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Navigating the Future: The Transformative Effects of Large Language Models on Financial Advisory Services

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Abstract--Large language models (LLMs) are revolutionizing financial advisory services by automating routine tasks, enhancing data synthesis, and personalizing client interactions. This paper examines the integration of LLMs, the emerging hybrid model of human-AI collaboration, and the critical ethical considerations---including privacy and bias---that accompany this technological shift. It concludes that while LLMs offer unprecedented efficiency, human emotional intelligence remains a cornerstone of the advisory relationship.

I. INTRODUCTION

Large language models (LLMs) are increasingly being applied across many sectors, and financial advisory services are no exception [1][2]. These models are built using deep learning technology based on architectures such as the Transformer, and are capable of producing human language or text responses [1][2]. The technology is enabled by neural networks that have been pre-trained on large amounts of text data, and can thereby generate human language that understands the nuances of language [1][2].

Figure 1 illustrates a professional futuristic financial advisory environment in which a human financial advisor

collaborates with an AI hologram assistant in a modern fintech workspace. The figure visually demonstrates how LLM-powered systems can support advisors through real-time dashboards, portfolio analytics, market trend visualization, automated recommendations, and intelligent client insights. The integration of holographic AI interfaces and interactive financial charts highlights the growing role of artificial intelligence in enhancing decision-making, improving efficiency, and enabling personalized financial services within next-generation advisory ecosystems.

According to Feng (2024), the potential applications of the technology to traditional financial advising include automation of routine tasks and provide clients with immediate and efficient assistance 24/7 [3]. Reports can be generated, regulatory updates understood, and even investment advice provided in the language and format that the client requires [3]. This enables financial advisors to concentrate on the complex tasks and client service that they are trained to do, while the LLM automatically processes and responds to a large volume and variety of inquiries and requests [3].



Figure 1: Professional futuristic financial advisory office with AI hologram assistant helping human financial advisor, dashboards, charts, modern fintech environment, realistic style”

Where as in Figure 2 presents a comparative split-screen illustration between a traditional financial advisor and an AI-powered financial advisor. The left side of the figure depicts conventional advisory practices involving manual paperwork, physical reports, time-consuming analysis, and higher workload. In contrast, the right side demonstrates a modern AI-assisted advisory system utilizing digital

dashboards, automated analytics, intelligent recommendations, and real-time financial insights powered by large language models. The comparison effectively highlights the transformation from traditional financial workflows toward data-driven, AI-enhanced advisory services that improve productivity, speed, personalization, and overall client outcomes.



Figure 2: Split-screen comparison of traditional financial advisor using paper reports versus AI-powered advisor using digital dashboards and large language model assistance

With the ability to process large amounts of data from a diverse array of sources such as financial news, industry publications, and academic journals and articles, the LLM is capable of synthesizing information from a variety of market reports [1][2].

Revolutionizing the Financial Industry

Furthermore, given the ability of LLMs to process massive amounts of data, they have the potential to revolutionise the financial industry (Bhardwaj, 2025) [4]. Currently, financial advisors largely rely on a small amount of data or even manually go through multiple financial reports (for example, financial statements) [4]. The LLMs, however, can quickly process and combine large amounts of data in real time [4]. They can thus quickly identify patterns, make predictions, and give the financial advisor the ability to offer far more accurate financial advice to their clients [4].

Figure 3 presents a futuristic AI visualization of a large language model actively analysing stock market data, financial news feeds, interactive graphs, economic indicators, and digital financial reports in real time. The figure demonstrates how advanced AI systems can integrate multiple streams of structured and unstructured financial information into a unified analytical framework. Through intelligent dashboards and predictive analytics interfaces, the LLM is shown continuously monitoring market fluctuations, identifying hidden patterns, forecasting trends, and generating data-driven investment insights. The visualization highlights the capability of AI-powered financial systems to enhance analytical efficiency, improve decision accuracy, and support real-time strategic financial planning within modern financial advisory environments.



Figure 3: Large language model analyzing stock market data, news feeds, graphs and financial reports in real time, futuristic AI visualization

LLMs also have the capability to tailor the advice given to each client based off their unique profile [1][2]. This enables the financial advisor to offer far more relevant advice and increase the overall effectiveness of the service [1][2].

II. ETHICAL CONSIDERATIONS

As LLMs are increasingly incorporated into the financial advisory services, several important ethical considerations become pertinent [1][2]. Primarily, issues of data privacy, model transparency, and bias are critical as the concern becomes increasingly evident that LLMs can 'learn' and embedding biases that are inherent within the dataset they are trained upon, potentially distributing discriminatory practices through financial advice recommendations [1][2].

Figure 4 illustrates a cybersecurity and AI ethics framework within financial AI systems, highlighting critical components such as privacy protection, bias detection, transparency, fairness, accountability, and regulatory compliance. The infographic visually demonstrates how financial institutions must integrate secure AI governance mechanisms to protect sensitive client information and ensure ethical decision-making processes. Elements such as encryption shields, secure data channels, fairness indicators, explainable AI modules, and compliance monitoring systems emphasize the importance of maintaining trust, reliability, and legal accountability in AI-driven financial services. The figure also reflects the growing necessity for responsible AI practices that balance technological innovation with ethical safeguards and consumer protection.



Figure 4: Cybersecurity and AI ethics infographic showing privacy, bias, transparency, fairness, and regulatory compliance in financial AI systems

The challenge then arises for these recommendations to be held accountable, placing the onus on state or industry sectors to modify governing structures, ultimately necessitating the adoption of an ethical framework to safeguard the financial interests of clients [1][2]. The Future of Human Advisors

Do human financial advisors have a future? As Smith (2024) notes, financial human advisors will shift from being task-oriented to providing advisory services that focus on relationship building and emotional intelligence to enable clients to make better financial decisions [1][2]. While the LLM is not able to tell the story or present the facts and figures behind the client's financial history, human financial advisors can leverage the work produced by the LLM to gain insights, provide data-driven advice and counsel clients to make better decisions by uncovering new insights and opportunities [1][2].

Figure 5 illustrates a professional corporate environment in which a human financial advisor collaborates with an AI assistant during a client consultation session. The figure visually represents the emerging hybrid financial advisory model where artificial intelligence supports human expertise through real-time analytics, predictive insights, portfolio visualization, and intelligent financial recommendations. Interactive dashboards and AI-generated financial data displayed within the consultation environment demonstrate how LLM-powered systems enhance decision-making efficiency while allowing human advisors to focus on trust-building, strategic planning, and personalized client engagement. The illustration emphasizes that AI technologies are designed to augment rather than replace human financial advisors, combining computational intelligence with emotional understanding and professional judgment.



Figure 5 : Human financial advisor collaborating with AI assistant during client consultation, professional corporate environment"

Ongoing discussions about the applications of LLMs in the financial advisory services have the potential to be transformational in nature and fundamentally change how human financial advisors go about creating value for their clients [1][2]. The combination of both human financial advisors and LLMs could, for example, create the ideal hybrid model, where the LLM augments and supports the financial advisor by enhancing their ability to deliver faster, more accurate insights and analysis for their clients [1][2].

III. OPERATIONAL EFFICIENCY AND PRODUCTIVITY

The integration of LLMs into financial advisory services has remarkable implications for operational efficiency within the financial services industry [1][2]. Like Takayanagi et al. (2025), I believe the LLMs have the capability to be transformative in nature and can significantly increase the efficiency of financial work by automatically analyzing large amounts of historical data to provide clients and financial advisors with deep, meaningful insights in a fraction of the time currently possible with

current technology [5]. Financial advisors can utilize LLMs to substantially enhance their productivity by leveraging LLM-driven tools to analyze vast amounts of historical and real-time data [5].

Figure 6 presents a business infographic comparing traditional manual financial advisory tasks with AI-automated financial workflows supported by large language models. The figure visually contrasts time-consuming manual processes such as document review, report preparation, market analysis, and customer query handling with intelligent AI-driven systems capable of automating these operations in real time. Productivity increase charts, workflow optimization diagrams, and performance indicators illustrated in the infographic demonstrate how LLM-powered automation significantly improves operational efficiency, reduces processing time, enhances analytical accuracy, and increases service responsiveness. The comparison highlights the transformative impact of AI technologies in streamlining financial advisory operations and enabling advisors to focus on higher-value strategic and client-centered activities.

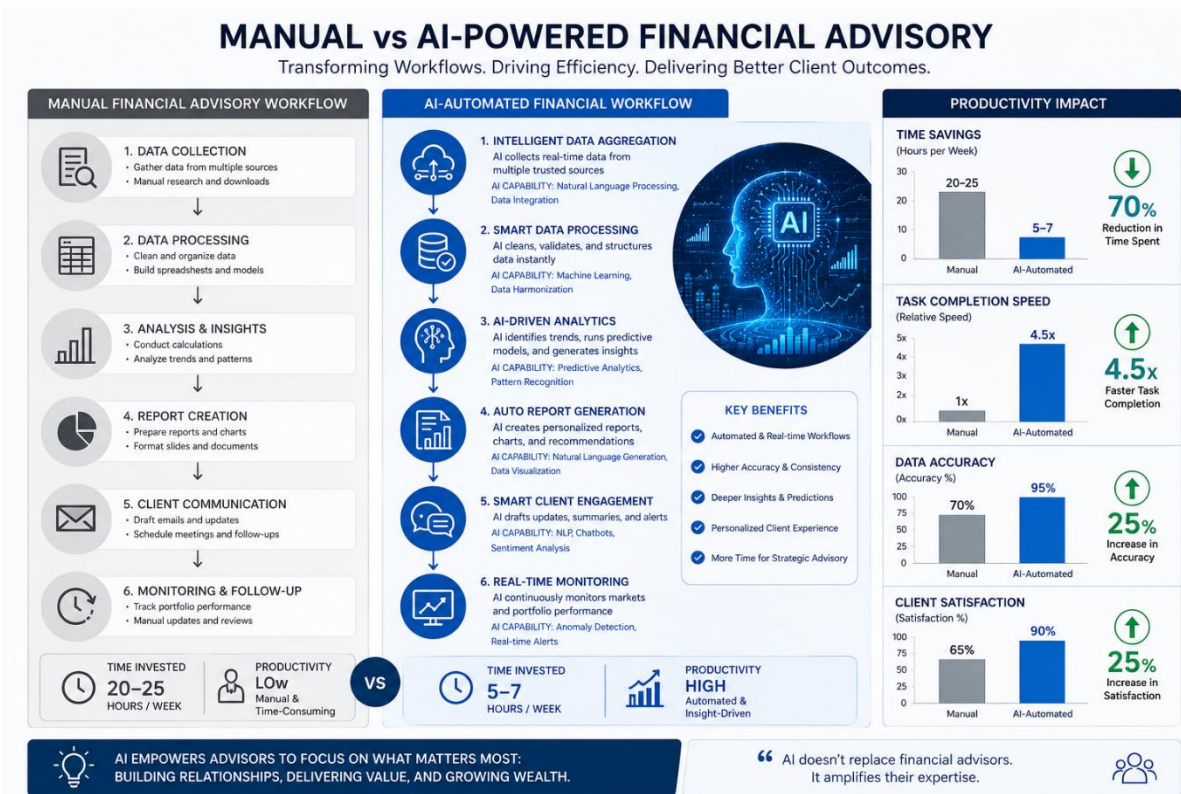


Figure 6 : Business infographic comparing manual financial advisory tasks versus AI-automated workflows with productivity increase charts

As a result, financial advisors have the opportunity to significantly enhance their value to their firms by focusing on high-value tasks that require their experience and expertise [1][2]. LLMs can handle tasks that are typically administrative in nature and can automate transactional workflows, freeing up financial advisors from administrative tasks that do not contribute to revenue growth [1][2].

Besides making workflows much more efficient, LLMs can also make financial advisory services a lot more responsive to client queries [1][2]. Batra et al. (2025) showed that when incorporated into various channels of communication, LLMs can produce immediate responses to clients' queries [6]. Thus, LLMs have the potential to significantly elevate the service levels and make customers highly satisfied [6]. Currently, clients demand immediate and personal interactions with financial advisors [1][2]. Equipped with the capability to generate human-like text in response to human input, LLMs can react quickly enough to fulfill this demand and consequently are a major selling point for financial advisory services [1][2].

IV. ADVANCED RESEARCH AND TAILORED SOLUTIONS

We have also noted the potential efficiency gains that LLMs could bring to the workflow of investment research [1][2]. As an LLM learns based on interactions and data inputs, it could become a powerful analytics tool to enhance existing predictive analytics capabilities [1][2]. In the future, LLMs could be incorporated into client advisory services, empowering advisors to anticipate client needs and analyze market trends with unprecedented accuracy [1][2].

Figure 7 illustrates an AI predictive analytics dashboard designed to forecast financial trends and generate personalized investment recommendations. The dashboard visualizes real-time market analytics, predictive forecasting models, portfolio performance indicators, investment risk assessments, and customized financial suggestions generated through large language model intelligence. Interactive charts, data visualization panels, and intelligent recommendation systems shown in the figure demonstrate how AI-powered predictive analytics can assist financial advisors in identifying emerging market opportunities, forecasting economic fluctuations, and tailoring investment strategies according to individual client profiles.

The figure highlights the growing role of AI-driven forecasting systems in improving decision-making accuracy,

enhancing investment planning, and delivering highly personalized financial advisory services.



Figure 7: AI predictive analytics dashboard forecasting financial trends and personalized investment recommendations

As a result, advisors could more proactively offer counsel and develop solutions that are uniquely tailored to each client's circumstances, thereby enhancing the quality of the advisory relationship [1][2].

While efficiency may be the immediate gain from integrating LLMs into financial advisory work, practitioners and industry observers are grappling with the far-reaching implications of this development [1][2]. While LLMs may perform tasks more efficiently, automation could change the nature of financial advisory work, with professionals increasingly serving as ombudsmen offering clients emotional comfort and ensuring their investments comply with an ever-shifting ethical environment in which the LLMs may not be able to serve [1][2]. The relationship between human financial advisers and LLMs is rapidly evolving, raising questions about how financial advisory work will be practiced in the coming years and requiring a refresher on the types of skills professionals will need to serve clients successfully [1][2].

V. PERSONALIZATION AND ENGAGEMENT

Large Language Models (LLMs) have the potential to bring efficiency, effectiveness and responsiveness to financial advisory services [1][2]. By automating routine inquiries and tasks, LLMs will enable Financial Advisors to move up the value chain and dedicate more time to high-stakes, high-value advisory activities that require human judgment and empathy [1][2]. At the same time, there is a delicate balance to be maintained between the outputs of LLMs and human advisory, i.e., between technology and human touch in financial advising [1][2]. Besides enabling Financial Advisors to service their clients around the clock, LLMs have the potential to generate enormous value by enabling Personalized client interactions [1][2]. LLMs can process vast amounts and varieties of client data to generate highly relevant recommendations that are highly customized to the specific needs of each individual client [1][2]. As Lakkaraju et al. (2023) discuss in their research paper, LLMs have the potential to significantly increase client satisfaction and engagement by recommending financial products and services on a highly personalized basis [1].

Traditional financial advising attempts to address client needs by developing general strategies and recommending suitable financial products to clients [1][2]. However, LLMs have the capability to process client data and tailor specific advice based on the client's history, preferences, and financial goals [1][2]. Such bespoke financial advising based on client-specific information has the potential to deliver better outcomes and foster meaningful client relationships [1][2].

The use of user-oriented approaches and the implementation of chatbots powered by LLMs in financial advisory services are also another promising avenues addressed by Pereira (2025) [7].

LLMs-based chatbots are incredibly interactive and provide real time answers to users' requests [7]. Therefore, financial advisors will be able to present their clients with the latest relevant information and suggestions while they engage in conversation, providing an optimal user experience [7]. The key to success for a financial advisory relationship is based on the foundation of trust [1][2]. As noted earlier, one of the variables that enhance trust are interactivity [1][2]. As a result, clients will have the instant gratification to receive information that is contextually relevant to their concerns during the consultation process [1][2].

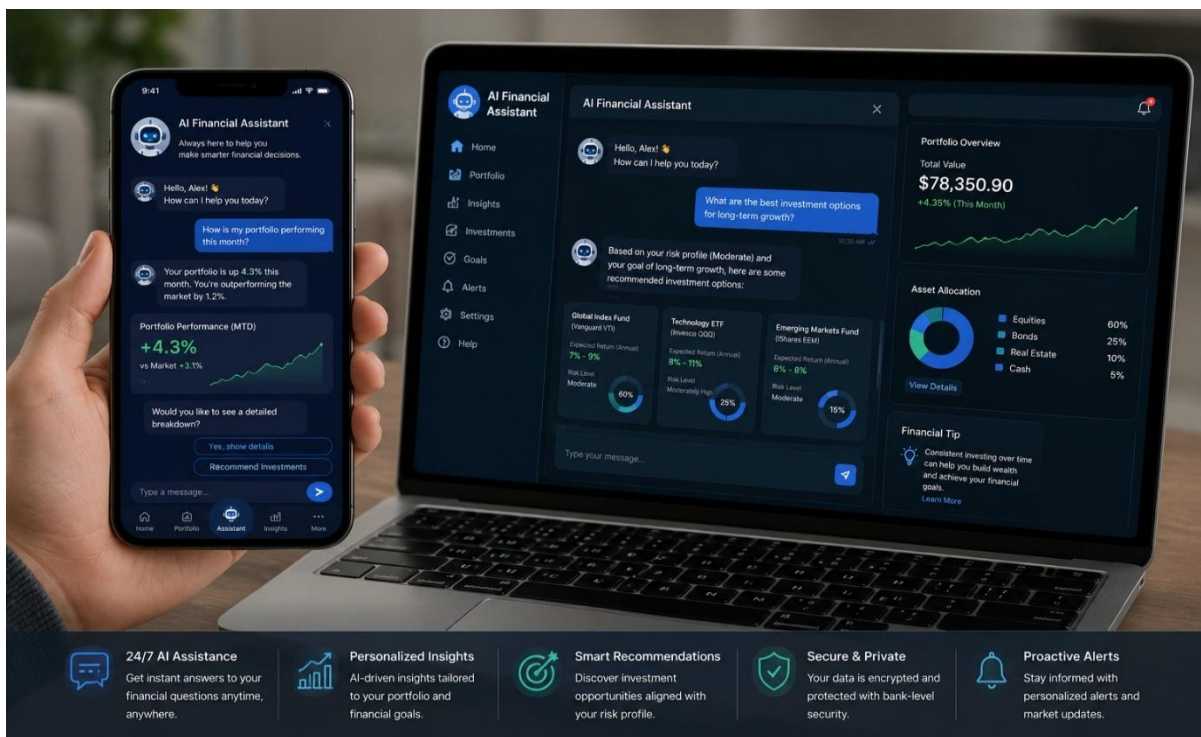


Figure 8: Modern AI financial chatbot assisting customer on smartphone and laptop, interactive finance interface.

The figure 8 presents an advanced AI-driven financial chatbot integrated across multiple digital platforms, including smartphones and laptops, to provide seamless and interactive financial advisory services. The illustration demonstrates how conversational AI interfaces enable customers to access personalized financial guidance, investment insights, budgeting assistance, and real-time account information through natural language interactions. The chatbot interface highlights features such as automated recommendations, predictive financial analytics, instant query resolution, and personalized alerts designed to improve customer engagement and decision-making.

The image further emphasizes the role of intelligent virtual assistants in enhancing accessibility, responsiveness, and user satisfaction by delivering continuous financial support through modern digital ecosystems.

In addition to the previously mentioned benefits, the ability of LLMs to learn from recent client interactions, historical conversations, and feedback in real time, allows for ongoing and continuous self improvement of the advisory service provided [1][2]. As the LLM improves in its ability to make predictions and generate advice based on historical outcomes, client interactions, and feedback, it can anticipate client needs better than a human could [1][2].

This means that LLMs can provide clients an even more optimized and meaningful experience in their financial journey, such as providing more value to a client who asks about a specific type of investment vehicle in the future by offering advice on related topics before the client even asks [1][2].

VI. DATA PRIVACY AND INTEGRITY

While the potential for deep personal engagement is within reach, there are important ethical considerations at play [1][2]. As clients pour over financial data and correspond with the AI-powered financial advisors, there will be real concerns about the privacy and security of the massive amounts of data being collected, used, and stored [1][2].

As Lakkaraju et al. (2023) argue, ethical use of data is paramount [1]. The organization must be transparent about how and when this data will be used, and clients must feel confident that all of their personal and financial information will remain private [1]. Furthermore, while LLMs will learn from a large dataset of financial interactions, there exists the risk of inherent bias within the models themselves, which could lead to unequal servicing of clients based off of characteristics such as race, gender, and socio-economic status [1]. It is therefore crucial that practices for evaluating the quality of these interactions are put in place to monitor for fairness [1].



Figure 9: Secure financial AI system protecting customer financial data with encryption shields and cybersecurity layers.

The figure illustrates a modern AI-enabled financial security infrastructure designed to safeguard sensitive customer financial information through advanced cybersecurity mechanisms. The visualization highlights multiple layers of protection including encryption shields, secure cloud architectures, biometric authentication, firewall systems, and real-time threat detection powered by artificial intelligence.

It demonstrates how AI-driven financial advisory platforms integrate privacy-preserving technologies to ensure secure handling, storage, and transmission of confidential financial data across digital environments. The image also emphasizes the importance of regulatory compliance, fraud prevention, and trust-building measures that protect users from cyber threats, unauthorized access, and data breaches while enabling secure and reliable AI-assisted financial services.



The integration of LLMs into financial advisory services has the potential to greatly enhance the quality of personal interaction between a client and their financial advisor, enabling both parties to receive highly customized advice that is unique to the situation [1][2]. However, in order to ensure trustworthiness and fairness going forward, it is necessary to carefully evaluate the ethical implications of how data is used in financial advisory settings in which LLMs are utilized [1][2]. The integration of Large Language Models (LLMs) into financial advisory practices is developing rapidly and therefore obviously opens the door to a variety of ethical considerations [1][2]. Perhaps foremost among these is the issue of privacy when it comes to the data that these models require to effectively interact with clients and tailor advice to individual circumstances [1][2]. Financial advisors regularly work with data that is proprietary, either in terms of market information or of private financial information that has been shared by clients [1][2]. By leveraging a vast amount of general knowledge and training that has been applied to vast amounts of financial data, these computer models are able to develop insights related to financial planning that are unique to the situation at hand and rely on a variety of different data points that have been gathered over time [1][2]. As a question therefore remains regarding the potential risk of a data breach involving the large amounts of sensitive information that financial advisors regularly handle, whether or not it is proposed that the use of LLMs be expanded to include the automation of various financial planning functions [1][2].

VII. PERSONALIZATION BENEFITS

The ability to personalise is another benefit of LLMs that could be highly beneficial to financial advisory businesses [1][2]. State of the art algorithms can be used to extract insight from a client's profile, preferences and goals to create advice that is specifically tailored to them [1][2]. This will enable a deeper understanding of individual client needs and enable greater customer satisfaction and engagement (Zafar et al., 2023) [1][2]. LLMs also have the potential to create real time conversational experiences across a variety of different channels, vastly increasing the accessibility and immediacy of financial advice [1][2]. While this means that clients may get a better experience through the automated element of advice, there is a fear that human interaction is being marginalised in a profession that has traditionally relied on building trust with clients [1][2]. As a result, human financial advisors will still be essential for complex client relationships [1][2].

This overlap between LLMs and human financial advisors also raises important ethical considerations for the former and new responsibilities for the latter [1][2]. For instance, the LLMs could be influenced by the biases in the training data, as pointed out by Ghosh et al. (2023) [1][2]. Consequently, the financial advisors will have to be diligent in their assessment of the LLM's generated information so as to offer independent and fair advice [1][2]. It will be critical for financial advisors to understand both how the LLMs function and the ethical obligations that financial advisors have to their clients [1][2]. Furthermore, there will be issues of client confidentiality and data privacy that need to be managed in the AI driven landscape for financial advising [1][2]. A detailed and ethical approach will be required to manage the integration of LLMs within financial advisory services [1][2].

Financial advisory services are increasingly moving to a hybrid model that leverages the strengths of LLMs and human advisors [1][2]. As a result, the human financial advisors will need to upskill in order to effectively interact with these technologies [1][2]. According to Lakkaraju et al. (2023), while LLMs will specialize in quantitative and predictive analytical capabilities, human financial advisors will need to shift to a more qualitative skill set, focusing on a combination of interpersonal skills, emotional intelligence, and strategic insight [1]. Consequently, the human financial advisors will assume the role of financial strategists and financial facilitators that can serve as the architects of client relationships, which are critical for trust and cannot be outsourced to technology alone [1][2].

VIII. FUTURE SKILLS AND NEW PROFESSIONAL ROLES

Future Implications: The future promises a more empowered workspace in financial advisory services using the synergy between LLMs and human advisors [1][2]. Both have different strengths; LLMs deliver speed and insights based on data, while human advisors deliver depth and expertise grounded in judicious decision making that complements the insights provided by LLMs [1][2]. It will not be long before clients demand both ease of use and high-quality human interaction in financial services (Vlahos, 2022) [1][2]. While there are many challenges that must be overcome in the evolution of LLMs in the future, one thing is certain: the future of financial advisory services will be vastly different in the next few years [1][2].

The integration of LLMs into financial advisory services requires financial advisors to acquire a host of new skills [1][2]. Xu (2024) explained that the impact of LLMs on financial advisors extends far beyond simple efficiency gains [8].



The emerging technology demands a fundamental shift in the types of expertise financial advisors are able to bring to their work [8]. Financial advisors have long required a foundation in finance principles and practices and financial market analysis, in addition to strong interpersonal skills [1][2]. But as technologies are quickly evolving in the industry, financial advisors must not only be aware of the changes but also find ways to thrive amidst them, through proficiency with LLMs in particular [8].

Language models (LLMs) process, analyze and generate human language at scale, potentially boosting the analytical capabilities of advisors [1][2]. To incorporate these tools into their workflows, advisors will need extensive training to master the technology as well as learn how to interact with their outputs [1][2]. This means that there will be a need for upgraded training programs that address the integration of new AI tools into the workflows of advisors [1][2]. There will also be a need for financial professionals to understand how to contextualize the insights that these models provide [1][2].

With the emergence of LLMs, financial advisors have the unique opportunity to delve deeper into their clients' situations [1][2]. By leveraging LLMs' capacity to process massive amounts of information in real time, financial advisors will be able to provide their clients with even more timely and personalized advice [1][2]. But to do this, financial advisors will need to have a good understanding of how these models work, as well as their advantages and disadvantages [1][2]. As a result, education surrounding LLMs will need to take a dual approach to address both the technology and the human touch that financial advisors must maintain when delivering advice to their clients, instilling confidence in the advice provided [1][2].

The potential of LLMs could also extend to the emergence of new roles within the financial advisory industry such as "AI-enhanced financial advisors" or "technology strategists" [1][2]. As LLMs mature, the traditional financial advisor role could be transformed in order to further exploit the benefits of LLMs while not undermining the importance of the crucial relational dimension of financial advice [1][2]. The result would be advice given in a new format, delivered through different channels and supported by innovative workflows [1][2].

However, as with any utilisation of LLMs, there are ethical considerations at play in their adoption within financial advisory settings [1][2]. Potential issues to be mindful of, as identified by Xu (2024), include data privacy and potential biases within the training data, as well as the impact of increasing reliance on algorithms on financial wellbeing [8].

As financial advisory technology continues to advance, there is a growing need for a strong framework by which LLMs are used within the industry in an ethical manner [1][2]. Furthermore, financial advisors require effective training on the use of LLMs as well as strong knowledge on associated ethical frameworks and compliance measures [1][2].

Large Language Models (LLMs) will fundamentally change the skill set, career path, and ethics required of those in the financial advisory services industry [1][2]. As the financial services industry evolves to leverage sophisticated technology for enhanced service and client experience, the education system will be called upon to keep pace and adequately train its future practitioners [1][2]. This Brief sets out to examine some of the other challenges that have arisen when LLMs are used in the context of financial advisory services [1][2].

IX. CHALLENGES AND ACCURACY CONCERNS

While offering numerous benefits to both client and advisor, such as increased efficiency, LLMs possess numerous drawbacks including accuracy concerns [1][2]. As technology continues to advance and more models emerge capable of generating human language, there inevitably remains the need for rigorous human intervention and review [1][2]. Fan (2024) found that while LLMs are capable of enormous output and can create more personalized interactions between clients and financial advisors, they nevertheless present numerous challenges in providing accurate responses [9]. Financial advisory services therefore necessitate continued human supervision to review information generated by LLMs for possible errors and inaccuracies [9].

While the outputs of LLMs are not guaranteed to be reliable, as demonstrated in Yang et al. (2024), they have the capacity to process large amounts of data and provide timely insights to financial advisors and planners [10]. Importantly, any insights or investment recommendations generated for historical dates will inevitably include any errors or biases in the data used to train the LLMs; therefore, it is incumbent on the human financial advisors and planners to carefully evaluate the output and ensure its accuracy, conformance to industry best practices and applicable regulations, and implement any resulting advice in a fashion that is transparent and best suited to each individual client's circumstances [10].



There are also ethical considerations in automating the production of LLM-based advice for clients [1][2]. While LLMs can process the data quickly enough to provide real-time financial advice, automating financial advice can potentially oversimplify complex personal financial circumstances, leading to misapplication unless the output is thoughtfully reviewed and constrained by the advisor (Smith (2023) [1][2]. In light of this potential risk, advisors have a duty to uphold their fiduciary duty and remain actively engaged in the advise development process [1][2]. This creates a unique opportunity for practitioners to harness technology while maintaining their value as experts in financial planning and decision makers in the advise development process [1][2].

There are also implications for the role of the human financial advisory professional [1][2]. As LLMs become increasingly sophisticated, there is a potential for some elements of the financial advisory process to be automated, including routine tasks and analysis of large datasets of existing information [1][2]. However, this is not to say that the human financial advisor is superfluous [1][2]. In many cases, the LLMs will assume tasks that currently consume a significant amount of time for the human financial advisor, enabling the professional to focus on deeper, more value added client work that requires key aspects of the human experience including empathy, trust, and high-stakes complex decision-making, all abilities that LLMs currently lack (Jones & Patel, 2023) [1][2].

While LLMs have the potential to significantly boost efficiency and enable greater personalization in financial advisory, they are far from perfect and raise several challenges including the need for rigorous human oversight, considerations of ethics, and the evolving role of humans as advisors as technology continues to advance and be used in new ways [1][2]. As LLMs become ever more powerful, there is a need to recognize their capabilities and limitations in order to utilize them effectively in the context of financial advisory while maintaining the level of professionalism that clients expect [1][2]. Another significant impact of LLMs in this space is their potential to enhance financial literacy through LLM-powered financial advice, specifically enabling novice clients to gain knowledge of financial products and concepts that might otherwise be difficult to understand [1][2].

X. FINANCIAL LITERACY AND SOCIAL IMPACT

LLMs also have the potential to enhance financial literacy through LLM-powered financial advice, specifically enabling novice clients to gain knowledge of financial products and concepts that might otherwise be difficult to understand [1][2].

Challagundla (2024) explained how LLMs process and generate natural language at scale can help to readily present complex financial terms and concepts in human-language formats [11]. LLMs can provide personalized and relatable content that takes into the financial planning needs and goals of clients, breaking down complex information based on the client's level of financial acquaintance and interest in the topic [11]. This can aid clients in developing a greater understanding of various financial topics to enable them to make more informed decisions and ultimately become better financial consumers [11].

In addition to producing financial education content, LLMs can be used to create interactive content which fosters financial education by providing clients with opportunities to engage in simulation style activities that promote learning [1][2]. A LLM could generate chatbots capable of mimicking financial advisor to client interactions providing instant answers to hundreds of commonly asked financial related questions while providing clients with basic financial advice relating to key financial concepts such as, planning, investing, retirement planning and more [1][2]. Not only do these resources serve to solidify understanding, but they enable individuals to test their knowledge in a real world environment through an interactive and simulated application of concepts [1][2]. The interactive, on-demand nature fostered by LLMs has the potential to boost participation and foster a habit of use that can help individuals reap long-lasting benefits of financial education as identified by Smith and Lee (2023) [1][2].

Besides making user engagement more fun, the LLMs (Large Language Models) can also create personalized learning experiences for your clients [1][2]. These can be personalized based on many factors such as the learning styles, topics of interest, or even financial goals [1][2]. Thus, you can show your clients content related to their financial goals, whether it is saving for a home, for your children's education, retirement and more [1][2]. As Johnson et al. (2023) mentioned, clients can take ownership of their learning by choosing their path of study in a context that is personalized and meaningful [1][2].

But the adoption of LLMs can also help democratize access to financial advisory resources, especially for underserved communities who don't have access to financial education [1][2]. LLMs can provide high-quality financial information to the public at a very low cost or for free, allowing a much wider demographic to have access to financial literacy tools [1][2]. This can be especially empowering for individuals who would otherwise not have access to financial advice, and can lead to more stable economies by creating a more informed consumer base [1][2].



Although LLMs hold great promise for complementing financial education initiatives to enhance financial literacy, there are also significant ethical concerns that must be addressed before LLMs can be widely adopted [1][2]. For instance, if LLMs are used to deliver financial education, it is paramount that the information generated by these models be accurate, fair, and inclusive to support the financial stability and well-being of all individuals [1][2]. However, the chance that LLMs might contain biases and incorrectly redistribute existing inequalities, or even exacerbate them, exists if the training data used to develop the LLMs are biased or lack sufficient financial scenarios and models from diverse cultural, national, and economic vantage points (Adams & Chen, 2024) [1][2].

XI. SYNTHESIS AND FINAL OBSERVATIONS

As LLMs have the potential to improve financial literacy, it is essential to study the various implications for financial advisory services in-depth, including their potential impact on client interactions and the development of financial education [1][2]. The integration of Large Language Models (LLMs) into financial advisory services marks a turning point in the financial services industry [1][2]. Not only does there being the potential added value for financial advisory services in terms of operational efficiency, but various studies demonstrate the potential of LLMs to automate tedious tasks that financial advisors perform on a regular basis [1][2]. Analyzing data, generating reports, and even sending emails to clients are all tasks that LLMs are able to perform autonomously, resulting in much faster response times and reducing the cost of servicing clients per dollar under management [1][2]. As a result, financial advisors will have more time to develop close, personal relationships with clients and make strategic, high-stakes decisions that benefit both the client and the advisor [1][2]. Furthermore, these changes within financial advisory firms could have positive repercussions for the overall financial system by encouraging faster and more timely decision-making [1][2].

Another significant impact is the personalization of client interactions enabled by LLMs, utilizing client data to provide advice which is specifically relevant to that individual's needs and preferences [1][2]. Interactions that are personal, relevant and insightful can significantly enhance the client experience, leading to greater client satisfaction and loyalty, which is key to attracting and retaining clients in a crowded financial services industry [1][2]. As clients have more access to information than ever before, investment advisers must develop more client-centric approaches incorporating data driven investment advice that takes the client's individual financial history, risk profile and investment goals into consideration [1][2].

This all raises the question as to whether or not the algorithms are really utilising the client's data effectively, and how much this can impact on the ability to deliver a completely human experience [1][2].

While LLMs offer numerous potential benefits, their adoption in financial advisory settings also gives rise to important ethical issues [1][2]. One such issue is the concern that deployed LLMs could generate advisory for clients that is biased, unfair, discriminatory, and deceptive [1][2]. Training data can contain all manner of embedded biases that LLMs will learn and incorporate into the advice that they generate for clients, exacerbating rather than mitigating existing inequalities in financial services [1][2]. Further, as with any LLMs, advisory firms will have an obligation to provide customers with meaningful transparency into how the algorithms that generate financial advice actually work [1][2]. Perhaps most important, however, will be ensuring that proper data privacy measures are in place to safeguard clients' sensitive financial information and protect the parties -- including advisory firms -- from potentially significant legal and reputational harm if that information is not kept private [1][2].

While LLMs will surely change the financial advising landscape significantly, that does not mean the work of human financial advisors will decline [1][2]. Human insight, judgment, and emotional intelligence are hard for LLMs to replicate, and there remains much value in the personal relationship that a human financial advisor brings to bear in financial planning [1][2]. Technology is here to enhance, personalize, and make more efficient what humans can offer, not to replace them entirely [1][2]. Emerging trends suggest that LLMs will be integrated with financial planning services to significantly enhance the advisement and resulting financial plans offered by financial advisors (Kumar & Patel, 2023) [12]. This integration enables human financial advisors to create the most comprehensive advisement for financial planning by leveraging the power of both humans and LLMs in tandem [12].

The future of LLMs in financial advisory services will be shaped by a mix of promising opportunities and tough challenges [1][2]. As organizations seek increased efficiency and client personalization, they will need to thoughtfully address a host of ethical issues, all while determining how LLMs can augment the work of human financial advisors [1][2]. As we move forward with this groundbreaking technology, continued research and open dialogue will be critical in ensuring that LLMs are developed and deployed in a way that is consistent with the ethical standards of financial advising [1][2].



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