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8TH EDITION ENWEALTH CONVERSATIONS REPORT

**THE ROLE OF TECHNOLOGY ON SAVINGS
AND INVESTMENTS IN KENYA**

CONTRIBUTORS AND ACKNOWLEDGMENTS

The study focuses on the role and impact of technology in savings and investments across diverse financial sectors, exploring emerging fintech trends reshaping the financial landscape and contributing to increased financial deepening in the country.

It is our hope that this research will make a positive contribution to the existing body of knowledge on FinTech, fostering discussions and the implementation of strategic initiatives that promote higher financial deepening through innovative financial solutions in the country.

We extend sincere appreciation to the members of Retirement Benefits Schemes who actively participated in the survey, as well as other stakeholders who generously supported and contributed their time, crucial for the successful completion of this research.

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EXECUTIVE SUMMARY

This research paper delves into the transformative impact of technology on savings and investments in Kenya, addressing behavioral aspects, evaluating current technological systems, and exploring emerging trends. The study assesses the influence of technology on the behavioral aspects of financial product utilization, evaluates the effectiveness of existing technological systems in the financial and pension sectors and investigates the effects of emerging technological trends on savings and investments.

The respondents were diverse, with the majority falling between the ages of 35-44. Of note, 72% reported saving a portion of their income, indicating a positive shift in savings culture. The primary saving platforms identified were pension (24%), followed by bank savings accounts, and chamas (13% each). The study showed that Digital access to financial services was prevalent, with 27.97% utilizing mobile money, 20.14% accessing banking services digitally, and 13.69% engaging with loan apps. Other avenues, such as table banking, insurance, and unit trusts, showed lower but notable levels of digital access. 63.29% of respondents attributed that technology had improved their saving and investment habits. With a majority stating reasons such as the ease of information availability (48.2%), the introduction of tech-powered financial products better suited to their needs (37.3%), and positive peer pressure (13.2%) being contributors. However, 10.1% felt technology had not enhanced their savings, citing reasons like online market availability and information overload. A significant 65.43% of respondents found digital sources of financial information to be reliable. More than half agreed that digital accessibility increased their eagerness to save and invest (53%).

The study identified areas requiring improvement, emphasizing the need for technological advancements in data protection, information security, insurance services, and internet connectivity. Respondents collectively acknowledged existing challenges, highlighting a growing awareness and concern regarding the safeguarding of personal and sensitive information.

The report shows that as technology continues to shape financial landscapes, understanding these insights provides a foundation for leveraging digital tools to deepen financial inclusion and enhance overall financial well-being in Kenya. Some of the recommendations include financial service providers should prioritize user-friendly mobile apps, Peer-Influence Initiatives, Tailor financial products and services to address the needs of individuals outside the formal financial system, Continuous Monitoring and Innovation. The recommendations offer practical steps to harness the positive impact of technology on savings and investments while addressing existing challenges

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CHAPTER 1



INTRODUCTION

1.1. Background of the study

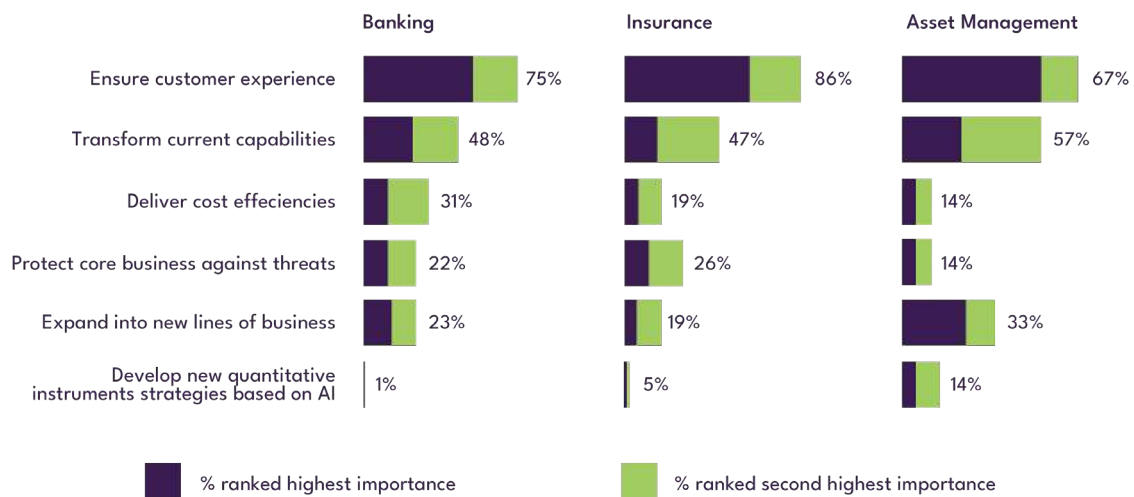
Savings are widely recognized as an important means for sustainable cash-flow management and consumption smoothing for many households and economies (Karlan, Ratan, & Zinman, 2014). Scholars and practitioners alike have celebrated saving promotion strategies as promising strategy for economic development (Janina I. Steinert, 2018). Saving emphasizes the efficient use of already existing resources, and is therefore considered one of the most economically sensible options when compared to other sources of amassing wealth such as the acquisition of external loans. In the existing body of research, there are two schools of thought, one agrees with this, and the other holds the contrary opinion that saving is a flawed endeavor in the face of rapidly rising inflation in countries all over the world.

However, the answer to this problem can be found in the realm of investments. If investment portfolios are correctly curated, savings don't have to be just savings; rather, they can be made to grow, either at simple interest rates or compound interest rates, to combat the effect of inflation. This can only be achieved if the investment avenues are easily accessible even to the most marginalized groups of individuals to have the opportunity to turn their savings into more formal channels of investments. To achieve this, financial inclusion is the key. The World Bank (2022) defines financial inclusion as a means through which individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered responsibly and sustainably. The development of technology has spawned a proliferation of public-accessible, dynamic investment opportunities. This is notably true for Western countries and other developed nations in the world, as technological development has made it possible to reach even the most marginalized groups of individuals. This is not particularly true for African countries which are still struggling with the issue of financial inclusion.

In the last decade, there has been a shift in financial inclusion that has been propelled by an advancement in technology, which is an integral part of our daily lives, but there is still a long way to go. The financial landscape in Kenya has experienced significant changes in recent years due to the advent of technology, case in point is the use of mobile money i.e. M-pesa services, but the same success is not particularly true for other financial products like Insurance Products and Pension Products.

The integration of technology into finance, referred to as “fintech,” has brought about significant changes in how individuals save and invest their money. Investments is arguably one of the financial subsectors that has seen tremendous changes in the last few decades ranging from financial crisis, the effects of COVID, and effects of technology which changed the consumers perception and consumption habits of investment products. Investment firms and investment managers have been forced to take a strategic operational advantage in a highly competitive, increasingly demanding industry by leveraging on technology to ensure that consumer needs are met. Despite all this effort, financial exclusion persists even in the greatest economies on the African continent, including Kenya within the different financial subsectors with investments lagging behind.

According to the report by KPMG, the banking sector, took the lead in technology integration in its infrastructure, followed by insurance and then asset management. The Banking was considered to be the most mature of the financial services subsectors when it comes to embracing fintech opportunities with an emphasis on delivering cost efficiencies and enhancing customer experiences (KPMG, 2017).



Source KPMG International global fintech survey, 2017

Figure 1: Ranking of Fintech strategy objectives – by industry

This study has centered its investigation on the question of whether or not the promotion of technology can effectively increase savings, consumption of pension products and financial products in general and foster future-oriented investments in Kenya and Africa as a whole, as well as the impact that it has on regulatory changes, also known as RegTech.

1.1.1. The Evolution of Technology and Finance.

Technology and finance have been intertwined for decades, but the pace of their convergence has accelerated rapidly in the last few years. The advent of digital platforms and the widespread availability of smartphones have created new opportunities for individuals to manage their finances more efficiently, including savings and investment activities.

Initially, financial institutions in Kenya relied on traditional banking systems, characterized by brick-and-mortar branches and lengthy paperwork processes. However, the introduction of mobile money services, particularly M-Pesa, in 2007 marked a turning point in the country’s financial landscape. M-Pesa, a mobile-based money transfer and microfinancing service, enabled Kenyans to send and receive money using their mobile phones, bypassing the need for physical bank branches. This innovation empowered individuals, especially those in underserved areas, to access financial services and make electronic transactions conveniently.

As mobile penetration increased and internet connectivity improved, a new wave of financial technology companies emerged. These fintech startups capitalized on the accessibility of mobile devices and developed innovative solutions to address specific financial needs. For instance, mobile banking apps were introduced, allowing users to manage their accounts, transfer funds, and even access investment opportunities directly from their smartphones. Additionally, digital lending platforms emerged, enabling individuals to access quick and convenient loans based on their creditworthiness and transaction history.

In recent years, Kenyans have also embraced investment platforms that leverage technology to provide access to a wide range of investment options. Robo-advisors, for example, have gained popularity, offering automated investment advice and portfolio management services tailored to individual preferences and risk tolerance. Furthermore, crowdfunding platforms have provided opportunities for Kenyans to invest in various projects, such as real estate developments or startups, that were previously inaccessible to the general public.

The integration of technology into the savings and investment landscape has not only made financial services more accessible but has also increased transparency and efficiency. Automation and digitization have significantly reduced the time and cost associated with traditional financial transactions, while data analytics and machine learning algorithms have enhanced risk assessment and investment decision-making processes.

Despite the positive impact of technology on savings and investments in Kenya, challenges remain. Issues such as data security, fraud prevention, and financial literacy need to be addressed to ensure the responsible and inclusive adoption of these technological advancements.

Technology has played a transformative role in the savings and investment landscape in Kenya. From the introduction of mobile money services to the rise of fintech startups and investment platforms, technology has empowered individuals to access financial services, manage their money more efficiently, and explore investment opportunities previously unavailable to them. This research aims to delve deeper into the various aspects of this transformation, examining the benefits, challenges, and future prospects of technology in enhancing savings and investments in Kenya.

1.2. Objectives of the study

- a. To assess the effect of technology on the behavioral aspect of utilizing/consuming financial products.
- b. Evaluating the effectiveness of current technological systems utilized by various service providers in the financial and pension sectors.
- c. Investigating the effects of emerging technological trends on savings and investments.

CHAPTER 2



LITERATURE REVIEW

In the modern age, technology plays a central role in our day to day life. We are predisposed to wearable technology such as smartphones and smartwatches that are more portable and have a higher functionality than ever before. Furthermore, significant technological advancements such as Internet of things (IOT) interconnects smart devices such as smart watches, intelligent refrigerators, smart watches, smart fire alarms among others such that these interconnected devices can seemingly exchange data as well as communicate with each other (Oladimeji, D., et al. 2023). Due to how technology has revolutionised life in the modern age, the purpose of this literature review is to logically review peer reviewed literature presented within the perspective of the role technology on savings and investments. Çetin, et al., (2023) outlines how the topic of saving and investing has received tremendous attention from policy makers, scientists as well as theorists who collectively underscore how the development of the financial sector is a primary microeconomic goal for both developed and developing countries such Kenya. In this respect, more research on the role of technology on saving and investments needs to be conducted.

In a research on “Role of Technology in Determining Financial Improvement in Sub Saharan Africa”, from 2000 to 2021, Adeyemi and David (2023) used the General Methods of Moments (GMM) estimation to examine how technology has influenced the financial system in Sub Saharan Africa as well as the technological components that determine financial development within this region. Adeyemi and David (2023) highlighted how Sub Saharan Africa region is characterised by vulnerabilities as well as weaknesses linked the deteriorated microeconomic conditions in these countries that are characterised by political interferences on the operations of financial institutions, lack of the required technology as well as negative real interest rate policies. The research model linked technology with financial improvement and research data was sourced from World Bank World Development Indicators, Central Bank of selected countries, African Development Bank, National Bureaus of Statistics of selected countries, articles journals as well as other sources and software were applied in the analysis of the data. The study concluded that technology can aid in financial growth in Sub-Saharan Africa due to how the components of technology

positively influence financial success. As such, Adeyemi and David (2023) recommend initiatives targeted at strengthening mobile subscriptions and fixed cellular devices, support towards secure internet servers as well as more resources being channelled towards enhancing growth within the financial system.

In the 7th edition of the Enwealth Conversations research on “The Saving and Investments Behaviour Among Kenyans” factors such as gender, income and expense level, age, financial literacy levels, religion, Employee Benefits and length of Employment and the Family Size, composition and Dependency Ratio were identified as the factors that affect the saving habits among Kenyans. Chen, et al., (2023), research focuses on financial inclusion where a novel survey was distributed across 28 major economics with the goal of investigating the adoption of new technology and gender differences. The survey incorporated individual characteristics towards establishing individual use and attitude towards 19 categories of fintech products and services that are provided by both traditional financial institutions and new entrants within the financial system. From the research findings 21% of women use fintech products while 29% of men use fintech products. The gap was evident on every sample across 28 major economics. Therefore, technology alone cannot close the gender gap when it comes to gender and financial inclusion. However, technological advancements accompanied with inclusive public policy are instrumental in enhancing the inclusiveness of products and services in the fintech industry.

CHAPTER 3



RESEARCH METHODOLOGY

3.1. Introduction

In this chapter, we discuss the research design, area of study, population, sample of the population, sampling technique, instrument for data collection, validation of the questionnaire, administration of the instrument and method of data analysis.

3.2. Research Design

The research incorporated both Primary and Secondary data. Primary data was acquired by utilizing questionnaires, which proved to be suitable due to the maintenance of confidentiality and facilitated analysis of gathered information. Moreover, questionnaires offered time efficiency and allowed for data collection from a significant sample size.

3.3. Area of Study

In this study, the opinions and perceptions of Kenyans was sought on the role of technology on Savings and Investments in Kenya. The data was collected from members in the Enwealth personal pension scheme and several Occupational schemes managed by Enwealth.

3.4. Population of the Study

The accessible population for this research was Pension Scheme members who are within the Researchers reach. Pension Scheme members especially in the Individual Pension Scheme were highly preferred as the population of study because they comprise the major population of savers in the Country on a voluntary basis. The Primary data was selected using simple random sampling. The secondary data served as part of the Literature review in Chapter One of this research.

3.5. Sample of the Population

As it is the General Public is a large population that cannot be studied considering the constrained time, therefore, a portion of the population that is studied is called a sample of the population (Nworgu 1991:69). The sample size was of 238 respondents.

3.6. Sampling Techniques

Random Sampling was used for selecting participants of this research. This Method was employed to ensure a fair and equal representative of the population. The sampling was applied to members within the company's database by sending a Monkey Survey link to all participants with emails within the database.

3.7. Instrument for Data Collection

See the questionnaire (See APPENDIX I) as the main data collection tool. The questions were based on the information held and awareness of participants about technology, savings and how technology has impacted savings.

3.8. Validation of the Questionnaire

The Questionnaire was subjected to Face and Content validity processes. Face validation refers to the process of assessing the apparent or surface-level validity of research questions or measures while Content validation is the process of assessing and confirming the relevance, representativeness, and appropriateness of the content or wording of research questions, survey items, or measurement tools

In the validation stage of this study, copies of the questionnaire were given to a group of expertise in the finance and technology sector who went through the questions to ascertain the adequacy, relevance and appropriateness of the survey. They suggested structuring the questionnaire in the Likert fashion, on a five-point scale (Nworgu 1991:117) because the extensive outcome would highly inform the recommendation's on areas of improvement as well as inform decision making.

3.9. Method of Data Analysis

The study collected and verified valid responses from a sample of 237 participants. The data was analyzed using SPSS tool, as described in Chapter Four of this study.

CHAPTER 4



DATA PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS

4.1. Introduction

This chapter consist of research findings and data collected. The data was obtained through administering of questionnaires. The findings were summarized, interpreted and compared to other studies in the area of interest. Data was analyzed using descriptive statistics via SPSS. The open-ended questions were analyzed quantitatively. The findings are presented using charts, graphs and figures.

4.2. Responses Collected

Most statisticians postulate that the minimum sample size to get a meaningful result, allowing for a margin of error of plus or minus 7.5%, is 146 for a population of 1,000 (Bullen, n.d.). The study sample collected for this survey consisted of 238 responses. In their research, (Kirsti Malterud, 2016) suggest that the size of a sample with sufficient information power depends on the aim of the study, sample specificity, use of established theory, quality of dialogue, and analysis strategy. The raw data underwent data cleaning process in order to identify and remove any inconsistencies, inaccuracies, and redundancies in datasets to improve data quality and reliability.

4.3. Demographics

4.3.1. Respondents by Age Brackets

The respondents age distributions in the research findings exhibited a normal distributed illustrated by a bell-shaped graph outlay and a zero skewness. Most respondents were between the age of 35-44 at 38.40% while the least were 18-24 and those aged above 65 years at 2.9% and 0.8% respectively.

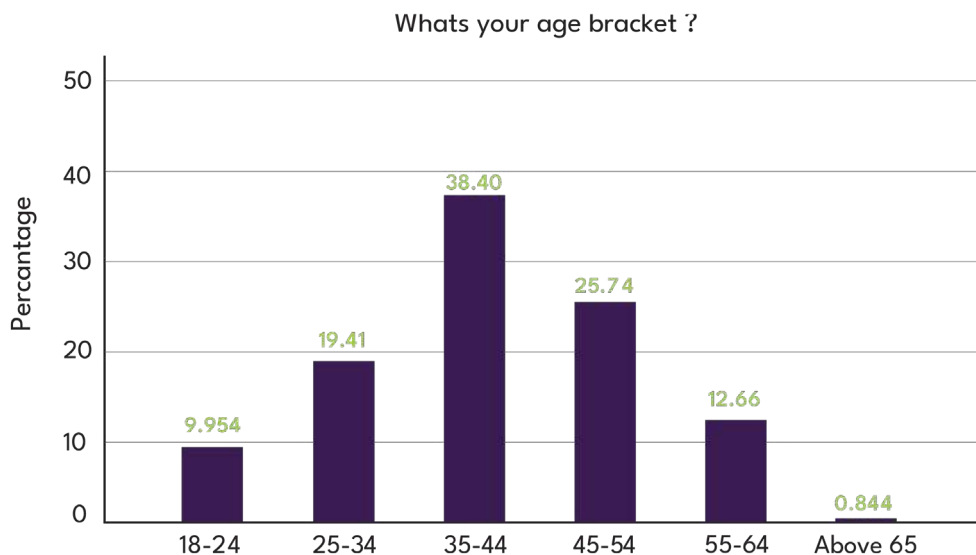


Figure 2: Respondents by Age Brackets

4.3.2. Respondents by Gender

There were more males who participated in the research at 63.29% than females at 36.71%. the gender distributions therefore demonstrate some sort of skewness towards the males unlike the females in terms of the population that undertook to participate in the questionnaires.

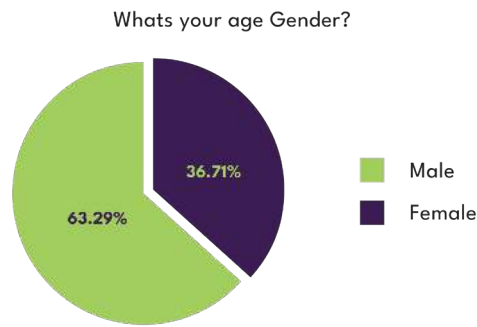


Figure 3: Respondents by Gender

4.3.3. Respondents by Education Level

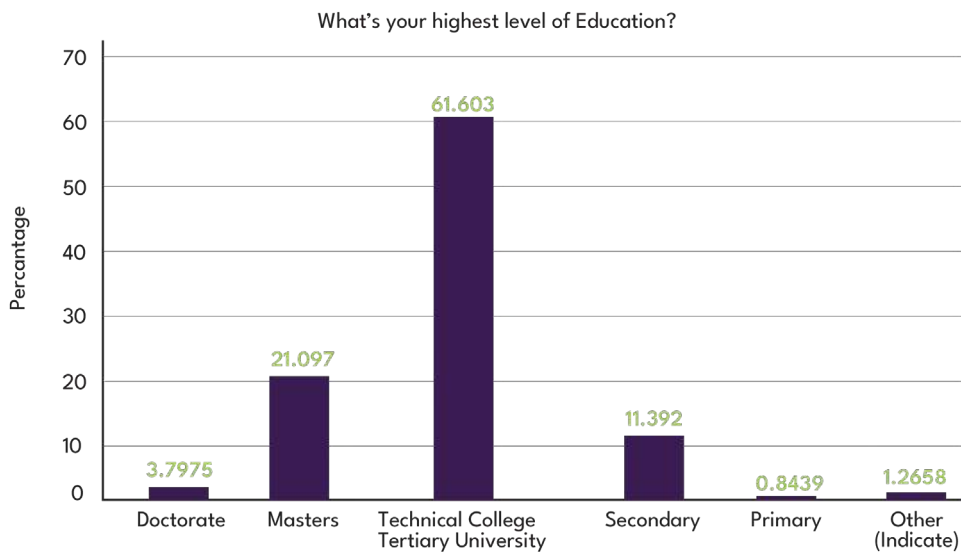


Figure 4: Respondents by Education Level

In terms of the academic level, most respondents at 86.53% had advanced academic credentials, with 61.03% of respondents having attained technical/college/university/tertiary level education. Only 2% had basic education level of primary school.

4.3.4. Respondents by Employment Sector

Most respondents indicated that they were either retired or self-employed. However, there was a huge representation in the agriculture, livestock and fisheries followed by retail business, education sector and pension sector. The lowest representation among the respondents came from the religious space, energy, building and construction.

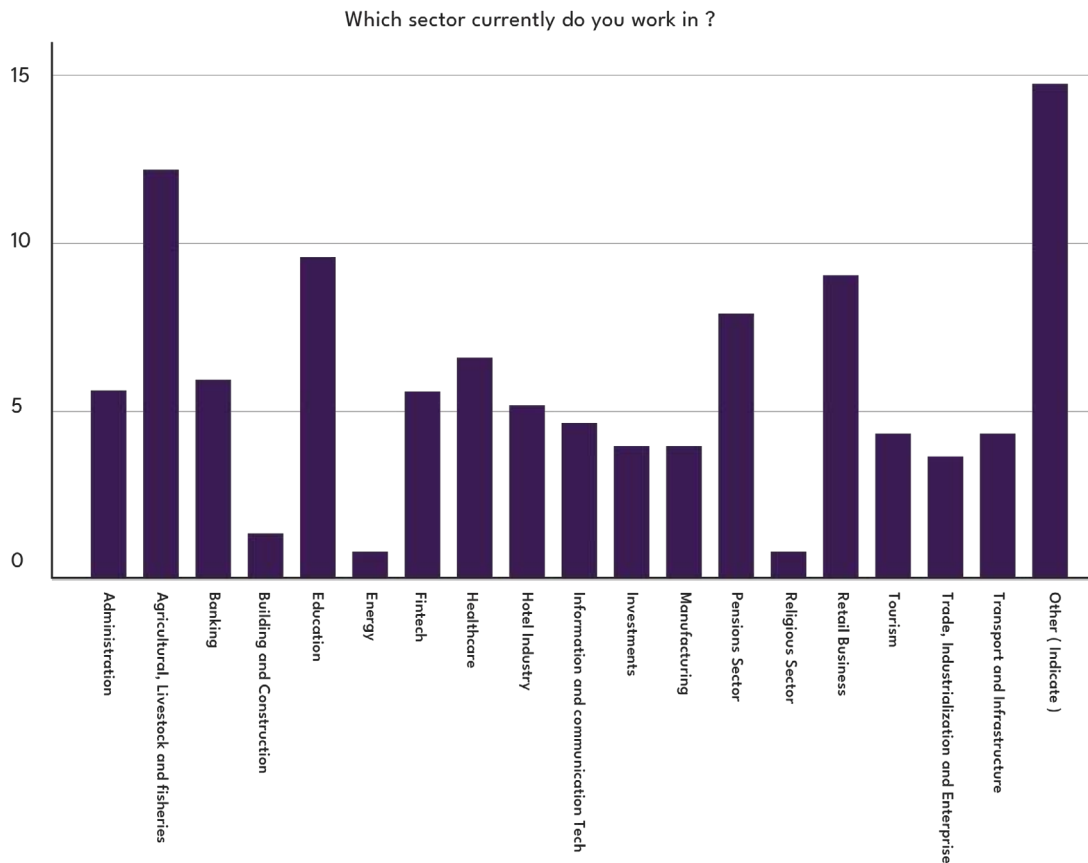


Figure 5: Respondents by Sector Working

4.3.5. Respondents by Income Per Month

From the below data, most respondents earn between Ksh. 25,001 and 50,000. This represents 25.74% of the total responses.

The highest percentage among the respondents earn below ksh. 50,000 while the lowest percentage was those earning above Ksh. 150,000 at less than 25.74%. There is a negative skewness in the distribution indicating low income among the respondents.

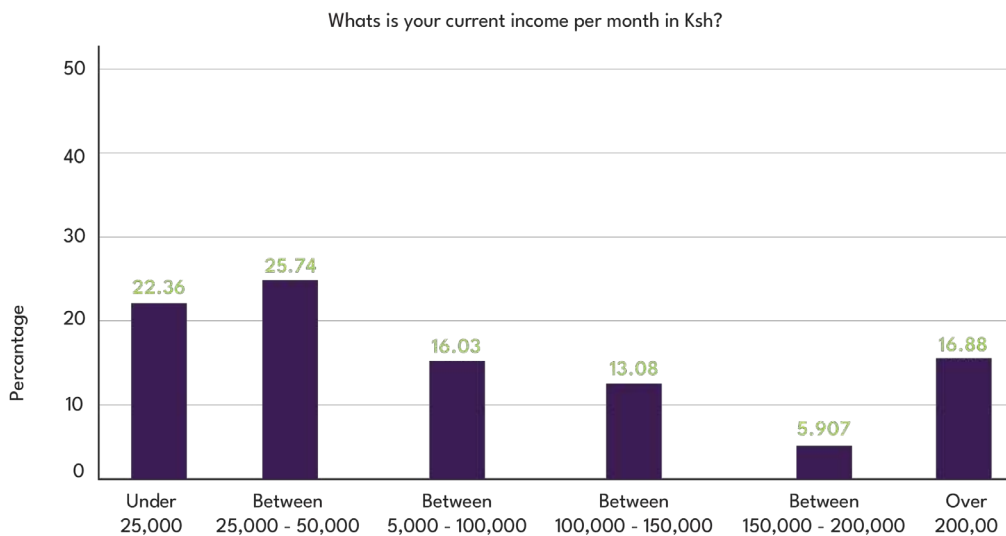


Figure 6: Respondents by Income Per Month

4.3.6. Other Supplemental Sources of Income

Do you have any other sources of Income that supplement your main source of Income ?

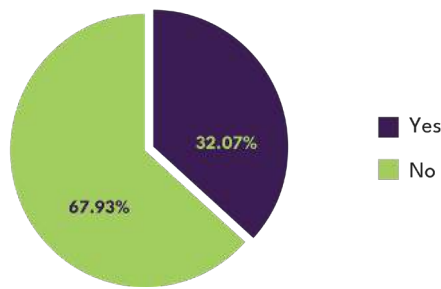


Figure 7: Other Supplemental Sources of Income

32.07% of the respondents indicated that they had a supplemental source of income while a bigger percentage of the respondents indicated that they solely depend on the primary employment/business as the major source of income.

4.4. Savings from Income Earned

4.4.1. Regular Saving

Do you regularly save part of your Income ?

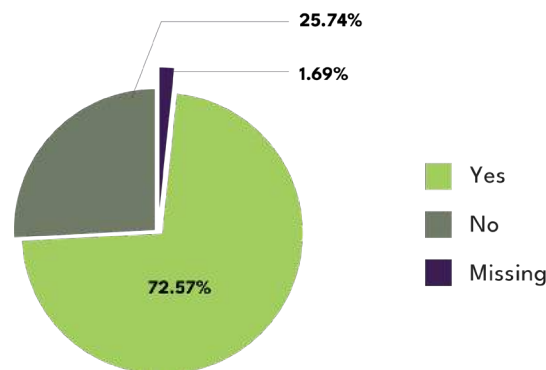


Figure 8: Savings from Income Earned

72% of the respondents highlighted that they did save part of their income while about 25% indicated that they don't save. This shows a positive trajectory in the saving culture among the respondents. Further, 25% of the respondents indicated that they save between 6-10% of their income while only 16% of the respondents indicated that they save above 15% of their income. 15% of the respondents indicated that they save less than 5% of their income.

4.4.2. Portion of Income that goes Into Savings and Investment

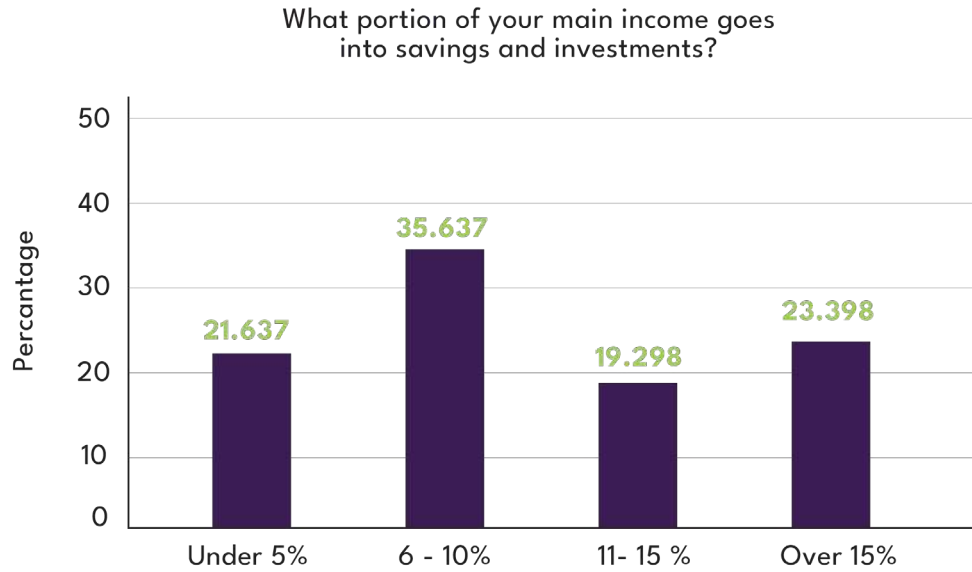


Figure 9: Portion of Income that goes Into Savings And Investment

4.5. Investment Avenues

4.5.1. Investment Avenues Utilized

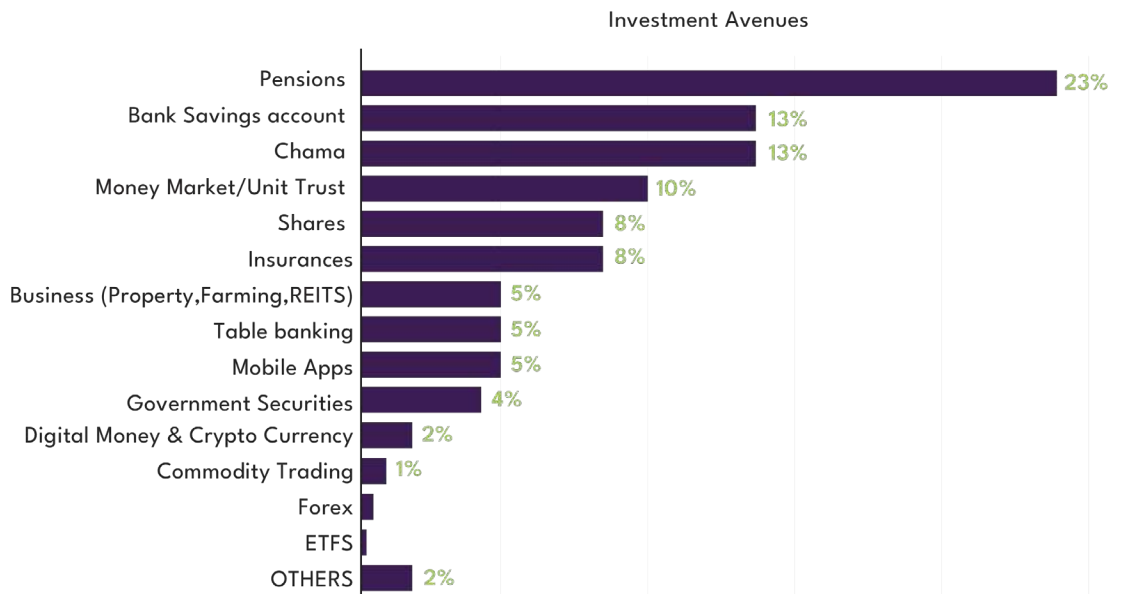


Figure 10 : Investment Avenues Utilized

The investment/saving platform highlighted by the respondents includes pension being the highest at 24%, followed by Bank savings accounts and chamas at 13% each, and other saving avenues including, insurance, mobile apps, table banking, digital currency/crypto-currency, forex, money market and government securities and shares.

4.6. Technology Utilization

4.6.1. Electronic Gadgets Owned

The responses show that most of the participants possesses electronic devices, indicating a widespread adoption of technology among respondents. Despite potential variations in the technological components of these devices, the majority have acquired and can effectively use them which is a good indicator for adoption of technology at a general level.

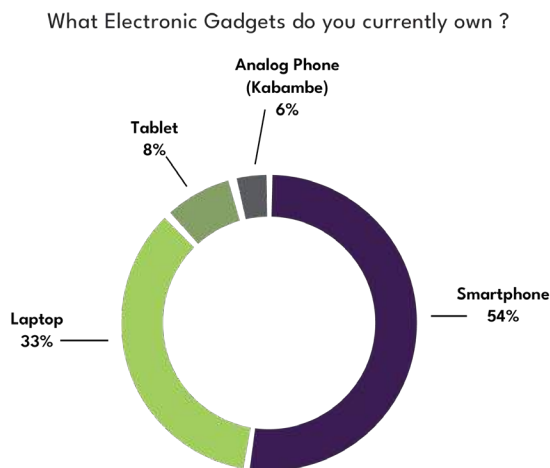


Figure 11: Electronic Gadgets Owned

4.6.2. Use of Electronic Gadgets

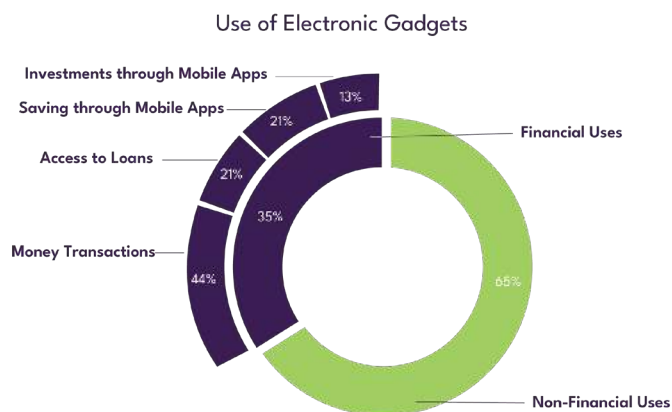


Figure 12: Use of Electronic Gadgets

Electronic devices have been used for varied reasons over the years. In the case of mobile devices, which a majority of respondents reported owning, their primary use has traditionally been for communication purposes. However, as technology has advanced, the functionality of these devices has expanded to meet the diverse needs of consumers. Notably, the survey findings reveal that a substantial 35.1% of respondents engage in monetary activities through electronic devices. This includes using mobile apps for accessing loans, managing savings, and making investments, showcasing a growing trend in the integration of financial activities into the digital realm. The multifunctionality of these devices has transformed them into powerful tools for not just communication but also for financial inclusion, providing users with convenient and efficient means to participate in various financial transactions. This shift underscores the increasing importance of technology in the financial

landscape, with electronic devices serving as gateways to a range of monetary engagements for a significant portion of the surveyed population.

4.6.3. Digital Access to Financial Products

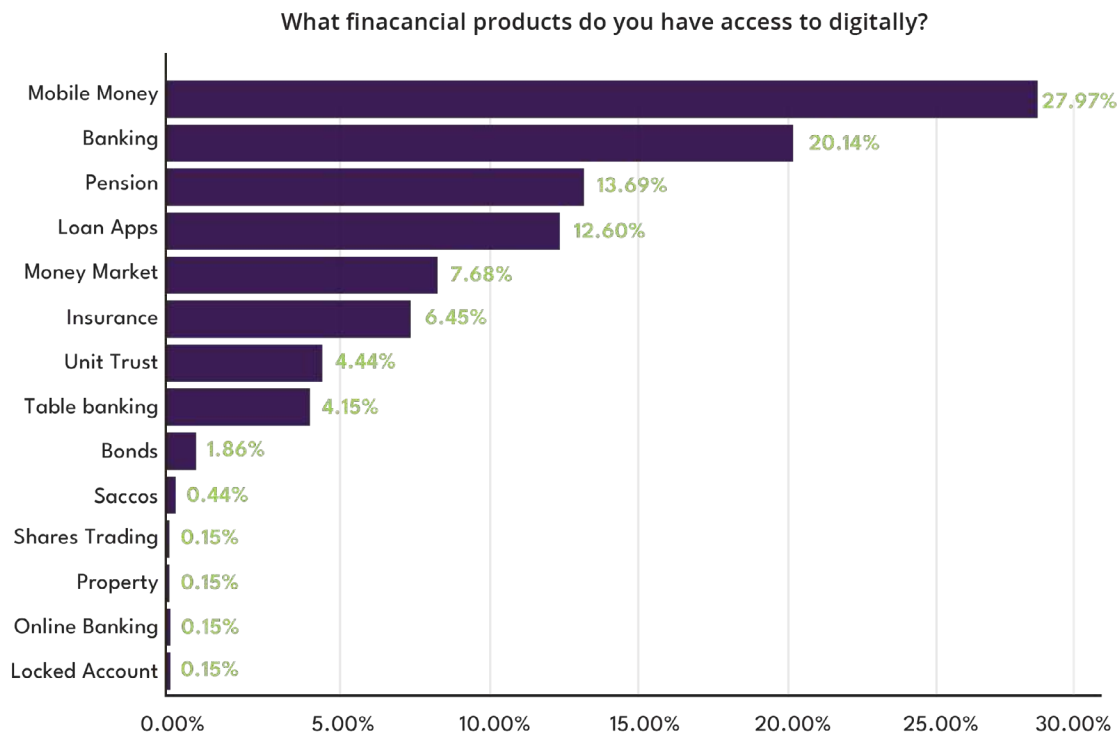


Figure 13: Digital Access to Financial Products

From the above data, most respondents have digital access to mobile money, banking, pensions, loan apps represented by 27.97%, 20.14%, 13.69% and 12.60% respectively.

Additional areas with lower rankings comprise the following: 4.15% of respondents have digital access to table banking, 6.45% have digital access to insurance, 7.68% have digital access to the money market, 4.44% have digital access to unit trust, and 1.86% have digital access to bonds. Other categories encompass Sacco, shares, and property.

4.6.4. Technology Familiarity

Given the transformative influence of emerging technology trends on the financial sector, the study sought to assess the respondents' level of familiarity with key technological advancements, such as 'AI' (Artificial Intelligence), 'Machine Learning,' 'Big Data,' and 'Blockchain Technology.' These technologies collectively define the landscape of digital financial innovation, consequently shaping the trajectory of financial deepening.

Financial deepening can be viewed as the process of enhancing and broadening financial systems by increasing the depth, liquidity, efficiency, and volumes of financial institutions and markets, as well as diversifying of domestic sources of finance and extending access financial services (Financial Sector Deepening and Transformation, 2012).

According to a research paper titled "Does digital financial innovation enhance financial deepening and growth in Kenya?" by Roseline Misati, Jared Osoro, Maureen Odongo, and Farida Abdul, which aimed to examine the effect of digital financial innovation on financial depth and economic growth in Kenya. The study concluded that

there is evidence of a positive relationship between digital financial innovation and financial depth with the strongest impact emanating from Internet usage and mobile financial services and the lowest impact from bank branches. [The results also reveal a significant positive impact of financial depth on economic growth consistent with the supply-leading finance theory 1](#) (Roseline Misati, 2022).

4.6.4.1. Artificial Intelligence

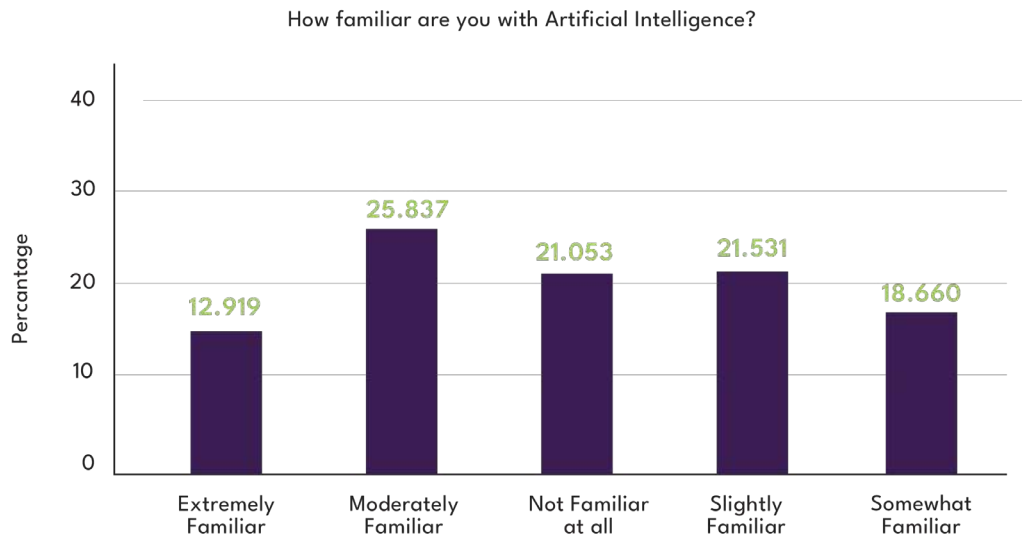


Figure 14: Familiarity with Artificial Intelligence

From the above data most respondents are moderately familiar with artificial intelligence. This represents 25.87% of the total responses.

Artificial Intelligence (AI) is a transformative tool for financial service providers, offering a myriad of applications to enhance financial deepening. Through sophisticated algorithms, within the different financial sectors, AI facilitates more accurate credit scoring and risk assessment, broadening the scope for lending to a diverse population, including those lacking traditional credit histories as in the case of mobile lending platforms. Additionally, AI-powered chatbots provide personalized financial advice based on individual financial preferences, fostering customer engagement and informed decision-making.

Particularly in insurance, AI's role in fraud detection enhances overall security by identifying irregularities in claim requests, contributing to a safer financial environment. Automated customer service, algorithmic trading, predictive analytics, and natural language processing further exemplify AI's capabilities in optimizing operations, securing compliance, promoting financial inclusion, and tailoring product development to meet the diverse needs of consumers. By seamlessly integrating AI technologies, financial service providers stand to improve efficiency, elevate customer experiences, and advance financial access, ultimately driving the deepening of financial services and fostering inclusive financial ecosystems.

4.6.4.2. Machine Learning

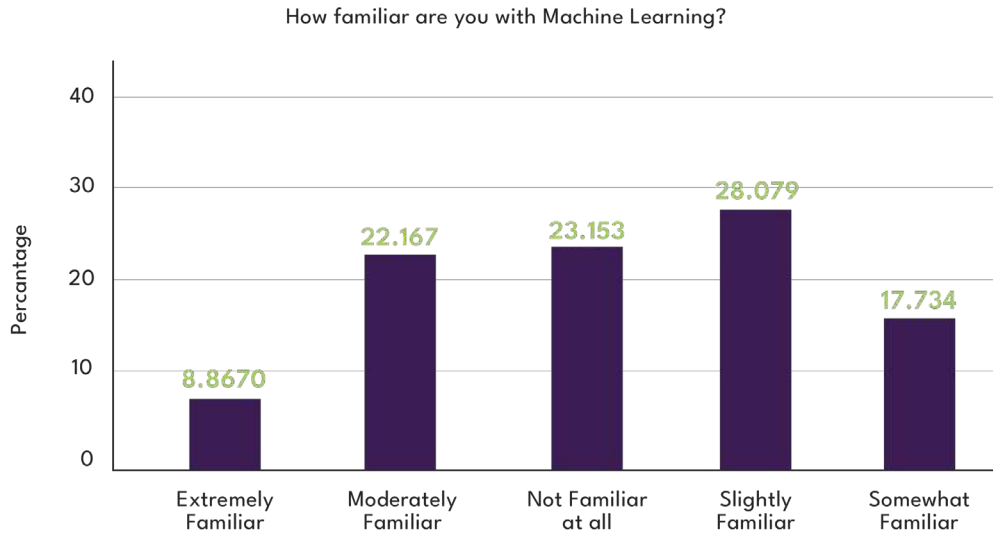


Figure 15: Familiarity with Machine Learning

From the above data most respondents are slightly familiar with machine learning. This represents 28.079% of the total responses.

4.6.4.3. Block Chain Technology

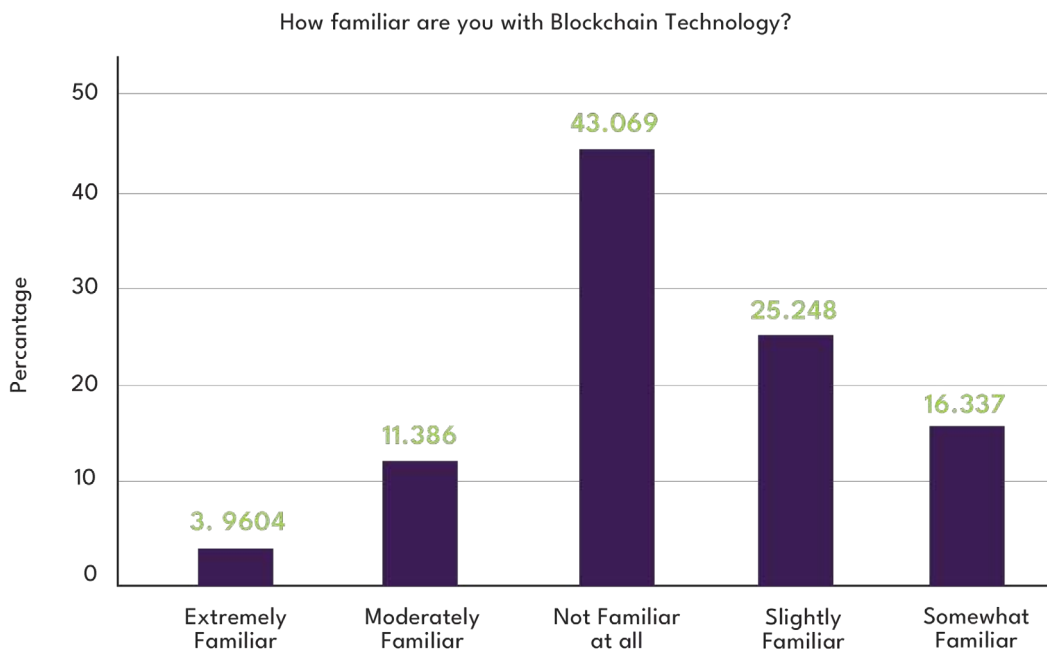


Figure 16: Familiarity with Block Chain Technology

From the above data most respondents are not familiar at all with block chain technology. This represents 43.069% of the total responses.

4.6.4.4. Big Data

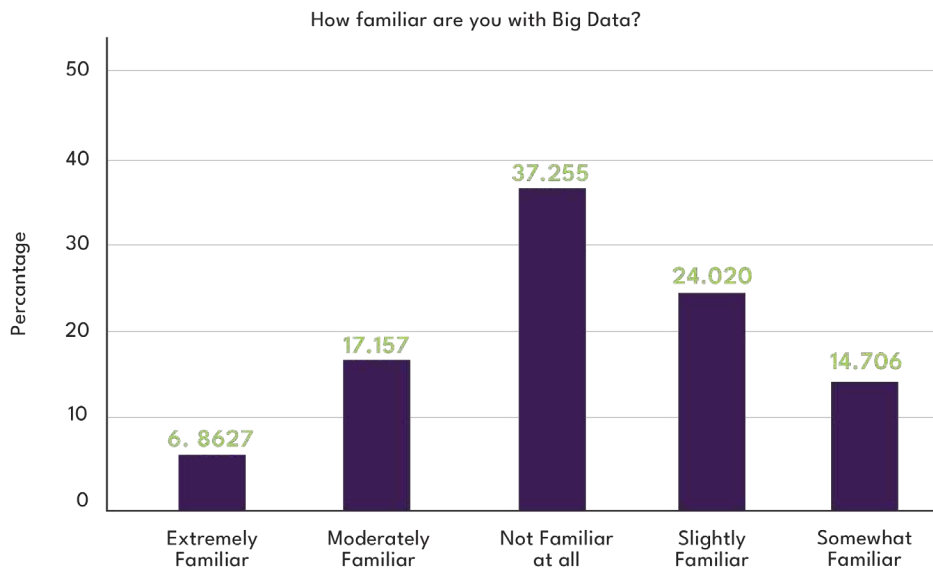


Figure 17: Familiarity with Big Data

From the above data most respondents are not familiar at all with big data. This represents 25.87% of the total responses.

4.6.4.5. Internet of Things

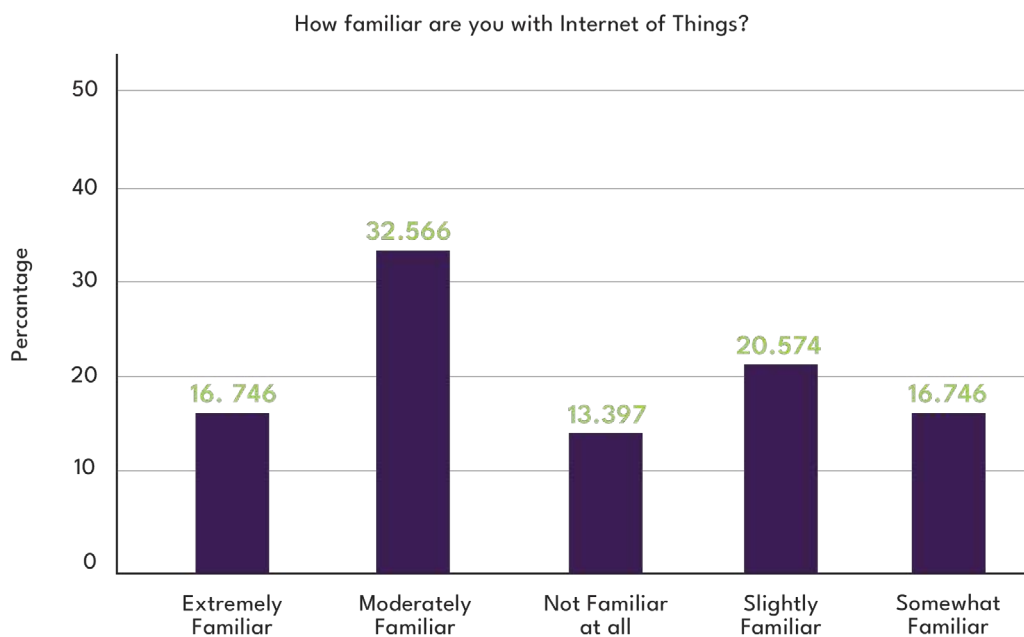


Figure 18: Familiarity with Internet of Things (IOT)

From the above data most respondents are moderately familiar with internet of things. This represents 32.536% of the total responses.

4.7. Sourcing For Financial Information On The Internet

Sourcing for Financial Information on the Internet

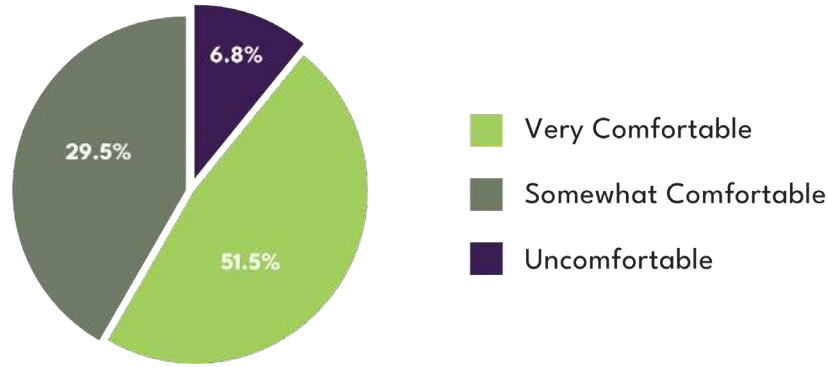


Figure 19: Sourcing for Financial Information on The Internet

From the above data, most respondents are very comfortable sourcing relevant financial information on the internet about financial Products and Services. This represents 51.48% of the total responses.

4.8. Saving Habits

How Technology has affected savings and investments

How Technology has affected savings and investments

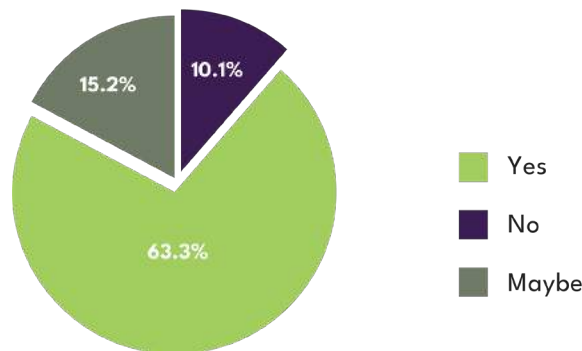


Figure 20: Has Technology improved your Saving and investment habits

From the above data, most respondents agreed that technology has improved their saving and investment habits. This represents 63.29% of the total responses.

How digital access has positively affected savings and investments

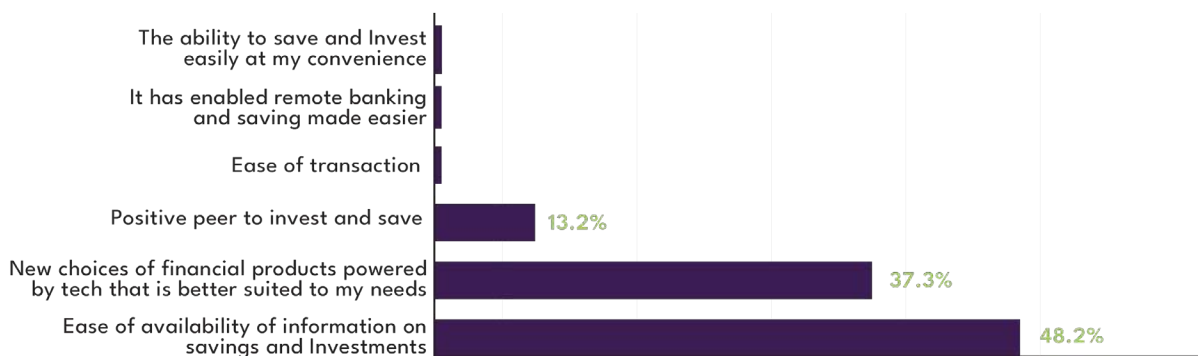


Figure 21: How digital access has positively affected savings and investments

48.2% of the respondents agree that technology has improved their saving and investment habits because of ease of availability of information on savings and investments, 37.3% of the respondents agreed that technology has improved their saving and investment habits because of new choices of financial products powered by tech that are better suited to their needs and 13.2% of the respondents agreed that technology has improved their saving and investment habits because of positive peer pressure to invest and save. Others include ease of transaction, enabling remote banking and made saving easier and the ability to save and investment easily at the client's convenience.

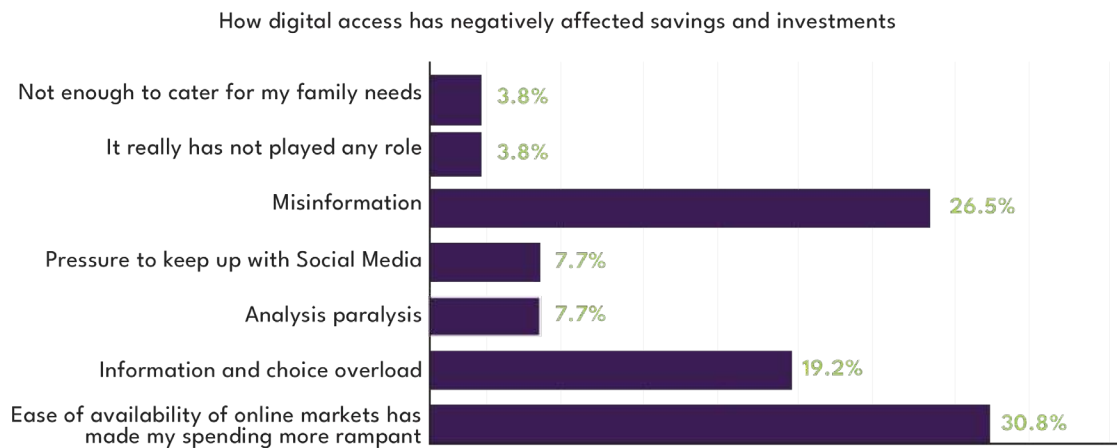


Figure 22: How digital access has negatively affected savings and investments

Out of the respondents 10.1%, indicated that technology has not improved their savings. Out of these, 30.8% of the respondents attributed this to the ease of availability of online markets which has made their spending more rampant, 19.2% of the respondents disagree because of Information & choice overload, 7.7% of the respondents disagree because of analysis paralysis, 7.7% of the respondents disagree because of pressure to keep up with Social Media, 26.9% of the respondents disagree because of misinformation on savings and Investment. 3.8% of the respondents disagree because it has not played any part. 3.8% of the respondents disagree because there is not enough to cater for family needs.

4.9. Digital Sources of Information

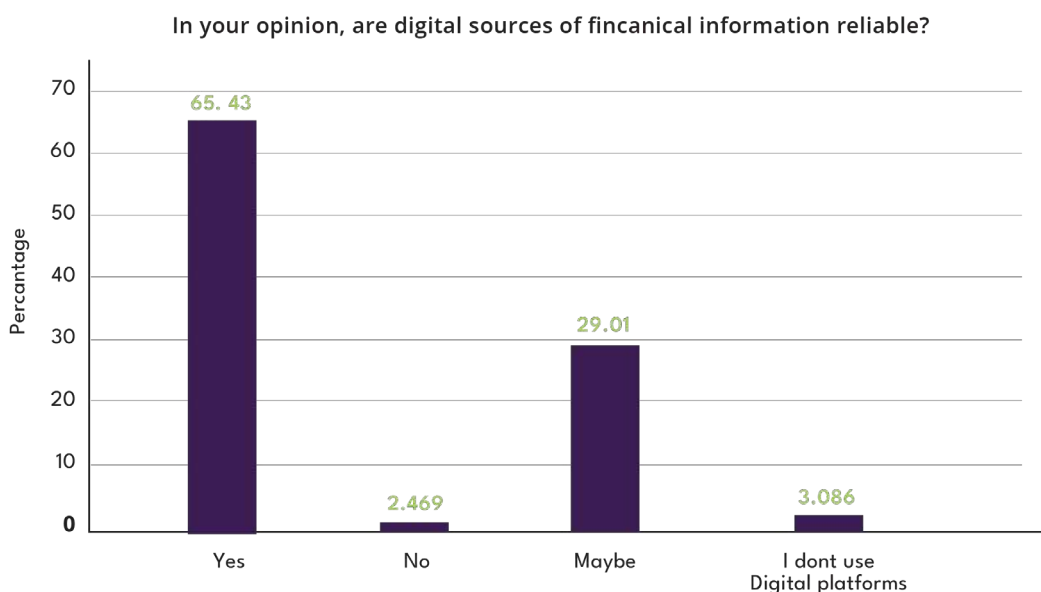


Figure 23: Reliability of Digital Sources of Information

From the above data, most respondents agree that digital sources of financial information are reliable. This represents 65.43% of the total responses, who reported the below sources of financial information.

4.9.1. Digital Sources of Information

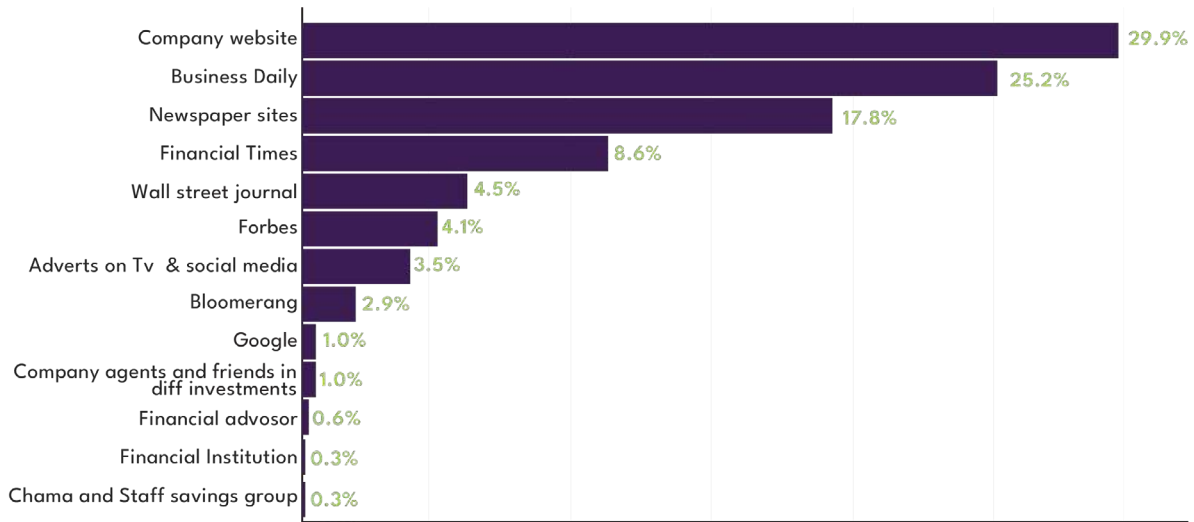


Figure 24: Digital Sources of Information

From the above data, 29.9% of the respondents get their information from financial company websites, 25.2% of the respondents get their information from business daily, 17.8% of the respondents get their information from newspaper sites, 8.6% of the respondents get their information from financial times. 4.5% of the respondents get their information from wall street journal, 4.1% of the respondents get their information from Forbes. Others include social media, financial advisor, financial institutions and chama and savings group.

4.9.2. Accessibility to Information and its Effect on Savings

Do you think that accessibility to information through digital platfrms has made them more eager to save and invest?

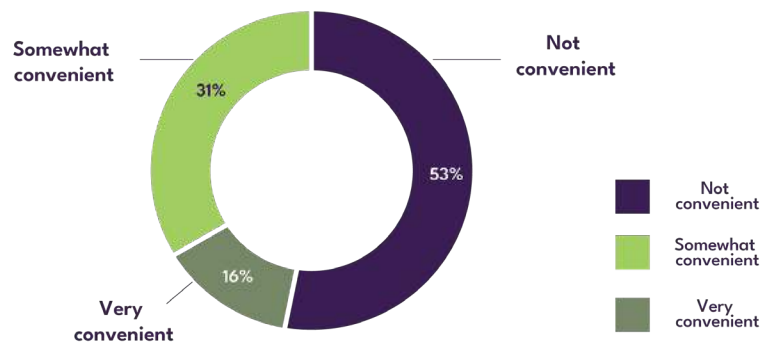


Figure 25: Accessibility of digital information has made you more eager to Save and Invest

More than half of the respondents agreed that accessibility to information through digital platforms has made them more eager to save and invest. This represents 53% of the total responses who reported a definite positive effect due to ease of accessibility of information, whereas 31% of the respondents noted that access to information has only positively affected their inclination to save and invest by a small margin. This assessment shows

that digitalization of information has not only contributed to increased savings and investment but has also continually played pivotal role in creation of a smart consumer of financial products. The impact of digitalization extends beyond facilitating financial transactions; it actively contributes to the education of consumers, making more and more knowledgeable in matters financial services.

However, it is important to look out for the quality of information that is available on the different digital platforms to ensure that the consumer is not misinformed. Different service providers can work in tandem to ensure that the information pushed through the different digital platforms is in a manner that can easily consumable by a common person.

It is also important for service providers to be cautious about oversimplification of information. This precaution is necessary to prevent situations where the information becomes overly fragmented, rendering it less useful and potentially impeding accurate interpretation at a basic level by a consumer.

4.10. Financial Transaction Platforms

The analysis was conducted on the frequently used or commonly known financial transaction and saving modes. The primary focus was on evaluating the ease with which consumers of financial products and services could navigate and utilize these platforms for varied purposes.

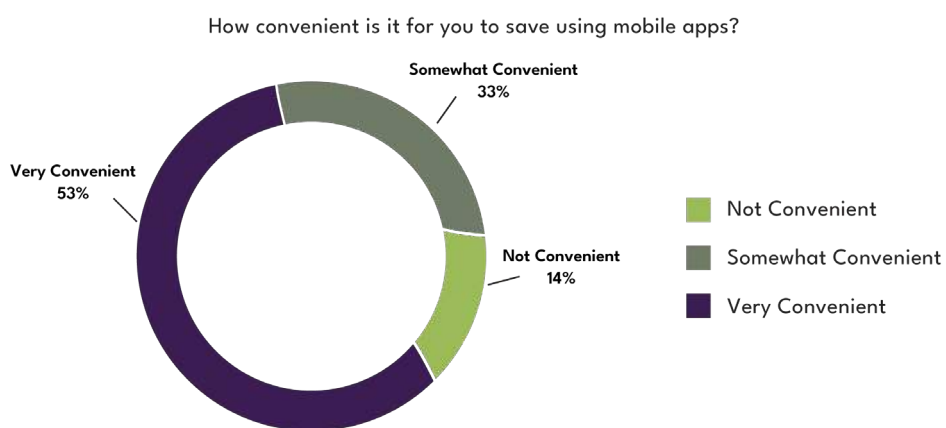


Figure 26: Mobile Apps

53% of the respondents stated Most respondents agreed that saving through mobile apps is very convenient. This finding is consistent with current trends which indicate the growing prevalence of smartphones and the surging popularity of mobile apps.

According to the Report by Communications Authority of Kenya, (2023) ,the number of mobile devices stood at 62.96 million as at the end of the quarter, translating to a device penetration rate of 124.5 per cent. The penetration rate for feature phones and smartphones stood at 66.2 per cent and 58.3 per cent respectively.

This is also consistent with to the extensive adoption of technology by financial institutions, aiming to improve the accessibility of their services and products via mobile applications. Given the reported figures by CAK, it becomes imperative for service providers to leverage these platforms to enhance the adoption of their products through these avenues.

ii. USSD Codes

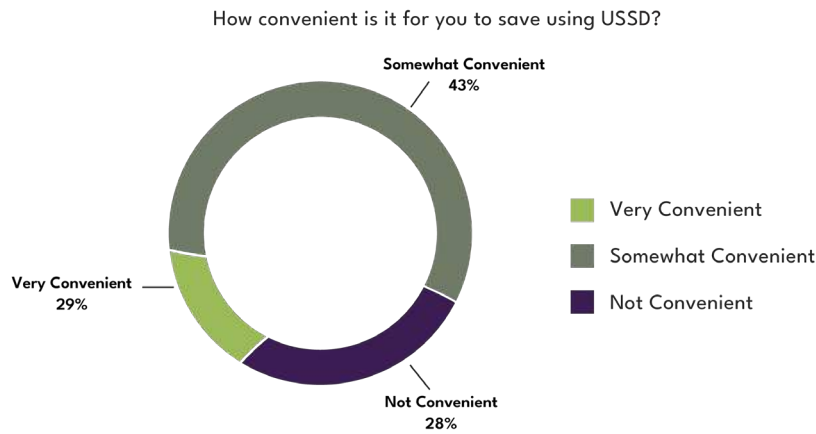


Figure 27: USSD Codes

Comparatively, there was a lower reported level of convenience associated with USSD codes in comparison to mobile applications. The majority of respondents, comprising 43%, reported that using USSD codes was somewhat convenient for them. This disparity could be linked to the limited features of USSD codes compared to the comprehensive functionalities offered by mobile applications. These include, but are not limited to, the ability to monitor savings and investments in real-time, which are critical features for an individual investor.

iii. Manual Transactions

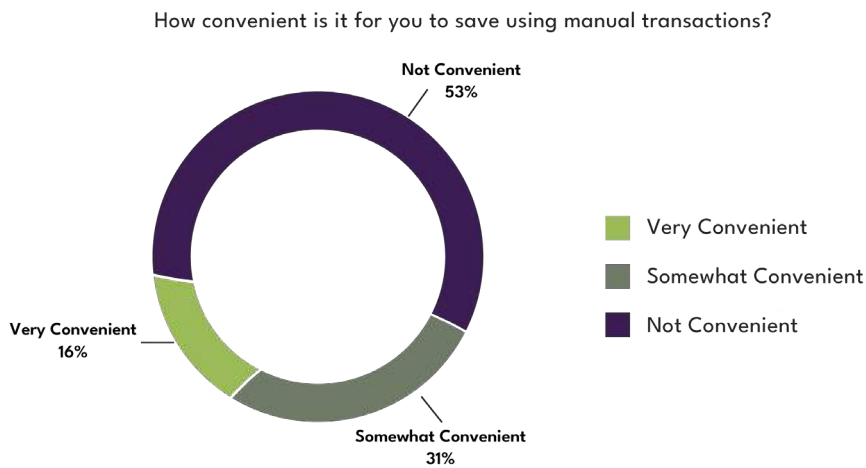


Figure 28: Manual Transactions

Respondents reported the least level of convenience when using Manual Transactions. About 53% stated that this method of transacting, especially for saving and investing, is not convenient at all. This shows a significant shift away from cash transactions toward cashless alternatives, facilitated by technological advancements. The financial sector has witnessed a considerable and rapid adoption of financial products by the public due to these technological advancements.

4.11. Respondents Rankings of Technology Integration Per Sector

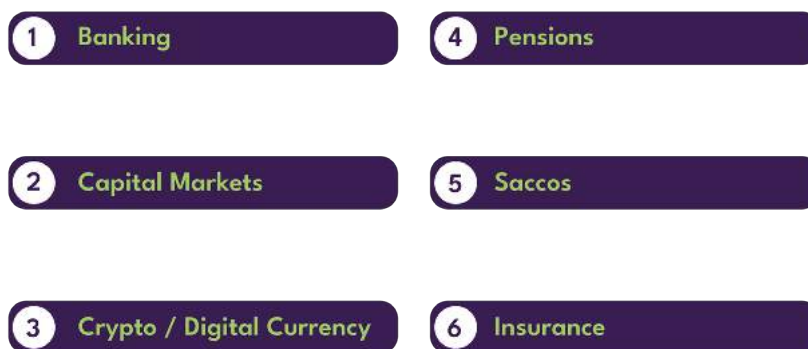


Figure 29: Respondents Rankings of Technology Integration Per Sector

4.11.1. Banking Sector

Most respondents ranked the banking sector as number 1 in terms of technological utilizations and advancements in Kenya. The transition of the banking sector from traditional cash transactions to the integration of technology has significantly contributed to the expanded coverage of financial products and services across Sub-Saharan Africa. The incorporation of technology, such as digital banking and mobile financial services, has facilitated greater financial inclusion, providing individuals in the region with easier access to a wide array of financial products. This shift has not only enhanced convenience for customers but has also played a pivotal role in reaching underserved populations in remote areas, ultimately fostering economic development and empowerment across Sub-Saharan Africa.

However, in as much as there has been reported changing technology in the financial sector and subsequently, a dramatic impact on consumer banking in the sub-Saharan region, particularly through mobile money services, there has been limited expansion of financial services beyond payment services, except for some mobile operators and other non-banks who are offering small loans and savings services. In most respects, this is not disruptive innovation so much as finding solutions to capacity and infrastructure constraints on traditional forms of financial services (Banking in sub-Saharan Africa: Recent Trends and Digital Financial Inclusion , 2016).

While technology is currently being impetrated into existing financial solutions, through research, there is potential for further innovation. This could extend beyond the current offerings in the market, leading to the development of solutions that address an even larger population in Sub-Saharan Africa.

4.11.2. Capital Market Sector

A significant portion of respondents, ranked Capital Market Sector as number 2, in terms of technological utilization and advancements in Kenya. This indicates a moderate level of recognition or assessment among respondents regarding the technological developments within the capital market sector, with the majority perceiving it as positioned in the mid-range on the scale.

4.11.3. Crypto-Currency/Digital Currency

Most respondents ranked the crypto currency/ digital currency sector number 3 in terms of technological utilizations and advancements in Kenya, which is a relatively low score. This is noteworthy as cryptocurrencies are considered among the most recent financial products globally, known for extensively incorporating technology in every aspect of their structure. According to IMF, (2023), crypto assets have been more of a disappointment

than a revolution for many users, and global bodies like the IMF and the Financial Stability Board urge tighter regulation. However, they noted that some of the rapidly evolving technology behind crypto, may ultimately hold greater promise as the private sector keeps innovating and customizing financial services. Additionally, in terms of catering to client needs, crypto may present a new kind of multilateral platform could improve cross-border payments, leveraging technological innovations for public policy objectives (Federico Grinberg, 2023)

4.11.4. Pensions

Most respondents ranked the pension sector in the fourth position in terms of technological utilizations and advancements in Kenya.

In the pension sector, technological advancement largely revolves around how innovation in the sector can result in increased accessibility, improved services, and efficiency gains by opening up the services value chain. This innovative approach encompasses the transformation of key functions within the pension sector, including streamlining payment settlements, establishing enhanced savings platforms, and optimizing income allocations processes. At the heart of pension management is the assurance that individuals participating in or considering pension arrangements can save adequately to meet their retirement needs.

4.11.5. Sacco Sector

From the data collected, most respondents ranked the Sacco sector as number 5 in terms of technological utilizations and advancements in Kenya.

4.11.6. Sacco Sector

Most respondents ranked the insurance sector with 6 in terms of technological utilizations and advancements in Kenya. The adoption of insurance coverage in the country has remained limited, with negative market sentiments, whether justified or not, adversely affecting the insurance sector. Nevertheless, several technological innovations have emerged within the industry, aimed at enhancing customer experience, improving market sentiments, and ultimately increasing the adoption of insurance products in the country. While technological disruptions may initially be accompanied by uncertainty and skepticism, they hold the promise of delivering significant efficiency gains in the long run.

According to (OECD, 2017) Innovation and new technologies have the potential to affect the franchise value of insurance companies, with accompanying competition policy considerations, whereby policies which have tailored coverage and simplified claims processes can improve coverage to segments of society that hitherto were not able to access financial protection. Regulatory approaches, such as the regulatory sandbox being developed by a number of jurisdictions, may bridge greater competition and prudential requirements, although ensuring a level playing field as solutions graduate into the full market require some consideration (OECD, 2017).

4.11.7. Sectors with Areas of improvement

From the findings, a majority of respondents agreed that there are areas requiring improvement, specifically highlighting the need for improvement in sectors needing to advance their technological advancements as being in data protection, data and information security, insurance services, and internet connectivity. This indicates a collective acknowledgment among respondents of existing challenges or deficiencies in these particular domains. The call for improvements in data protection and information security suggests a growing awareness and concern regarding the safeguarding of personal and sensitive information.

4.12. Data Protection Act

The advent of technology brought with it cybercrimes which necessitated formulation of Data protection Acts across different jurisdictions. In Kenya, the Data Protection Act serves to regulate the processing of personal data with a focus on safeguarding individuals' privacy rights. The act is applicable to both public and private entities. It defines the key terms such as personal data, data subject, and processing. It establishes data protection principles emphasizing lawfulness, fairness, transparency, and the need for relevant, accurate, and limited data processing based on what the data being collected is reasonably intended for within the sector that the data is applicable.

The Act grants rights to data subjects, necessitates the appointment of a Data Protection Officers in certain entities, and imposes restrictions on data transfers outside certain geographical jurisdictions. The act has required registration of data controllers and processors (which includes all participants in the financial sector), mandates data breach notifications, and empowers the Data Commissioner for enforcement, investigation, and penalties for non-compliance.

In the era of data protection, it is crucial for financial institutions to implement measures ensuring the effective safeguarding of individual data in their possession against cybercrimes, including hacking. With increased awareness of the significance of data protection, a smart consumer are will be more inclined to choose products from financial institutions that demonstrate high rankings in technological advancement and provide robust data security. Despite the implementation of preventive measures, financial institutions should also take steps to mitigate their own risk. In the event of a data breach, it is essential for financial institutions to protect themselves against potential financial losses stemming from legal actions to insurance covers.

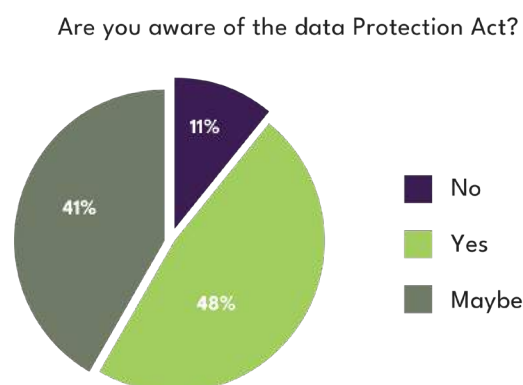


Figure 30: Respondents Awareness of the Data Protection Act

Respondents were asked whether they were aware of the Data Protection Act out of which 48% of the respondents were aware of the Data protection act. While a majority of the respondents were either not sure or had not heard of the Data protection Act before.

4.12.1. Use of Data

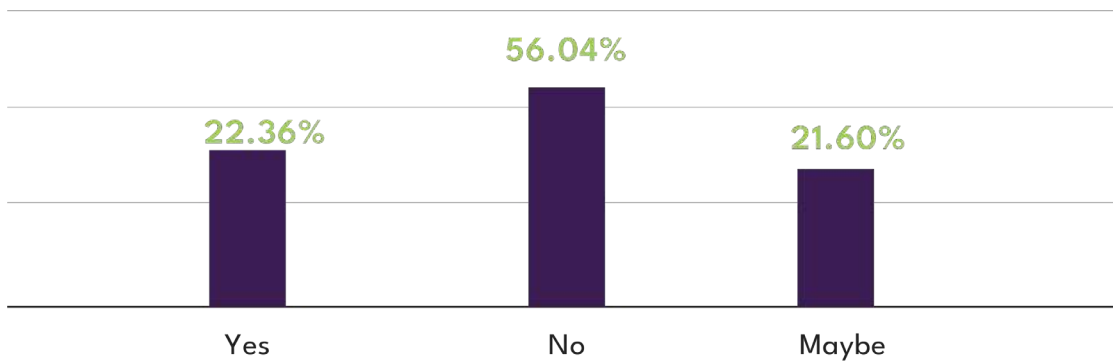
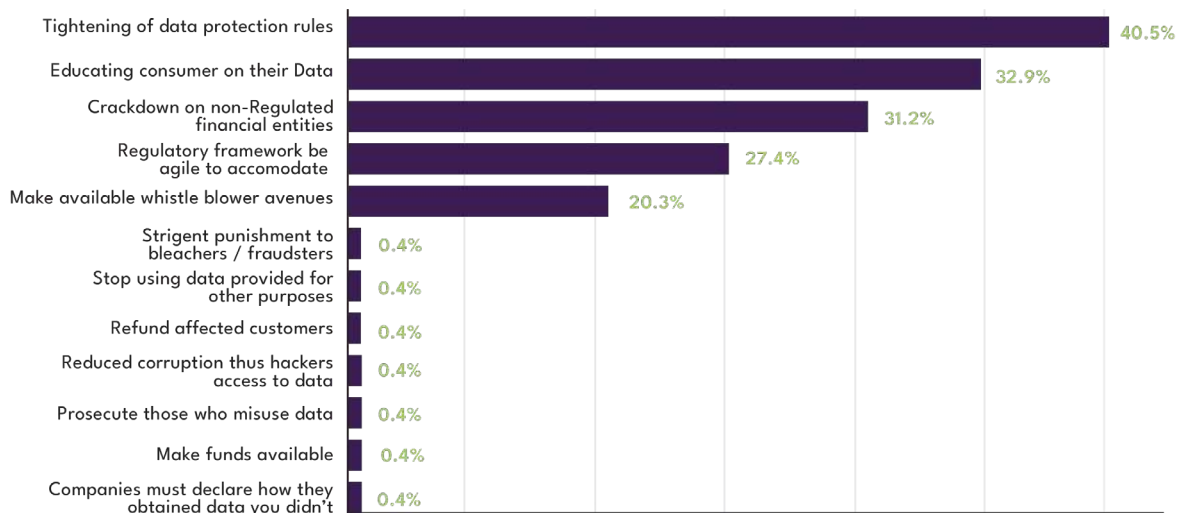


Figure 31: Use of Data

From the above data, more than half of the respondents accounting for 56.04% don't have confidence that the data provided to financial providers is used only for the intended purpose. From this research, some individuals work in sectors with higher data protection risks than others, yet they reported a lack of awareness about the Act. This is disconcerting, especially given their daily interaction with public-provided data, presenting a potential risk for the institutions employing them. Such misuse of customer data can undermine the trust of the general public in financial products incorporating technology into their structure.

For some members of the public, trust hinges on the assurance that the institutions they have subscribed to employ technology systems that are not easily vulnerable to hacking. This underscores the necessity for educational programs to impart awareness about the Act among employees in the financial sector and the wider public in a simplified manner. The responsibility for training rests on both individuals and institutions, as well as the broader public, to ensure that available data is used solely for its intended purposes.



The respondents were asked to suggest methods that can be adopted to improve the level of data protection.

Analysis of the data indicates a variety of perspectives among respondents regarding measures to enhance data protection. Notably, 31.2% of participants propose a crackdown on non-regulated financial entities, emphasizing the importance of regulating entities that currently operate outside established frameworks. A significant portion, 40.5% of respondents advocate for a tightening of Data Protection Rules, signalling a call for stricter regulations and standards to bolster the safeguarding of personal information. Additionally, 32.9%, suggests creating smart consumers through education on data protection rights, highlighting the role of informed individ-

uals in ensuring their data is handled responsibly. Furthermore, 20.3% of respondents recommend establishing whistle-blower avenues, showcasing the importance of mechanisms to report and address data protection violations. Another 27.4% propose an agile regulatory framework to accommodate new tech trends, underscoring the need for regulations to evolve with technological advancements.

Additional suggestions include making funds available for data protection initiatives and advocating for the prosecution of those who misuse data, reflecting a comprehensive approach to addressing data protection concerns.

4.12.2. Challenges Affecting Digital Transformation of Financial Services

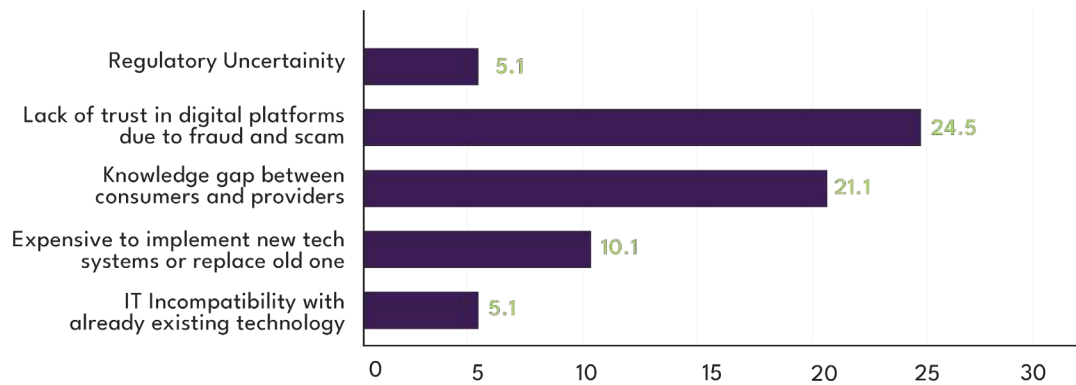


Figure 32: Challenges Affecting Digital Transformation of Financial Services

The analysis of the data done was from a financial consumer perspective, of which 24.5%, noted that a major impediment to the advancement of technology infrastructure in the financial industry is the lack of trust in digital platforms. This lack of trust is mostly due to perceived or reported fraud, cyberbullying, and scams.

Another significant difficulty, accounting for 21.1% of total responses, is the information gap that exists between consumers and service providers. This means that a sizable proportion of respondents perceive a big gap in understanding between individuals who use financial technology and those who provide these services. Addressing these problems is critical for promoting technical infrastructure developments within the financial sector.

From a provider perspective, apart from low funding levels to integrate an advanced technological infrastructure that, for the most part, may not be fully utilized by consumers.

According to (Ceyla Pazarbasioglu, 2020) for some financial services providers, many incumbents have operated expensive brick-and-mortar networks, maintained outdated core technologies, and relied on costly and time-consuming human and paper processes. These infrastructure and processing costs make small transactions and maintaining low-balance accounts unprofitable.

According to ((IFC), 2017) other key challenges that have affected the digital transformation of financial services in sub-Saharan Africa, relative to advanced economies: Low penetration of formal financial services, Low income and financial literacy levels, Underdeveloped technology ecosystems and weak infrastructure.

Additional suggestions include making funds available for data protection initiatives and advocating for the prosecution of those who misuse data, reflecting a comprehensive approach to addressing data protection concerns.

4.13. Cross Tabulation - Correlation

Correlations estimate the strength of the linear relationship between only two variables. Correlation coefficients range from -1.0 which is a perfect negative correlation to +1 which is a perfect positive correlation. The closer correlation coefficients get to -1 or +1 the stronger the correlation. The sig 2 tailed value is used to come up with the value which will help in formulating our hypothesis. We reject the null hypothesis if the value is less than 0.5 and accept if the value is greater than 0.5. Pearson’s correlation determines to which a degree a relationship is linear. A strong Pearson correlation is when the value is greater than 0.7.

Additional suggestions include making funds available for data protection initiatives and advocating for the prosecution of those who misuse data, reflecting a comprehensive approach to addressing data protection concerns.

		What is your age bracket	Do you regularly save part of your income ?	What's your Gender ?	Has tech improved your saving and investment habits ?
What is your age bracket ?	Pearson Correlation	1	.011	.013	.044
	Sig (2-tailed)		.864	.836	.528
	N	237	233	237	210
Do you regularly save part of your income ?	Pearson Correlation	.011	1	-.132	.378
	Sig (2-tailed)	.864		.044	.000
	N	233	233	233	210
What's your Gender ?	Pearson Correlation	.013	-.132	1	.024
	Sig (2-tailed)	.836	.044		.728
	N	237	233	237	210
Has tech improved your saving and investment habits ?	Pearson Correlation	.044	.378	.024	1
	Sig (2-tailed)	.528	.000	.728	
	N	210	210	210	210
* Correlation is significant at the 0.05 level (2-tailed)					
** Correlation is significant at the 0.01 level (2-tailed)					

The Pearson correlation between age bracket and saving regularly is 0.011 indicating a weak positive correlation. The p value is 0.864 which is greater than 0.05 meaning we accept the null hypothesis that age has not played a role in regularly saving.

The Pearson correlation between age bracket and technology improving saving and investment habit is 0.044 indicating a weak positive correlation. The p value is 0.528 which is greater than 0.05 meaning we accept the null hypothesis that age has not played a role in technology improving saving and investment habit.

4.14. Respondents recommendations to Service Providers and other Stakeholders

Most respondents agreed that service providers and the government can support the savings and investment journey through technology through sensitization on already existing products and through other technological innovations that are customer friendly. Other responses include:

-“ Service providers can ensure that the services offered over the internet are end to end encrypted to create

confidence in me that my savings won't get stolen through hacking or scamming.”

- “The government can put in place better and favorable technology laws and ensure they're enforced to avoid ICT being used for the unintended purpose.

-“Be credible”

-“By being informative to enlighten and create more awareness about the benefits.”

-“By checking financial status of each individual without bias.”

-“By coming with online alerts texts through which members can be able to know how long they should wait to be paid their dues.”

-“By ensuring the DPA is fully implemented and by following up on complaints, claims and or allegations of data mishandling.”

More on RegTech - Policy makers gear towards making consumer friendly policies including reduction in unnecessary paperwork and requirement before enrolment for financial products. Case in point, insurance products. Money market questions on kyc too many questions.

CHAPTER 5



CONCLUSIONS AND RECOMMENDATIONS

This chapter presents an overview of the study's focus and findings. Conclusions are drawn from the research, and recommendations are offered for further exploration of technology integration and its transformation in the financial sector. The discussions encompass both consumer and financial provider perspectives.

The focus of the study was to assess the Role of Technology on Savings and Investments; with a focus on assessment of the effect of technology on the behavioural aspect of utilizing/consuming financial products, evaluation of the effectiveness of current technological systems utilized by various service providers in the financial and pension sectors and an Investigation into the effects of emerging technological trends on savings and investments.

The findings from the survey offer valuable insights into the evolving financial behaviors and preferences of respondents, shedding light on the intersection of technology, savings, and investments. Notably, 72% of respondents showcase a positive trajectory in embracing a savings culture, with 25% indicating consistent savings habits. The investment landscape reveals pensions as the preferred choice at 24%, emphasizing the significance of long-term financial planning.

The role of electronic devices, predominantly mobile devices, is pivotal in this digital transformation. What was once primarily a communication tool has evolved into a multifunctional gateway, with 35.1% of respondents actively engaging in monetary activities through mobile apps. This underscores the growing trend of integrating financial activities into the digital realm, offering convenient and efficient means for users to manage savings and investments.

Digital access to financial services demonstrates a preference for mobile money, banking, and pensions, reflecting a higher comfort level with these platforms. While mobile lending apps have gained popularity, other avenues such as table banking, insurance, money markets, and unit trusts show varying degrees of digital adoption.

Moreover, respondents expressed confidence in sourcing financial information online, with 51.48% attesting to the ease of accessing relevant data about financial products and services. This underlines the critical role of credible online sources in empowering consumers to make informed financial decisions.

Overall, technology receives widespread acknowledgment for improving saving and investment habits, with 63.29% of respondents attributing this improvement to the ease of accessing information, the availability of new tech-driven financial products, and positive peer influence. As technology continues to shape the financial landscape, these insights provide a foundation for understanding and leveraging digital tools to deepen financial inclusion and enhance overall financial well-being.

Based on the above, and in addition to the respondent's sentiments, we offer the following recommendations and suggestions.

The pivotal role of mobile devices as the most widespread mode of technology available in Kenya, financial service providers should prioritize user-friendly mobile apps, mobile interfaces and USSD codes, to ensure seamless navigation and enhanced functionalities can encourage more users to engage in monetary activities, thus deepening financial inclusion. While mobile money and banking enjoy popularity, efforts should be directed towards increasing awareness and ease of access for services like insurance, money markets, and unit trusts. Recognizing the reliance on online sources, stakeholders in the financial sector, including regulators, should ensure the availability of accurate and credible financial information. Collaborative efforts can contribute to a more informed and financially literate society, and the creation a smart-consumers of financial products and services.

Peer-Influence Initiatives: Acknowledging the impact of positive peer influence, there is an opportunity to design campaigns or initiatives that leverage social dynamics to promote responsible financial behaviors. Peer-led discussions and success stories particularly among the youth can inspire others to embrace sound financial practices and improve the saving and investment for these particular age group.

Given the dynamic nature of technology and its impact on financial behavior, continuous monitoring of trends and Innovative in Financial Products is essential. Financial institutions should remain agile, adapting their strategies to align with evolving consumer preferences and technological advancements.

Traditionally, companies analyze their internal capabilities and target customer markets to identify new opportunities. But when pursuing initiatives that aim to create both business value and societal value, companies need a different starting point (Brokaw, 2014). That starting point brings together constituencies with different interests, perceptions and capabilities by considering external expertise and multiple stakeholders' perspectives, including the consumer to whom the product is being made for. Beginning with the client in mind is crucial in developing financial products and services, as well as designing the interfaces for consumer interaction. This approach significantly influences the success rate of products and the extent to which consumers are drawn to and adopt them.

Financial companies must closely observe the evolving financial behaviors and technological interactions of today's consumers. In the era of technology, consumers are increasingly impatient and have limited attention spans when engaging with digital platforms. This is particularly challenging due to the competition for attention in the Attention Economy. To succeed, financial service providers should create versatile and user-friendly products and interfaces. Further, there is need to for these companies to establish a feedback loop to refine their products and user interfaces to ensure that they are continuously improved to suit the consumer needs, recognizing technology as a tool for enhancing client experiences through more efficient processes catering to both external and internal clients.

The financial sector can consider Integrated Financial Services via Joint Venture and Other Arrangements between unaffiliated financial services firms. In such structures, financial providers – such as a pension provider, a bank and an insurer etc can come together through a strategic alliance, or other formal arrangement through which the firm's products are collectively offered to consumers.

Individuals typically have diverse financial needs addressed by different financial companies. Consolidating all these services under one roof simplifies tracking investments and allows consumers to explore additional products that may be suitable for them.

While this study primarily focused on individuals within the formal financial system, it is imperative not to overlook the significant population existing outside this framework. Many individuals, albeit not engaged with formal financial institutions, have developed informal methods of saving, investing, and establishing a form of social security through self and social insurance mechanisms. Although these methods may be deemed less robust compared to formal financial instruments, they provide a sense of financial resilience. To enhance financial inclusion, the formal financial sector must employ technological advancements or other means to connect with this population. This involves developing tailored financial products and services that address the specific needs of these individuals rather than imposing existing market products that may not align with their requirements. It is crucial to recognize that some individuals in this category lack the necessary documentation as mandated by various financial institutions, presenting barriers to entry. Overcoming these obstacles is essential to ensure a more inclusive financial landscape.

This poses challenges to financial inclusion. According to existing research, approximately one-fifth of adults without access to financial services identify the absence of documentation as a significant barrier to opening accounts. Digital Financial Services (DFS) have the potential to assist individuals without proper documentation by utilizing digital authentication and transaction initiation methods. This can help overcome the stringent documentation

requirements typically associated with traditional accounts. By leveraging digital transaction data and alternative sources, such as social media or e-commerce platforms, DFS can address information asymmetries. This approach compensates for the lack of comprehensive formal credit histories and financial statements, as well as the limited capacity to register collateral. Overcoming these challenges enables individuals to access financial services on more favorable terms (Ceyla Pazarbasioglu, 2020).

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APPENDIX

- i. Questionnaire
<https://www.surveymonkey.com/r/8ZRD233>

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CONVERSATIONS



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