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NAVIGATING THE FUTURE: ROBO-ADVISORS IN THE FINANCIAL LANDSCAPE.

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Abstract

Robotic advisors have emerged as a disruptive force in the rapidly evolving financial technology landscape, revolutionizing traditional wealth management practices. Driven by artificial intelligence and automation, these intelligent systems offer investors a novel approach to financial decision-making. This study delves into the multifaceted realm of robotic advisors, examining their development, regulatory framework, challenges, and immense potential in Nigeria. Utilizing a comparative research method, the study meticulously analyzes primary and secondary legal sources to achieve its objectives. Findings reveal that while the legal framework for robotic advisors exists, it remains susceptible to inherent faults and biases. Additionally, the study identifies a degree of human intervention in robotic advisory services, undermining claims of complete autonomy. Based on these findings, the paper advocates for monthly external auditing and independent contractor supervision to enhance investor confidence and security. Furthermore, it recommends regular oversight of human intervention to ensure adherence to regulatory standards. It is anticipated that these recommendations will contribute to restoring confidence and trust in robotic advisory services within the Nigerian landscape.

Keywords: Artificial Intelligence, E-Commerce, Robo-Advisor & Investor, Finance.

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1. Introduction

Due to the emergence of an innovative model that combines technology and financial experience to give high-quality advice at a cheaper cost than traditional investment advisory services, the environment for investment advice is changing.¹ Prior the advent of this innovative model, traditional financial advisor works directly with clients to help them meet their short and long-term financial goals. By virtue of the recent technological advancement, the provision of online financial services is growing rapidly.² Within the financial services industry, digital innovation is concentrated on revolutionizing back and middle offices, supporting investment management to achieve economies of scale and/or networking benefits.³

It is important to note that the use of artificial intelligence softwares and robots to make market and economic analysis for business persons with respect to giving a meticulously processed advice is also a growing area of the worldwide financial market, Nigeria inclusive. This concept is popularly referred to as a Robo-Advisor. Impressively, but with some skepticism, this is a radical shift from what was obtainable few years ago, when intelligent business experts were

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¹ KL Jennifer and EL, Perelman, 'The Transformation of Investment Advice: Digital Investment Advisors as Fiduciaries' in Julie Agnew and Olivia S. Mitchell (eds) *The Disruptive Impact of FinTech on Retirement Systems*, (Oxford University Press, 2019).

² L. Cao, G Yuan, T. Leung, & W. Zhang, 'Special Issue on AI and FinTech: The Challenge Ahead' (2020) *IEEE Intell. Syst.*, 35, 3-6., <<https://doi.org/10.1109/MIS.2020.2983494>> accessed 28 April, 2024

³ S.L Destines and PB Hammond, 'Matching FinTech Advice to Participant Needs: Lessons and Challenges' in Julie Agnew and Olivia S. Mitchell (eds) *The Disruptive Impact of FinTech on Retirement Systems*. (Oxford University Press 2019). <DOI: 10.1093/oso/9780198845553.003.0010> accessed 1 February 2023.

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consulted by business men for financial advice on investments and other economical possibilities.⁴

Artificial Intelligence enables Robo-Advisors to collect investor data, including their goals, time horizon, risk tolerance, investment period, inputs and amounts invested, life objectives, etc. These data are then converted by computer algorithms installed in the advisor to recommend a diversified investment portfolio, a market strategy, or investment guidelines.⁵

Interestingly, in both emerging and developed nations, Robo-Advisors are growing increasingly alluring. Offering more precise and logical cutting-edge services to investors worldwide with greater precision and reasoning than many specialists in those industries is not implausible.⁶ Not only do they provide time-saving automated investing services, but their costs are also far lower than those of traditional investment managers.⁷ To put things in perspective, Robo-Advisors, also called "Robo-Advisers," are now predicted to handle \$500 billion in investments as of 2021.⁸ By 2024, the sector for Robo-Advisory services is expected to grow to \$1.2 trillion.⁹

With the growing pace and acceptance of the development and deployment of Robo-Advisors, it is no doubt pertinent that adequate regulations be put in place to balance the interest of parties involved, and also of public interest and public safety. This has always been the important role of

⁴ C. Tishion, 'How to Start a Robo-Advisory Service in Nigeria' <<https://lexpraxisng.com/how-to-start-a-robot-advisory-service-in-nigeria/>> accessed 5 December 2022.

⁵ *Ibid.*

⁶ A Folarin, 'An Overview of the SEC Rule on Robo-Advisory Services in Nigeria' (2021) <<https://www.lawyard.org/opinions/an-overview-of-the-sec-rule-on-robot-advisory-services-in-nigeria-by-akorede-folarin/>> accessed 5 December, 2022., F. Xin, 'Research on Hotspot and Frontier of Robo-Advisor in China' (2023) *Academic Journal of Business & Management*.< <https://doi.org/10.25236/ajbm.2023.051507>.> accessed 28 April, 2024

⁷ Folarin (n. 6)

⁸ *Ibid.*

⁹ *Ibid.*

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laws and legislation in the growing pace of technology across the world in different jurisdictions. Just as countries worldwide enact laws to regulate the internet and blockchain technology, the development of robo advisors has also been subject to careful legislative oversight. Over time, robo advisors have been supported and regulated within comprehensive legal frameworks, akin to the governance surrounding the internet and blockchain innovations.

The Nigerian legal landscape for Robo-Advisors is still in its early stages, but the Nigerian Securities and Exchange Commission issued the final Rule on Robo-Advisory Services on August 30, 2021, aiming to regulate the adoption and deployment of these services in the capital market¹⁰. However, recent developments, such as Comiblock's global-based crypto robo-advisor, demonstrate the industry's dynamism and the potential for diversification and expansion in the Nigerian financial ecosystem.¹¹ These initiatives reflect the evolving regulatory framework and the dynamism of the robo-advisor industry.

The paper is structured into sections that examine the emergence and regulatory landscape of Robo-advisors in Nigeria, along with the nature of Robo-Advisors, its challenges, and recommendations for future growth. Utilizing primary data sources such as the Nigerian Securities and Exchange Commission Rule on Robo-Advisory Services in 2021, as well as secondary sources like articles and relevant journals. The data was subjected to content and

¹⁰ Aelex, 'Fintech Review 2022: Recent regulatory and legal development in Nigeria' (2022) <<https://www.aelex.com/aelex-2022-fintech-report/>> accessed 1 March 2023.

¹¹ 360mozambique, 'ComiBlock, A Nigerian Startup To Help Users Invest In Cryptocurrencies' (2021) <<https://360mozambique.com/markets/crypto/comiblock-a-nigerian-startup-to-help-users-invest-in-cryptocurrencies/>> accessed 1 March 2023.

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jurisprudential analysis. Hence, this paper aims to fill gaps in existing literature. Through thorough analysis and proposed regulatory improvements, this paper aims to offer valuable insights for policymakers, practitioners, and researchers in the field.

1.2 Literature Review

This work requires a thorough review of existing literature to effectively situate it within the context of this research.

Auwal Adam Sa'ad *et al*,¹² examines the legal implications of robo-advisory technology in Islamic finance, focusing on the intersection of regulatory concerns and technological requirements.. The study reveals that robo-advisors have amassed substantial market value, managing \$60 billion in client assets as of 2015, with an exponential surge predicted to surpass \$2 trillion as of 2020. The authors highlight industry players like Betterment and Wealthfront, which have garnered investor confidence and raised hundreds of millions of dollars, with cumulative assets under their management of over \$10 billion. The study highlights the transformative potential of Robo-Advisory services in the Islamic financial landscape and the multifaceted nature of the Robo-Advisory phenomenon within Islamic financial institutions. The study underscores the multifaceted nature of the Robo-Advisory phenomenon within the specific context of Islamic financial institutions. From yet another perspective, Pablo¹³ analyzed the legal landscape surrounding Robo-Advisory. He argues that the rise of Robo-Advisors presents new

¹² A Sa'ad, S Alhabshi, R Hassan, and A. Noor, 'Robo-advisory for Islamic financial institutions: shari'ah and regulatory issues' (2020) <<https://doi.org/10.13135/2421-2172/3992>> accessed 28 November 2023.

¹³ P.S Bayón, *A Legal Framework For Robo-Advisors Schweighofer/Kummer/Saarenpää/Schafer (dirs.), Datenschutz/LegalTech: Tagungband des 21 Internationalen Rechtsinformatik Symposions IRIS 2018*, (Editions Weblaw, 2018), 311-318

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challenges to the financial market. He highlights the advantages of robo-advisors in managing vast datasets, but also highlights the inherent challenges in their development. While these automated advisors address existing issues and improve market efficiency, they also introduce new risks and regulatory challenges that require more comprehensive attention. Bayón's analysis is limited to European Financial Market regulation, highlighting the nuanced nature of legal considerations within this context. This raises questions about how these insights might translate into a broader global regulatory landscape. Meanwhile, Chiu¹⁴ explores the UK and EU's view of robo-advice as a technological transformation that can address the financial advice access gap. She suggests that AI can use data and investment strategies to provide personalized financial advice, prompting regulatory adjustments. Chiu's research highlights the evolving relationship between technological advancements, financial regulation, and public governance, potentially reshaping the dynamics of financial advice accessibility.

Imperial Law Attorney¹⁵ reveals that the Securities and Exchange Commission (SEC) established Rules for Robo Services in 2021 to broaden the investment landscape by introducing digital assets, foreign securities, and financial services to a wider audience. They noted that the rules aim to enhance accessibility through any internet-enabled device, allowing a wider range of participants to engage in Nigeria's financial space. Hence, he opines that this move is expected to stimulate competition for traditional advisors and contribute to the ongoing shift towards financial technology in the country. The law attorney's examination emphasizes regulatory

¹⁴ I.H Chiu, 'Transforming the Financial Advice Market - The Roles of Robo-advice, Financial Regulation and Public Governance in the U<Chiu_AAM_BFLR%20submission-2.pdf>

¹⁵ Imperial Law Attorney, 'Overview Of Securities And Exchange Commission Rules Of Robo-Advisors' <ILO_NEWSLETTER_-_MARCH_2022-7006251.pdf> accessed 27 November, 2023.

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efforts to accommodate digital advancements and promote inclusivity in investment opportunities. While, Garcia ¹⁶ explores the history, current market trends, and current state of Robo-Advisor software in the US. It aims to identify growth areas, assess industry strengths and weaknesses, and inform future strategic options. He highlights the growing focus on advanced portfolio management methodologies, such as FSO, as a way for Robo-advisors to differentiate themselves in a competitive market. He proposes the integration of digital twin capabilities into Robo-advisor software to boost productivity by providing real-time access to digital footprints and consumer behavior. However, Garcia acknowledges the speculative nature of this method, particularly concerning sensitive user data. The dissertation also highlights the impact of Natural Language Processing (NLP) on the industry, suggesting that Robo-advisors using AI chatbots with enhanced conversational instant-messaging capabilities will gain a competitive edge. This underscores the importance of embracing NLP technology to engage consumers effectively and stay ahead in the rapidly evolving Robo-advisory services landscape.

1.3 Research Gap

The literature on Nigerian robo advisors lacks a comprehensive analysis of the legal framework and potential opportunities and challenges. This gap highlights the need for an in-depth examination to identify shortcomings and propose solutions. Addressing these issues will provide a more concise understanding of the legal landscape and offer valuable insights for policymakers, practitioners, and researchers interested in the intersection of financial technology and regulatory frameworks in the region.

¹⁶ G Tiger, *Robo-Advising: Past, Present, and Future US Trends* (Master's Dissertation, University of Strathclyde 2022) <10.13140/RG.2.2.28601.03682> accessed 27 November 2023.

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2. The Nature of Robo-Advisor

This section aims to explore the essence of Robo-Advisors, focusing on their operational mechanisms and regulatory oversight.

2.1 How Robo-Advisor Works

According to Tiger, Robo-Advisors create a portfolio for clients based on their investing objectives, risk aversion, and return-risk expectations by using questionnaires to assess their level of risk tolerance. Following this, users fund the platform, and the programme creates a target portfolio. Over time, the Robo-Advisor generates profits or losses by making investments on the client's behalf. Hence, the investor has access to their portfolio and can exit during market hours using popular exchange-traded funds (ETFs).¹⁷ Stephen¹⁸ further opines generally that initial awareness, evaluation, modelling, findings and suggestions, and follow-up are all part of the process of using robot guidance. According to him, every one of these stages may be completed only online, over the phone, or in person with a human advisor.¹⁹

2.2 Who regulates Robo Advisors?

Similar to the circumstances in Nigeria, the Securities and Exchange Commission (SEC) in the United States is tasked with safeguarding investors in the securities market by supervising the implementation of federal securities legislation.²⁰ It is important to note that this is being

¹⁷ Tiger (n. 16)

¹⁸ Deschenes (n.18)

¹⁹ *Ibid.*

²⁰ Security and Exchange Commission Act 2017

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accomplished by regulating the services offered by both human and automated advisers, who are required to register as Registered Investment Advisers (RIAs) under the Investment Advisers Act of 1940. They have a fiduciary duty to advise in their clients' best interests and are subject to the substantive responsibilities imposed by that legislation in the US.²¹ As a result, robo-advisors that retain client assets are required to register as broker-dealers in the US with the SEC and the Financial Industry Regulatory Authority (FINRA).²²

Similarly, the Nigeria Security and Exchange Commission regulates the operation of Robo-Advisor. Recently, the commission unveiled its rules which are applicable to persons who provide Robo advisory Services in Nigeria. The legal framework for Robo-Advisor in Nigeria is still very sketchy compared to the US and there are few companies engaging in such services. In response to this development, a start-up company just introduced a global-based investing crypto advisor, giving anyone with a smartphone access to planning tools, advice, curated and thematic crypto-portfolios²³.

3. An Analysis of Security Exchange Rule on Robo Advisor 2021

It is worth noting that Robo Advisory Services is a landmark development in the financial sector. However, it is yet to be determined whether the information supplied to the algorithm will be able to provide a reliable and accurate opinion that can be trusted without any iota of doubt. From clear indications, the Rules provides for instances where the client will discard with the

²¹ P Lazaroff, 'The Difference between Fiduciary and Suitability Standards.' *Forbes*. (2016) <<http://www.forbes.com/sites/peterlazaroff/2016/04/06/thedifference-between-fiduciary-and-suitability-standards/#4d42e9a735bf>> accessed 1 February 2023.

²² FINRA is a nongovernmental organization that writes and enforces rules for brokers and broker-dealers.

²³ T. JACKSON, 'Nigerian Startup Launches Crypto Investment Robo-Advisor' (2021) <<https://disruptafrica.com/2021/08/27/nigerian-startup-launches-crypto-investment-robot-advisor/>>accessed 7 March 2024

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advice given by the software and hold on with that which is obtained from traditional advisors.²⁴

In essence, this means that a Robo-Advisor's client has a right to vary their option and yet go with an independent advisor.²⁵ It is pertinent to note that on this premise, the idea is not totally free from challenges, as can be gleaned from the provisions; it has placed enormous responsibility on the human factor to be able to function effectively. This is not far-fetched considering the reasons why the Rules provide for adequate and sufficient governance and supervisory arrangements to effectively mitigate against fault or bias.²⁶ It is submitted that to specifically mitigate in the context as painted earlier is to reduce to the barest minimum; hence, there seems to be a high possibility of fault or bias.²⁷

For this reason, the board and senior management of the Robo-Advisor are responsible for maintaining effective oversight and governance of the client-facing tool and ensuring that there are sufficient resources to monitor and supervise the performance of algorithms. In some instances, the Rules permit the board or senior management to delegate such tasks to other personnel.²⁸ However, the Rules unequivocally states that the board and senior management remain ultimately responsible and accountable for the proper development, monitoring, and testing of the client-facing tools.²⁹ Thus, the Robo-Advisor invention cannot operate on its own unless there is adequate human intervention. Hence, the question becomes: how reliable are the human supervisors empowered to enhance the of its effectiveness?

²⁴ Section 3(iv) of the Robo-Advisor Rules 2021.

²⁵ *Ibid*

²⁶ Rule 6 (a)

²⁷ *Ibid*

²⁸ Rule 6 (b)

²⁹ Rule 6 (c)

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Another critical issue to be discussed is the risk associated with the algorithm. Even though the Technological Regulation Management Rules provide a special legal framework for the use of fintech software, which demands strict compliance, it is important to stress that the said proffered guidelines cannot be completely effective; there will definitely be some lacunae due to its configurations, as they are not totally personalized for only one individual. Also, the service is just developing in Nigeria, and as such, there will still be some structural adjustments and framework re-adjustments. The risk ranges from giving wrong to limited investment advice by virtue of its limited scope of data available.³⁰ Another risk is the possibility of hackers accessing vital information on Robo-Advisor clients. More especially in this part of the world, the internet network could be so unreliable and frustrating, hence making it somewhat difficult to gather all required information to harness. To further buttress the above-mentioned argument, Rule 14 of the Rules provides that Robo-Advisors shall provide a risk warning statement to their clients at the point of account opening and when advising them on overseas-listed investment products. It is important to state that even though the world is going digital, there is still some vital information regulatory compliance matters that can only be accessed if it is carried out manually rather than go digital, hence it will be difficult for Robo-Advisor to access it.

The rules provide that Robo-Advisors should be adequately staffed with people who have the competency and expertise to develop and review the methodology of the algorithms. It also provides that adequate training should also be provided to all staff who use the client-facing tool.³¹ This point is very necessary and crucial. Another major challenge that this could

³⁰ Rule 12

³¹ Rule 6 (c)

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encounter is the unavailability of competent hands to develop and review the software. It would especially create a major setback in Nigeria since it is just growing.

Rule 13 discusses conflicts of interest. The rule states that Robo Advisers shall comply with the existing disclosure requirements on conflicts of interest set out in the Code of Conduct for Employees of Capital Market Operators set out in these Rules and Regulations. The question becomes whether the principle of conflict of interest also applies to artificial intelligence software, by virtue of not being human. Although the Rules state that they shall disclose in writing to their clients any actual or potential conflict of interest arising from any connection to or association with any product provider, including any material information or facts that may compromise their objectivity or independence, the author believes that since it is an AI programme, the principle of conflict of interest will be difficult to implement, especially if it happens to cut across different jurisdictions. Secondly, since it is programmed to give financial advice to different clients around the globe, it shouldn't be restricted, and even at that, it would be out of place to restrict it.

Rule 15 focuses on the suitability of advice. It states that Robo-Advisers shall have a reasonable basis for recommending any investment product to a person who may reasonably be expected to rely on the recommendation. The author believes that even though there is a reasonable basis to recommend any investment product, the question of trust comes to fore. Despite the fact that AI collects a wide range of information concerning the risk tolerance of the client, the employment status of the client, the financial situation of the client, including assets, liabilities, cash flow, and income, as well as the source and amount of the client's regular income, amongst others, can

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such advice be solely trusted? The author is of the view such can only be trusted if there are laid down structures that validates such advice that clients can easily access and be certain of success.

4. Benefits, Prospects and Challenges of Robo-Advisors

Robo-advisors have revolutionized the financial services industry by providing accessible, low-cost alternatives to traditional advisors.³² These online platforms bypass human labour, making them accessible at any time with an internet connection.³³ Compared to traditional methods, robo-advisors require significantly less capital to start investing, with middle-class and mass investors able to access services with under \$100,000 US dollars.³⁴ Betterment, a popular robo-advisor, offers a basic offering without requiring an account minimum.³⁵

Robo-advisors are efficient, allowing users to complete transactions from the comfort of their homes.³⁶ Investing with a robo-advisor may restrict your options, but it may also help you avoid

³² J Frankenfield, 'Robo Advisor' (2023) < <https://www.investopedia.com/terms/r/roboadvisor-roboadviser.asp> > accessed 1 February 2023.

³³ *ibid.*

³⁴ K Shih (n. 14)

³⁵ *ibid.*

³⁶ *ibid.*

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bad investments that come from buying individual stocks or trying to outperform the market.

Ordinary investors typically see greater returns when using an indexing technique.³⁷

Tax savings are another benefit of robo-advisors. In the US, robo-advisors can reduce tax effects by offsetting capital gains tax by selling assets that generate losses. Robo-advisors in the US market obtain surplus returns by providing value-added services including tax harvesting and rebalancing. Overall, robo-advisors will make financial planning more accessible to everyone, not just high-net-worth individuals, if its potentials are harnessed in Nigeria.³⁸

5.2 The Prospect of Robo Advisory Services

The future of robot advisors is rather promising as wealth management technology develops further. A wide array of financial advice services may be automated, increasing accessibility and scalability for a wider range of investors, thanks to the continuous advancement of complex software. Future access to services like cash-flow management, tax planning, college savings, and investment might be made more accessible by robot advisors if explored in Nigeria.

Let's examine some important future directions for robot advisors.

5.2.1: Full-Scale Optimization (FSO):

FSO represents an advanced method for risk advisors (RAs) to elevate client service. Notably, platforms like Schwab Intelligent Portfolios have successfully integrated FSO strategies, with studies indicating that firms employing advanced investment methodologies attract higher client

³⁷ *ibid.*

³⁸ K Shih (n. 14)

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investments. FSO enables the precise tailoring of portfolios to customer characteristics and return distributions. By utilizing search algorithms to find optimal weightings, it outperforms traditional methods like Multi-Percentage Return (MPT), particularly for investors with unique utility functions. Firms adopting more sophisticated investment methodologies stand to benefit from enhanced performance and increased capital influx, as modern, research-backed, and transparent strategies attract discerning investors.³⁹ If this is allowed to operate in Nigeria, it would encourage enhanced capital and performance.

5.2.2. Digital Twin:

Digital twin technology emerges as a cutting-edge option for Robo Advisors, albeit one that requires regulatory testing for consumer trust. A government sandbox program could facilitate this FinTech innovation.

By combining digital twin technology with Robo Advisor software, major challenges like a lack of personalization and adaptability to changing client needs could be overcome. This approach leverages real-time data from various sources, creating a dynamic digital representation of individuals, enabling more tailored and timely advice.

³⁹ Tiger (n.11); F Rasiwala, and B Kohli, 'Artificial Intelligence in FinTech: Understanding Stakeholders Perception on Innovation, Disruption, and Transformation in Finance.' *Int. J. Bus. Intell. Res.*, (2021) 12, 48-65. <<https://doi.org/10.4018/ijbir.20210101.oa3>> accessed 28 November 2023.

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The integration of digital twin technology empowers in Nigeria fintech will enable Robo Advisors to provide personalized recommendations based on real-time customer information, enhancing the overall client experience and responsiveness.⁴⁰

5.2.3. Natural Language Processing (NLP):

By attending to customers' emotional requirements and improving the advisor-client connection, NLP has the potential to completely transform the Robo Advisory sector. NLP-powered AI chatbots can enable mutual communication between Robo Advisors and human clients, building confidence and raising the possibility that customers will heed investment advice. Putting money into NLP technology may improve the interaction between users and software, creating a more satisfying user experience. Conversational AI chatbots may take on the ideals of the business, developing a unique personality that fits the company's ethos and sets it apart from rivals.

Regulators must, nonetheless, keep an eye on some discoveries. Investors have a tendency to accept the recommendations of conversational Robo Advisors, even if it means paying more fees or receiving less-than-ideal portfolio advice. This emphasises the necessity of regulatory measures to protect customers from any deception and guarantee the best possible investing choices. NLP technology development must continue despite these factors if client connections with Robo Advisors are to be enhanced.⁴¹

⁴⁰ Tiger (n.11); J Fisch, M Laboure, J Turner, R Klitzman, T Rouse, D Levine, A Itami, and B Taylor, 'The Disruptive Impact of FinTech on Retirement Systems.'(2019). <<https://doi.org/10.1093/oso/9780198845553.001.0001>.> accessed 28 November 2023.; D Jung, V Dorner, C Weinhardt, and H Puszma, 'Designing a robo-advisor for risk-averse, low-budget consumers. *Electronic Markets*,' (2018) 28, 367-380. <<https://doi.org/10.1007/s12525-017-0279-9>.> accessed 28 November 2023.

⁴¹ A John, et al. 'Health Care Chatbot' *International Research Journal of Computer Science* (2022) <<https://doi.org/10.26562/irjcs.2022.v0908.28>.> accessed 28 November 2023.

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5.3 Challenges Faced by Robo-Advisory Services

5.3.1 Establishing Trust:

Building trust has traditionally been integral in financial planning, relying on human interaction to convey the credibility of services. This proves challenging for robo-advisors, given the already low trust levels in the planning industry. Overcoming this hurdle requires significant investments in processes and marketing efforts to articulate a compelling narrative that demonstrates the trustworthiness of the robo-advisor to the broader public.⁴²

5.3.2 Lack of Personalization

While robo-advisors offer configurability through financial planning software to address the needs of a wide range of investors, they fall short in acknowledging individual money-related concerns. The absence of human interaction prevents them from considering nuanced financial issues, making it challenging for users who may benefit from personalized discussions with a human advisor.⁴³

5.3.3 Limited Flexibility

Robo-advisors may struggle to accommodate certain investment strategies, such as selling call options or buying individual stocks. The rigidity of investing algorithms may not cater to sophisticated or novice investors seeking a broader portfolio with diverse asset classes. This limitation poses challenges for those wanting more flexibility in their investment approaches.

⁴²P Resnik, 'Six challenges for robo-advisers' (2016) <<http://www.firstlinks.com.au/six-challenges-for-robo-advisers>> accessed 1 March 2023.

⁴³ BA Friedberg, 'Robo-Advisor: Advantages and Disadvantages', (2022) <<https://www.investopedia.com/articles/personal-finance/010616/pros-cons-using-roboadvisor.asp>> accessed 1 February 2023.

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5.3.4 Absence of Face-to-Face Meetings:

For individuals valuing a personal relationship with their financial advisor, robo-advisors prove to be an inadequate option. Unlike traditional financial advisory models that allow direct, face-to-face meetings with advisors, robo-advisors lack a physical office setting. This absence of personal contact limits the appeal of robo-advisors for those who prefer a more traditional advisory approach.⁴⁴

5. Conclusion

Robo-Advisors are transforming the financial landscape by combining technology and investment expertise, offering efficient and cost-effective financial services globally. These digital platforms, using artificial intelligence and algorithms, can gather and process vast amounts of information, offering diversified investment portfolios, market strategies, and guidelines tailored to individual investor profiles. They have demonstrated the ability to outperform human experts in accuracy and logical conclusions.

The regulatory framework, such as the Nigerian Securities and Exchange Commission's Rule on Robo-Advisory Services, is crucial in balancing innovation and stakeholder interests. The global significance of Robo-Advisors is evident across various markets, including Islamic financial institutions, European financial markets, the UK, the US, and Nigeria. Future directions such as Full-Scale Optimization (FSO), Digital Twin technology, and Natural Language Processing (NLP) hold promise for further advancements. However, challenges persist, such as establishing

⁴⁴ *ibid.*

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trust in an industry reliant on human interaction and addressing issues of personalization, flexibility, and the absence of face-to-face meetings.

Despite these challenges, the Robo-Advisor phenomenon appears poised for sustained growth and influence in the financial services sector. The ongoing interplay between technological innovation, regulatory frameworks, and market demands will shape the future trajectory of Robo-Advisory services, influencing how investors access and interact with financial advice globally, especially in Nigeria.

6. Recommendations

The following are the proposed recommendations.

1. It is recommended that there should be monthly external auditing and independent contractor supervision to enhance investor confidence and security.
2. It is recommended that there should be regular oversight of human intervention to ensure adherence to regulatory standards.
3. It is recommended that there is need to increase Nigerian population's understanding of Robo-Advisory services through educational programs, financial literacy programs, and widespread awareness campaigns, partnering with educational institutions.
4. It is recommended that there should be a customize Robo-Advisory services to Nigerian market preferences, incorporating investment options that align with local risk appetites, making them more appealing and relevant to the local population.
5. It is recommended that there should be an avenue to engage with established financial institutions to include Robo-Advisory services into what they already provide.
6. It is recommended that there should be a growing reliance on digital financial services necessitate the continuous enhancement of cybersecurity measures to build user trust and protect

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financial information, thereby enhancing the long-term success and acceptance of robo-advisors in Nigeria.

7. It is recommended that government should further support innovation in Robo-Advisory by incentivizing startups and financial institutions to develop advanced solutions, and creating a supportive environment for experimentation and learning from failures to continuously improve Robo-Advisory services.