
Generative AI and the Future of Financial Advice Regulation

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Abstract

This paper explores the regulation of financial advice in an era increasingly influenced by advanced artificial intelligence (AI). It investigates the existing legal framework for investment advisors and broker-dealers in the United States and scrutinizes the rise and impact of robo-advisors and generative AI. It examines whether generative AI models present an even greater challenge to regulation than robo-advisors. Various potential regulatory strategies, such as disclosure regulations and restrictions, are critically analyzed. The paper argues for a comprehensive and nuanced understanding of these technologies and their effects on financial advice.

1. Introduction

Artificial intelligence (AI) advancements have significantly reshaped many economic sectors, including financial services. The advent of robo-advisors and generative AI models like GPT-4 and ChatGPT bring efficiency but also pose unique regulatory challenges. We explore these issues, starting with the current regulatory landscape of financial advice in the United States and the evolving roles of investment advisors and broker-dealers. It proceeds to present robo-advisors and generative AI models as transformative forces in financial advice, thoroughly exploring their functions and associated regulatory concerns. We then critically assess possible regulatory strategies, emphasizing the need for a deeper understanding of these technologies and their implications for financial advice.

In the first section, we delve into the current regulatory framework for financial advice in the U.S. The second section introduces the role of robo-advisors and generative AI models within this landscape. The third section explores the

challenges associated with adapting these technologies to established fiduciary standards. The fourth section provides a critique of potential regulatory approaches.

2. Regulation of Financial Advice

2.1. Provision of Advice

The regulatory regime for financial advisers in the United States consists of *ex ante* requirements and supplemental open-ended duties that govern the operations of regulated entities and guard their interactions with retail investors (Jackson & Gillis, 2019). The regulations for financial advisers is primarily under the jurisdiction of two bodies: The Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA). These agencies provide detailed interpretations of the regulatory requirements and play a major role in ensuring compliance with those requirements through a combination of supervision and enforcement.

Regulatory oversight distinguishes between two types of advice providers—broker-dealers and investment advisers. Investment advisers provide securities advice to clients and are paid for these services. They are regulated by the Investment Advisers Act of 1940. Importantly, investment advisers have a fiduciary duty to their clients. Typically, the fiduciary duty is understood as having two components. The first component, the duty of loyalty, means that the advisor must act in the client’s best interest at all times. This includes making full and fair disclosure of all material facts, particularly those that could impact the advisory relationship, and to avoid conflicts of interest. The second component, the duty of care involves providing advice that is in the best interest of the client, given the client’s objectives, risk tolerance, and needs (Laby, 2010).

Broker-dealers are individuals or firms that are in the business of buying and selling securities on behalf of their clients, but also on their own account. Broker-dealers are regulated under the Securities Exchange Act of 1934 and must become members of FINRA, a self-regulatory organization that oversees broker-dealers, creates rules for conduct, examines for compliance, and disciplines those who fail to comply. Traditionally, broker-dealers were primarily seen as transaction-based providers; their role was to facilitate the

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buying and selling of securities on behalf of clients. Any advice they offered was generally considered to be incidental to this primary function. However, the role of broker-dealers has evolved, and many now offer a range of services that overlap with those provided by investment advisers. This has led to a blurring of the lines between broker-dealers and investment advisers and consequently changes in regulation.

In 2020, the SEC Regulation Best Interest (Reg BI) came into effect, which established a new standard of conduct for broker-dealers. This regulation requires that when making a recommendation, a broker-dealer must act in the best interest of the retail customer, without placing the financial or other interest of the broker-dealer ahead of the interests of the retail customer. This regulation was seen as an effort to elevate the standard for broker-dealers closer to the fiduciary duty standard that applies to investment advisers. Reg BI overlaps with many of an investment adviser's fiduciary duties and so that any differences in conduct may boil down to the advice intensity of the broker-dealer relationship.

2.2. Regulation of General Communication

Both broker-dealers and investment advisers are required to comply with strict standards when communicating with clients, regardless of the medium used for communication (written, digital, through apps, etc.). The SEC and FINRA have similar rules prohibiting the use of false, exaggerated, or misleading statements or claims. Promotional materials and communication must provide a balanced treatment of both risks and potential benefits and must take into account the intended recipient of the claims and statements, providing them with appropriate information, details, and explanations. (FINRA, 2019; Lazaro & Verges, 2022; SEC, 2021). While both the SEC and the FINRA regulations do not provide a clear definition for the term 'recommendation' (Lazaro & Verges, 2022), if a communication by a broker-dealer is deemed a recommendation ('call to action'), it becomes also subject to Reg BI (SEC, 2019).

Persons and firms that are designated as "publishers" are excluded from the Advisers Act. This exclusion applies if a publication meets several criteria, including that (i) it provides only impersonal advice (i.e., advice not tailored to the individual needs of a specific client); (ii) is 'bona fide,' (containing disinterested commentary and analysis rather than promotional material); and (iii) is of general and regular circulation (rather than issued from time to time in response to episodic market activity) (Lowe v. SEC, 1985).

3. Robo-Advisors and Generative AI

Robo-advisors are cost-effective, automated investment platforms (Fisch et al., 2019). They operate with minimal human involvement, using algorithms to create personalized

portfolios for investors based on their risk tolerance and financial goals. This automated approach enables robo-advisors to provide investment guidance at lower costs than traditional financial advisors, making them an attractive option for retail investors.

Betterment, SoFi, and Wealthfront exemplify the diverse services of robo-advisors. These companies specialize in automated portfolio rebalancing, tax-loss harvesting, and customized investment advice tailored to an individual's financial situation and goals. Their ability to attract a large number of users demonstrates the growing popularity of robo-advisors. The robo-advisory market is on the rise, with assets predicted to hit US\$2.76 trillion in 2023 (Statista, 2023). This forecast highlights the market's potential and suggests a growing dependence on robo-advisors for investment management.

Large Language Models (LLMs), such as GPT-4 and ChatGPT by OpenAI, are AI systems that generate human-like text (Bowman, 2021). These models are powerful and unpredictable, known for capturing and utilizing worldly knowledge. However, they face challenges related to control, transparency, and alignment with human values. They excel in certain tasks, but the complexity of their internal mechanics often remains elusive.

The widespread use of chat-based generative AI has led to a surge in dependence on these technologies for information. Wealth management advice is one of such domains. A user might disclose her monthly income and personal financial data to the AI, seeking a plan for early retirement (Maxwell, 2023). Users may also seek advice on asset portfolio allocation aligned with their risk tolerance. In addition, they can delegate this task to AI agents, such as AgentGPT, autonomous software programs that execute tasks based on predefined rules or learned behaviors.

Robo-advisors utilize transparent algorithms, while LLMs work through an opaque mechanism. The clear, rule-based algorithms of robo-advisors allow their decision-making process to be easily understood and regulated. This transparency is crucial for consumers and regulators. In contrast, LLMs, due to their "black box" nature, produce more complex outputs, which make monitoring and understanding their decision-making challenging. Robo-advisors also elicit elaborate information from users and are not used on an anonymous basis.

4. Regulation of Robo-Advisors and Generative AI

Robo-advisors are commonly used as standalone online or app-based advisory services or as supplements to traditional financial advisors through automation. Firms that provide services via robo-advisors are required to adhere to securi-

ties laws applicable to financial advisors and broker-dealers (SEC, 2017; FINRA, 2016)).

At first blush, robo-advisors present significant challenges for the effective implementation of the regulation. Critics have raised concerns regarding the ability of robo-advisors to comply with fiduciary standards. For example, they argue that robo-advisors cannot efficiently fulfill the duty of care and the suitability requirement, primarily due to their reliance on preset questionnaires that might overlook vital information on the client (Fein, 2015; 2016). In addition, critics argue that robo-advisors lack the ability to fully comprehend a client's financial situation as they are likely to overlook the nuances that arise during 'human' conversations. These critics further assert that human perception is necessary in situations such as market failures or economic downturns, to guide clients and provide them with a comprehensive understanding of the implications of their decisions (Fein, 2015; Stein & Comm'r, 2015). Lastly, critics express concerns that robo-advisors may be programmed to prioritize the interest of the firm over clients, breaching the obligation to avoid conflicts of interest (Ji, 2017).

The SEC and FINRA have issued alerts on automated financial advice services since the emergence of robo-advisors. These alerts serve as cautionary measures and do not assert non-compliance with regulations. Rather, they emphasize the limitations of robo-advisory tools and advise investors to consider these limitations while utilizing automated services and provide guidance to firms.¹

Additionally, scholars have argued that the fiduciary duty's extent depends on the dynamics of the client-adviser relationship, hence it is 'personalized' and dependent on the the agreement between the two parties (Ji, 2017). These scholars argues that the adaptability of the fiduciary duty to a specific client-adviser relationship should also apply to robo-advisors. Furthermore, Recent surveys indicate that most robo-advisors rely on relatively simple and transparent algorithms that operate based on fixed rules derived from client-specific information, like needs, investment goals, and risk preferences (European Securities and Markets Authority (ESMA), 2023). In other words, even though robo-advisors don't involve human interaction, they can still personalize their recommendations to match a client's unique needs and risk tolerance (Baker & Dellaert, 2017) while maintaining appropriate fiduciary duties (Ji, 2017; Lightbourne, 2017).

It is also worth mentioning that majority of robo-advisors operate in conjunction with registered financial advisors. (Baker & Dellaert, 2017). This obliges the registered financial adviser or broker-dealer to oversee the activity of the robo-advisor and ensure it complies with the regulations. Consequently, registered financial advisors or broker-dealers

assume responsibility for monitoring the operations of robo-advisors and ensuring adherence to regulatory standards (Lightbourne, 2017). In the event of regulatory violations, there is a legal entity accountable to clients and authorities.

We contend that while there are some similarities between applications of generative AI and robo-advisors, particularly in terms of the automated advice process, generative AI applications in finance pose greater challenges to current regulations. The regulatory framework that met with challenges when applied to robo-advisors will not be adequate for certain use cases of generative AI.

Unlike robo-advisors, these technologies are typically general-purpose tools that are not necessarily designed specifically for providing financial advice. Some models are trained on specific financial information (Wu et al., 2023), and there are indications that LLM trained for financial applications might produce desired results for certain investors (Lopez-Lira & Tang, 2023). Nevertheless, the complex and opaque nature of these models raises concerns about the ability to ascertain whether the model satisfies the demand for fair and balanced information and whether it provides a reasonable basis for a specific recommendation. Moreover, it also challenging to determine if the model was able to consider the client's information to comply with suitability requirements. Existing models still suffer from "hallucinations," undermining the credibility of the information provided by the model. This contradicts the regulatory prohibition against providing false and deceptive information and may even breach fiduciary duties. Furthermore, these models are not necessarily employed by companies dedicated to financial advice; instead, consumers can seek financial advice from these tools. Consequently, there is no clearly identifiable group of individuals or a corporation that can be held liable for the advice provided by the tool.

Integrating LLMs into robo-advisors will not solve the above concerns. The inclusion of LLMs can enhance user experiences by providing advanced, tailored advice, such as in-depth insights into investment strategies. However, LLMs' complexity poses the challenges presented above for compliance with the regulation.

5. Regulatory Approaches

To consider the appropriate way to oversee generative AI as it pertains to financial advice, we can look to the two types of regulatory tools in the regulatory toolkit— disclosure and rules of conduct. Financial regulation often relies on disclosure as a tool to protect consumers, such as when advisors are required to disclose information about conflicts of interest. At other times, financial regulation creates heavier and more substantive requirements, such as banning certain methods of soliciting investment advice.

¹See, for example, (SEC & FINRA, 2015; SEC, 2017)

Current general initiatives to regulate AI focus on disclosure requirements. The most advanced initiative in this regard is the EU AI Act proposal (European Commission, 2021). This proposal has recently been amended to address challenges posed by generative AI. One of the added requirements is the inclusion of a disclaimer stating that the content was not generated by a human. In our context, this could mean that any time a user asks a question related to financial advice there would be an automatic disclaimer clarifies that the information is not personal and should not be considered advice as it was not generated by a human (or machine) that is familiar with the user.

This approach that emphasizes disclosure has several drawbacks. Such disclaimers may prove insufficient in mitigating potential risks associated with using these tools for financial advice, as generative AI tools are designed to provide highly personalized and persuasive information. There are other reasons to be skeptical about the effectiveness of disclosure in altering behavior in this context. Firstly, the easy accessibility and simplicity of activating generative AI tools have led to their widespread use. Even if some users take the disclaimer into consideration, a significant number of users may still be impacted, potentially affecting their investment returns (Ji, 2017).

Secondly, it's important to acknowledge that a majority of users relying on generative AI tools for investment advice are likely unsophisticated investors who may not have access to alternative sources of financial advice (D'Acunto & Rossi, 2019). Consequently, they may not exercise caution in interpreting or considering the disclosures provided.

Regulation could also choose to go down the road of more substantive restrictions and requirements through rules of conduct. At the far end of the spectrum would be to prohibit the use of generative AI-based chatbots if they are not able to comply with current regulations. Enforcing such a requirement could prove to be challenging. The complexity of LLM model that rely on vast amount of parameters will make it almost impossible to prove whether the model comply or did not comply with existing regulations.

Ultimately, the desirable regulatory framework for regulating financial advice in the context of generative AI requires a better understanding of how people act upon this advice, the impact of potential disclosures and the technological feasibility and social desirability of restricting information on these platforms.

6. Concluding Remarks

The role of AI in financial advice has grown significantly, requiring a well-considered approach to regulatory strategies. Each strategy, whether it involves disclosure regulations or outright prohibitions, brings its own set of benefits and

potential challenges. An effective regulatory framework needs more than a superficial understanding; it requires a comprehensive grasp of these AI technologies and their implications. We must fully understand how users engage with AI-driven advice and how they respond to the guidance provided. It is equally important to assess the impact of potential disclosures on users, understanding the extent to which transparency affects their decision-making.

In addition, evaluating the feasibility of limiting certain AI activities is essential. These limitations need to be weighed against societal desirability, examining if and how such restrictions could serve the greater public interest. As the lines blur between human and AI financial advice, our regulatory methods cannot remain static. We must strive for a dynamic approach, one that carefully balances the benefits brought by technological innovation against the essential need for consumer protection and market stability. This balance ensures that, while we continue to advance and innovate, we also maintain the trust and safety of consumers, thereby upholding the integrity of our financial markets.

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