	34 (85)
Complicated integration with other systems	7 (17.5)
High costs of implementation and maintenance	1 (2.5)
Lack of expertise to use AI tools	16 (40)
Data security and privacy concerns	8 (20)

Source: Processed by the author, 2024

The data indicate varying levels of acceptance and usage of artificial intelligence (AI) among respondents, with attitudes towards AI ranging from basic to expert levels. The most significant proportion of respondents, 41%, identified with a "high" level of AI knowledge, while 24.6% reported expert knowledge. Only 3.2% of respondents rated their knowledge as very low or nonexistent, suggesting a relatively high awareness of the technology within this group.

More than half of the respondents, 57.4%, indicated that they currently use AI actively, with varying frequencies. Regular usage several times a week or month was reported by 62.3% of respondents, while only 3.3% use AI daily. The remaining 19.7% said they do not use AI tools.

The most common uses of AI include "chatbots and virtual assistants," cited by 71.8% of respondents, followed by "data processing" (33.3%) and "creation of educational materials" (48.7%). In contrast, respondents currently do not use areas like portfolio management via robo-advisors (0%). These data suggest that most users focus on areas where AI supports work processes and communication efficiency. At the same time, more complex applications, such as investment management, still need to be expected.

Regarding the main benefits of using AI, respondents most frequently mentioned "increased work efficiency" (80.4%) and "better data-driven decision-making" (56.9%). Other cited benefits included improved customer experience (13.7%) and reduced operational costs (7.8%). These results suggest that AI is primarily viewed as a tool to boost productivity and optimize decision-making processes.

Regarding risks associated with AI usage, 59% of respondents answered affirmatively, with the most frequently cited issue being "insufficient accuracy and reliability of tools" (85%). Other mentioned risks included "lack of expertise" (40%) and "data security and privacy concerns" (20%). These data indicate that, while AI tools are widely accepted in financial advisory, concerns remain regarding their reliability, integration, and security.

### **3.3. Proposals for Future Use of AI Tools in Financial Advisory**

The responses indicate that the majority (70.5%) of participants plan to expand or modify their use of artificial intelligence in their practice. The remaining respondents were either uncertain (26.2%) or did not intend to change their current use of AI tools (3.3%). This uncertainty may reflect concerns about AI's reliability and security.

These results suggest that while AI is seen as a promising tool with substantial potential to enhance financial advisory, its broader adoption may be conditional on overcoming existing obstacles, such as the need for technical expertise and the reliability of the technology.

The survey revealed a wide range of perspectives among financial advisors regarding the future use of AI in their practice. Key areas where respondents see potential for AI include the automation of routine tasks, data processing, and decision support. Many respondents indicated that AI could significantly improve efficiency by taking over administrative activities, such as processing insurance claims, preparing financial plans, and managing email correspondence with clients. This creates a vast potential for generative AI as a personal virtual assistant. A prerequisite for such use would be training the assistant properly, providing it with essential information and materials, and teaching it to accurately locate answers to specific questions. Other areas where respondents see AI benefits include generating financial plans, personalizing services, and accelerating client project processing. Respondents anticipate that AI will enhance client education and support the practical training of colleagues, especially in developing educational and business materials. Some also mentioned AI as a tool for market analysis and financial trend prediction, which could improve the quality and accuracy of their advisory services.

Conversely, some respondents expressed uncertainty or skepticism about AI's use due to a lack of familiarity with the technology or concerns about its relevance for specific job tasks. Training sessions or workshops could be considered for these respondents to improve their knowledge of AI applications.

In summary, most respondents view AI as a significant tool for enhancing efficiency, accuracy, and service customization, though they have some reservations and questions about its practical application and reliability.

#### **4. DISCUSSION**

The research findings confirm a growing interest among financial advisors in AI applications within the field, particularly in areas such as automating routine tasks, data analysis, and support for financial planning. This trend aligns with current literature, highlighting AI's potential for fundamentally transforming financial services. Studies indicate that AI tools can significantly enhance efficiency (Mhlanga, 2021).

From the perspective of specific applications, respondents primarily view AI as a support tool for data processing. This is consistent with Manser Payne et al. (2021) findings, who report that AI in finance can analyze vast volumes of data and deliver more accurate financial recommendations. In this way, AI can mitigate cognitive biases that often affect human decision-making, as supported by Hasan et al. (2023), who emphasize AI's role in reducing bias in investment decision-making.

Despite most respondents' optimistic stance, challenges remain that need to be addressed. Key obstacles identified in the survey include insufficient accuracy and reliability of AI tools, data security and protection concerns, and complications in AI integration with other systems. These concerns align with the conclusions of Truby et al. (2020), who highlight the need for stricter AI regulations in the financial sector to ensure worker trust and the protection of client personal data.

Another finding is that AI needs to be more utilized in complex applications, such as portfolio management through robo-advisors. As Bhatia et al. (2021) noted, robo-advisory services can expand access to financial services for a broader client base. However, their implementation requires a high level of user trust. Survey results indicate that some financial advisors have reservations about the risks associated with fully automating investment processes, which could limit AI's use in more complex areas of financial advisory.

Respondents also indicated that AI has the potential to save time in administrative tasks, a benefit supported by Dwivedi et al. (2021), who view automation of routine tasks as a significant advantage of generative AI in the field. At the same time, it was noted that some more complex issues still require a human approach, as confirmed by Northey et al. (2022), who found that clients often prefer human advisors for complex decisions while being more open to AI for more straightforward transactions.

In light of these findings, it can be concluded that while AI offers substantial benefits for enhancing efficiency and quality in financial advisory, its application in this field will require a balanced approach that combines technology and the human factor. Further research should focus on practical ways to integrate AI to foster user trust and extend its use into more demanding areas of financial advisory.

#### **CONCLUSION**

The research findings indicate that AI is perceived as a vital tool for enhancing efficiency and accuracy in financial advisory, especially in automating administrative tasks and accelerating data analysis. Financial advisors particularly value AI's potential to streamline processes, increase the accessibility and accuracy of services, and reduce time-consuming routine activities. Nevertheless, challenges remain, particularly concerns about data security and the potential loss of human-client interaction.

The study also identified barriers that could limit the broader adoption of AI in financial advisory, such as a need for more expertise and concerns over the reliability of AI tools. As Dwivedi et al. (2021) suggest, implementing AI in practice requires a balance between technological advancement and the ability to ensure client trust and data security, which may lead to the development of hybrid models that combine technological approaches with human advisory. Such a balanced model could ensure that AI is a valuable supplement for human advisors rather than a complete replacement.

In the future, it will be essential for financial institutions and AI technology providers to ensure transparent and ethical implementation of these tools. Further research should focus on optimizing AI methods to support decision-making processes in more complex areas of financial planning and developing training programs that help advisors adapt AI technologies to meet clients' specific needs effectively.

### Acknowledgemnt

**This study was conducted as a part of the International Visegrad Fund no 22410207: Innovation of the education process towards implementing AI tools.**

### REFERENCES

- Arenas-Parra, M., Rico-Pérez, H., & Quiroga-Garcia, R. (2024). The emerging field of Robo Advisor: A relational analysis. *Heliyon*, 10(16). <https://doi.org/10.1016/j.heliyon.2024.e35946>
- Bhatia, A., Chandani, A., Atiq, R., Mehta, M., & Divekar, R. (2021). Artificial intelligence in financial services: qualitative research to discover robo-advisory services. *Qualitative Research in Financial Markets*, 13(5), 632-654. <https://doi.org/10.1108/QRFM-10-2020-0199>
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., et al. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy. *International Journal of Information Management*, 57. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
- Górriz, J. M., Álvarez-Illán, I., Álvarez-Marquina, A., Arco, J. E., Atzmueller, M., Ballarini, F., Barakova, E., Bologna, G., Bonomini, P., Castellanos-Dominguez, G., Castillo-Barnes, D., Cho, S. B., Contreras, R., Cuadra, J. M., Domínguez, E., Domínguez-Mateos, F., Duro, R. J., Elizondo, D., Fernández-Caballero, A., et al. (2023). Computational approaches to Explainable Artificial Intelligence: Advances in theory, applications and trends. *Information Fusion*, 100. <https://doi.org/10.1016/j.inffus.2023.101945>
- Hasan, Z., Vaz, D., Athota, V. S., Désiré, S. S. M., & Pereira, V. (2023). Can Artificial Intelligence (AI) Manage Behavioural Biases Among Financial Planners? *Journal of Global Information Management*, 31(2), 1-18. <https://doi.org/10.4018/JGIM.321728>
- Hooda, M., Rana, C., Dahiya, O., Rizwan, A., Hossain, M. S., & Kumar, V. (2022). Artificial Intelligence for Assessment and Feedback to Enhance Student Success in Higher Education. *Mathematical Problems in Engineering*, 2022, 1-19. <https://doi.org/10.1155/2022/5215722>
- Ivanashko, O., Kozak, A., Knysh, T., & Honchar, K. (2024). The Role of Artificial Intelligence in Shaping the Future of Education: Opportunities and Challenges. *Futurity Education*, 4(1), 126-146. <https://doi.org/10.57125/FED.2024.03.25.08>
- Liu, Y., Yang, Z., Yu, Z., Liu, Z., Liu, D., Lin, H., Li, M., Ma, S., Avdeev, M., & Shi, S. (2023). Generative artificial intelligence and its applications in materials science: Current situation and future perspectives. *Journal of Materiomics*, 9(4), 798-816. <https://doi.org/10.1016/j.jmat.2023.05.001>
- Liu, Y., Yang, Z., Yu, Z., Liu, Z., Liu, D., Lin, H., Li, M., Ma, S., Avdeev, M., & Shi, S. (2023). Generative artificial intelligence and its applications in materials science: Current situation and future perspectives. *Journal of Materiomics*, 9(4), 798-816. <https://doi.org/10.1016/j.jmat.2023.05.001>
- Manser Payne, E. H., Dahl, A. J., & Peltier, J. (2021). Digital servitization value co-creation framework for AI services: a research agenda for digital transformation in financial service ecosystems. *Journal of Research in Interactive Marketing*, 15(2), 200-222. <https://doi.org/10.1108/JRIM-12-2020-0252>
- Mhlanga, D. (2020). Industry 4.0 in Finance: The Impact of Artificial Intelligence (AI) on Digital Financial Inclusion. *International Journal of Financial Studies*, 8(3). <https://doi.org/10.3390/ijfs8030045>



- Mhlanga, D. (2021). Financial Inclusion in Emerging Economies: The Application of Machine Learning and Artificial Intelligence in Credit Risk Assessment. *International Journal of Financial Studies*, 9(3). <https://doi.org/10.3390/ijfs9030039>
- Northey, G., Hunter, V., Mulcahy, R., Choong, K., & Mehmet, M. (2022). Man vs machine: how artificial intelligence in banking influences consumer belief in financial advice. *International Journal of Bank Marketing*, 40(6), 1182-1199. <https://doi.org/10.1108/IJBM-09-2021-0439>
- Rabbani, M. R., Lutfi, A., Ashraf, M. A., Nawaz, N., & Ahmad Watto, W. (2023). Artificial intelligence's role in moderating the banking sector's innovative financial process: a research based on structural equation modeling. *Frontiers in Environmental Science*, 10. <https://doi.org/10.3389/fenvs.2022.978691>
- Rasiwala, F. S., & Kohli, B. (2021). Artificial Intelligence in FinTech. *International Journal of Business Intelligence Research*, 12(1), 48-65. <https://doi.org/10.4018/IJBIR.20210101.oa3>
- Truby, J., Brown, R., & Dahdal, A. (2020). Banking on AI: mandating a proactive approach to AI regulation in the financial sector. *Law and Financial Markets Review*, 14(2), 110-120. <https://doi.org/10.1080/17521440.2020.1760454>
- Yasir, A., Ahmad, A., Abbas, S., Inairat, M., Al-Kassem, A. H., & Rasool, A. (2022). How Artificial Intelligence Is Promoting Financial Inclusion? A Study On Barriers Of Financial Inclusion. *2022 International Conference on Business Analytics for Technology and Security (ICBATS)*, 1-6. <https://doi.org/10.1109/ICBATS54253.2022.9759038>