The adoption of Fintech applications in wealth banking

Pierre Retief Nel

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Supervisor: Prof Johan Coetzee

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ABSTRACT

Financial technology, or FinTech, offers substitutes for some products used in traditional banking and non-banking finance services. In the financial sector, FinTech is a new idea. This field study's main goal is to gain insight into wealth clients' perspectives of FinTech adoption within a wealth banking paradigm. It explains the factors that affect how clients perceive using FinTech services in the wealth management industry. The wealth management services industry's traditions and behaviour will alter as well as how AI will be adopted, different generations and population to name a few.

This study explored further into the factors that influence wealth clients' perceptions when adopting FinTech services as part of a large South African bank's wealth management client base. Due to technological advancements, the financial world has been changing quickly, and practically every facet of it now has a new look and feel. FinTech is the term used to describe this technological transformation in the financial sector. Even if the 'FinTech influence' has been felt throughout all financial services, the wealth management business is just beginning to experience it in comparison to other financial services industries.

The clientele of wealth management is ageing, and younger people and women are significantly underrepresented. Despite the younger populations' interest in FinTech solutions, the wealth services sector currently provides only a few possibilities for them. The distribution of female clients in wealth management is lagging behind overall growth trends. Wealthy customers use a variety of wealth service providers, combine different wealth service options, and maintain a strong personal connection with either their wealth banker, investment manager, or both. FinTech services help wealth management clients operate more effectively while also increasing their usefulness and meeting their needs for services. Financial management clients employ FinTech service offerings from only well-known wealth service providers with confidence. South Africa's wealth management industry lags the US and UK's by several years. Currently, FinTech is seldom present in the core wealth management industry. In the South African wealth market, there aren't many entry-level Robo-advisors, but those that do exist don't pose much of a threat to the market leaders.

Wealth management should acknowledge the impact of technology advancements on client behaviour. Ensuring a trusted relationship for wealth management is high priority in evaluating the bank/client relationship when incorporating or planning FinTech services in wealth banking. Also, to understand what drives client perception in relationship quality and how these perceptions need to be combined to find the right balance of quality. It is important for the wealth management business to understand the risk of an aging book and to implement proper wealth transfer strategies to include the next generation. With a diversified and growing investment market with increasing options, wealth management need to look at how they can deliver alternative asset classes to add value to a growing and more diversified client base. Managing complexity such as volatility, and the risk of various different asset classes, might be in the form of robo-advisors. Wealth management need to find the FinTech ‘disruptor’ of the status quo. Overall, FinTech has improved the services offered by the traditional wealth management sector. Wealth management need to accept the future lies in a fully digital FinTech platform that serves as a one-stop shop for all wealth management needs. Digital and online engagement is the future of the wealth management industry and wealth technology. The current nature of advice professionals will evolve, becoming a more individualised one-stop solution thanks to the more sophisticated client interaction digital platforms.

South Africa's banking system is in a state of flux and change. On one hand, traditional banking models have seen a decrease in market share as fintech innovations have gained traction within the country. On the other hand, fintech has had its own struggles, with many South Africans still not having access to digital banking services. Fintech refers to the use of technology to offer financial services, including mobile banking, online banking, and digital wallets.

Keywords: FinTech Adoption Factors, Intention to adopt FinTech, Wealth banking, Wealth Management, WealthTech, Robo-Advisor, TAM Model.

DECLARATION

I declare that the Field Study hereby submitted for the Magister in Business Administration at the UFS Business School, University of the Free State, is my own independent work and that I have not previously submitted this work, either as a whole or in part, for a qualification at another university or at another faculty at this university.

I also hereby cede copyright of this work to the University of the Free State.

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Name: P R Nel

Date: 20 January 2023

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CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Background

Globally, wealth management as an industry experienced distinct change over the last few years and must cope with a variation of future challenges. Firms offering private banking services will need to grow a business model with a strategic focus that change and enhance their ability to take advantage of any opportunities afforded by higher growth markets and product segments (Lin, 2016). Mid-market high-net-worth individuals are seen as a vital source for growth in developed wealth management markets of Europe and North America, however newly emerging markets that include Latin America, the Middle East, Asia, Eastern Europe, and Africa are seen as stronger areas of potential growth (Maude, 2010).

The number of high-net-worth individuals (HNWIs) in South Africa is expected to increase 40% over the following ten years, according to an analysis by Henley and Partners (2022). HNWIs are people with a net-worth of $1 million (R16.08 million) or more, and there are now 39,300 HNWIs and 2,080 multi-millionaires (net wealth of $10 million or more) living in South Africa. By 2032, the country may have more than 55,000 HNWIs, according to predictions (BusinessTech, 2022).

Banks cannot afford to be complacent and need to re-evaluate their competitive advantages given the profound changes brought on by the advances in information technology (IT) as well as the competitive pressures by FinTech companies (Jakšič and Marinč, 2019). The challenge in these changing times is the understanding of banking, specifically relationship banking's response to significant challenges brought on by IT-driven inventions such as smart technology (Currie and Lagoarde-Segot, 2017).

Smart technology has mastered complex tasks, and it is anticipated that more tasks, especially those that are beyond the capability of humans, will be mastered (Byrum, 2018). Byrum (2018) defines smart technology as a tool or system that uses a combination of artificial intelligence, machine learning, information analytics, and cybernetics to do more with fewer resources. Industry 4.0 revolution advances in digital

and smart technologies have the potential to close the gap between short- and long-term gains, allowing for the full realisation of Industry 4.0's potential and its effects on sustainable financial systems (de Sousa Jabbour *et al*., 2021). To encourage the development of industrial symbiosis between businesses interested in incorporating sustainable practises into their business models, digitalisation is tied to the development of new technical tools (de Sousa Jabbour *et al*., 2019; Pizzi *et al*., 2021). Financial services and the emergence of financial technology (FinTech) are two examples of industries that have grown because of Industry 4.0 (Pizzi *et al*., 2021).

According to Giglio (2021), the term FinTech is derived from the words finance and technology, and it is defined as an interdisciplinary field that combines finance, technology management, and innovation and describes the connection between internet-related technology and commercial service activities of the financial sector, such as banking transactions and money lending. FinTech, which encompasses innovative business models and procedures, applications, and software, is defined by Mearian (2017) as the use of any financial technology by financial services to support and manage the financial parts of the organisation. The banking and financial services sector could benefit from FinTech's large cost reductions, expansion of varied services, and improvement of industrial and market circumstances (Giglio, 2021).

According to Bates (2017), traditional banks are under pressure to think about potential alliances with FinTech firms to maintain their market shares and be relevant in the fast-paced world of finance. Vives (2020) indicates that such endeavours result in reciprocal benefits. FinTech companies can create lucrative compensation packages for the services provided, whilst banks can easily provide financial needs at less expensive, competitive rates. Doyle *et al.* (2017) suggests that direct access to the banks' pre-existing clientele enables the widespread adoption of cutting-edge banking products that are constantly improved and tailored to address specific needs. Coetzee (2018) emphasises that as a result, FinTech businesses have changed how banks develop their strategy, rules, procedures, and segment models. Wealth management is one of the business models that has been impacted by the rise in FinTech start-ups (Giglio, 2021).

Dziawgo (2021) defines wealth management as the practise of performing tailored strategies in managing assets (both liquid and non-liquid) for the customer, within the originally planned financial plan, as well as strategic planning with varying degrees of client involvement. In addition, Dziawgo (2021) highlights that asset management, tax planning, legal and financial consulting services, offshore services, and retirement planning are some of the major wealth management services.

Several factors are reshaping the wealth management competitive landscape, including an expanding, diversified customer base with rising expectations, new ways of working powered by technology, rapid regulatory change, geopolitical volatility, and competitive new entrants with aggressive business models (KPMG, 2022). The wealth management industry is facing significant pressure from a variety of factors, including several key trends like a greater emphasis on cost management, entry of Big Tech companies (Google, Amazon, Facebook, Apple), an ageing client base, and a key trend of rapid digital and technological transformation, according to Dziawgo (2021).

The wealth management industry, and particularly how it is managed, has been transformed by technological advancements. The practise of wealth management has been impacted by big data and artificial intelligence (AI), in particular (Clements, 2019; Menon, 2021). FinTech is the term for the application of cutting-edge technology in the financial sector (Varghese, 2018). Wealth management is becoming more accessible, affordable, and transparent thanks to FinTech, which is evolving wealth management (Singh and Kaur, 2017). WealthTech is the term for FinTech used in wealth management (Varghese, 2018). Growing in popularity, WealthTech appears to answer some of the major issues facing the entire wealth management sector (Dziawgo, 2021). WealthTech is a segment of the financial technology industry that focuses on managing client portfolios and investments via the use of digital technologies as well as specialised products and solutions (Dziawgo, 2021). Robo-advisors are the name given by the industry to the computer programmes used in wealth management (Varghese, 2018).

According to Dziawgo (2021), WealthTech has become an important component of wealth management because of the extremely quick digital revolution. With funding in the billions of dollars for new wealth technology companies and a strong reliance on key

technologies like artificial intelligence, robo-advisory, big data, or blockchain, WealthTech will play a bigger role in wealth management and could draw in more clients who are both younger and less wealthy (Dziawgo, 2021). One of the major trends in the global financial sectors is the rapid digitisation of wealth management, and since WealthTech firms use technologies like artificial intelligence, blockchain, big data, and robo-advisory, it is probable that this trend will continue in the future (Dziawgo, 2021).

1.2 Problem statement

Globally wealth management as an industry experienced distinct change over the past 24 years (1999 till 2022) and must cope with a variation of future challenges. Banks offering private banking services will need to grow a business model with a strategic focus that change and enhance their ability to take advantage of any opportunities afforded by higher growth markets and product segments. Banks cannot afford to be complacent and need to re-evaluate their competitive advantages given the profound changes brought on by the advances in IT as well as the competitive pressures by FinTech companies. Private Banks are slow to adapt to IT changes and client preference is still face-to-face interaction and value is placed on the convenience that a Private Bank provides.

With a rising expectations from a diverse customer base and the added pressures from factors such as outside Big Tech companies, aging client base and rapid digital and technological innovation, wealth management divisions within banks are at risk of losing out on a competitive edge for not incorporating digital transformations within their product design and offerings, rising cost management, losing out on market share of a generation X and Y as well as a growing female market. Not addressing the aging client base and having a poor client strategy when it come to an aging book, poses a risk of wealth flowing to the next generation that is not known and thus losing out on balances, revenue, future generational banking, and investment opportunities. This possibility of outflow of assets and clients could weaken the bank balance sheet numbers, impacting revenue and the ability of lending funds within the wealth management division given the capital holding and risk associated with a small balance sheet to fund lending. A wealth management business that do not want to evolve could also be a reputational risk and seen as to set in their ways and not growing with times, client market, and behaviour. Globally wealth

management are digitalising and with WealthTech firms on the rise this trend is going to continue. Hence the importance of this field study is to address the determining factors impacting FinTech adoption within a wealth banking model and to find the correct balance for the future to add value to wealth management.

1.3 Objectives

1.3.1 Primary objective

To evaluate the perceptions of clients to adopt FinTech applications in wealth banking at a major South African Bank.

1.3.2 Secondary objectives

- To provide an overview of FinTech applications and wealth banking.
- To assess the impact of technology advancements on client behaviour.
- To evaluate the bank/client trusted relationship when incorporating Artificial Intelligence in wealth banking; and
- To identify the aspects of relationship quality that impact a client's perception when adopting Artificial Intelligence within wealth banking.

1.4 Layout of the study

Chapter 2 is a literature review of FinTech applications, wealth banking, technology in banks, FinTech and the future of banking, models for technology adoption and the various factors influencing trust of the client relationship model and behavioural and attitudinal loyalty.

Chapter 3 discusses the research methodology, which was a quantitative investigation by way of Likert scale questions to establish the adoption of FinTech applications in wealth banking and the impact on the client relationship banking model and the identification of possible challenges.

Chapter 4 discusses the quantitative data analysis and findings.

Chapter 5 is a collation of findings and recommendations to increase the adoption of FinTech applications in wealth banking and the impact on the client relationship banking model, as well as support available for challenges faced.

1.5 Conclusion

Globally wealth management as an industry experienced a distinct change over the last few years and must cope with a variation of future challenges. Firms offering private banking services will need to grow a business model with a strategic focus that change and enhance their ability to take advantage of any opportunities afforded by higher growth markets and product segments. Banks cannot afford to be complacent and need to re-evaluate their competitive advantages given the profound changes brought on by the advances in IT as well as the competitive pressures by FinTech companies.

It is critical to have an all-inclusive approach when delivering wealth management solutions and the private banking industry should do so in a manner that appeals to its wealth clients. Mostly in-house wide-ranging products are offered to clients to fulfil their wealth banking needs, leaving most wealth clients unhappy with this methodology. Trust is key to the relationship and wealth clients wants a personal touch with the knowing that their wealth manager can be trusted to guide them through a vast range of products and uncertain market trends.

Most of the wealth clients do not want to conduct their wealth management business online, rather value is placed on the convenience that a private bank provides. Reluctance from clients in adopting artificial intelligence applications in the wealth banking model could have a negative impact on profitability as well as client retention and future acquisition/growth. Taking advantage of smart technology might just be the key to market wealth management and client relationship leading to an increase in client loyalty and trust.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

The evolution of wealth management and the present understanding of the FinTech (financial technology) sector are discussed in this section. The wealth management industry and its evolving dynamics will be covered and how the dynamics of the industry and the world of wealth management are changing because of FinTech. This section further covers the determinant factors that influence users' adoption of FinTech services. A conceptual framework and some of the factors that drive adoption are all clearly outlined.

2.2 What is FinTech?

Considering its impact on the banking industry, FinTech is a very popular and trendy subject (Philippon, 2016). Numerous studies have been conducted on the relationship between technical advancement and financial innovation, from various angles by both domestic and international academics (Hu *et al*., 2019). Sci-tech finance has advanced significantly since McKinnon and Shaw's initial Financial Deepening proposal in 1973 (Hermes and Lensink, 2008; Hu *et al*., 2019). Therefore, it is thought to be useful to establish its roots to more accurately establish the period in which to contextualise its progress, along with the scientific and social trends that are forming it (Mosteanu and Faccia, 2021). With the launch of online banks in the last decade of the 20th century, the digitisation of finance advanced dramatically (Arner *et al*., 2015; Mosteanu and Faccia, 2021). Magnuson (2018) documents that the phrase ‘FinTech’ or ‘Fintech’ is the merging of Finance (Fin) and Technology (Tech).

FinTech only includes the new breed of companies that specialise in providing financial services primarily through technologically enabled mobile and online platforms, as well as the willingness to include only technology-enabled technologies (Mosteanu and Faccia, 2021). The field of research relating to FinTech is controversial, depending on the characteristics of the technologies to be included and the identification of technologies that can be considered innovative (Magnuson, 2018). Any application of new digital

technology to the financial sector for the purpose of performing forecasts, analysis, or facilitating financial transactions is given a broader definition (Varghese, 2018). Any computer software and other technology used to support or facilitate banking and financial services is known as FinTech (Vasiljeva and Lukanova, 2016).

FinTech was defined by Gai *et al*. (2018) as a financial technology division of one company that would use newer information technology to enhance management effectiveness and service quality. Due to the use of technology in the banking industry, FinTech may increase the effectiveness and range of financial services (Varghese, 2018). There have been numerous technological advancements in the field of finance technology, including big data (Yin and Gai, 2015), cloud computing (Gai *et al*., 2018), the internet of things (Cuomo *et al*., 2018), and data analytics methods (Mishra, 2018). The four dimensions of data-oriented, facility and equipment, applications, and service models are the primary concerns with security and privacy in FinTech (Du *et al*., 2019). FinTech is not just the merger of information technology with financial services, as Arner *et al*. (2015) explained, but rather an application of technology to existing services to widen their scope.

Mosteanu and Faccia (2021) state that FinTech businesses strive to offer the most cutting-edge financial services that, because of digital technologies, can be created and improved to serve end users, individual consumers, big businesses, or SMEs. According to Mosteanu and Faccia (2021) over the past 20 years (1999 to 2019), the banking, financial, and insurance industries have seen significant transformation. Additionally, Mosteanu and Faccia (2021) assert that the impact of digital technology on finance is undeniable; FinTech is thus, the most difficult frontier. FinTech is not just for the banking industry, as Utzerath and Fernández (2017) point out; it can also be applied to open banking, API (Application Programming Interface), start-ups, robot advisors, process automation, and crowdfunding online platforms. Varghese (2018) also emphasises how the FinTech revolution affects traditional financial services including retail banking and wealth management.

Consequently, the ability to employ new technology is becoming increasingly important (Mosteanu and Faccia, 2021). As a result, a lot of attention is being paid to technologies

like blockchain, big data analytics, AI, cloud systems (Loginova, 2020) and the newest 5G communication technologies (Prasad and Aithal, 2015; Treleaven, 2015; Mosteanu and Faccia, 2021). FinTech intelligence results from the sophisticated effect of algorithms and machine learning that help construct better consumer-focused models through the development of artificial intelligence (Bates, 2017).

2.3 Artificial intelligence (AI)

The development of AI has been a major force behind the digital changes in a variety of industries (Agrawal *et al.*, 2018). AI is now a key component of digital transformations, driving networking advancements and increased data processing (Alsheibani *et al*., 2019). AI is viewed as a critical business solution and the foundation for capabilities in all types of businesses (Chui, 2017). Applications of AI can boost organisational performance and provide businesses a competitive edge (Nadimpalli, 2017). Banks that have embraced AI technology have seen increases in interest earnings, decreased costs, and improved client satisfaction (Gartner, 2020; Thowfeek *et al*., 2020).

Despite the advantages brought about by its enhanced computing data capability, AI has not yet been widely embraced (Thowfeek *et al*., 2020). The adoption of AI is still in its infancy in many businesses, and they are still working to establish the business case for AI applications and the necessary capabilities for assessing, developing, and deploying AI solutions (Ransbotham *et al*., 2018). AI helps banks gain a competitive advantage, but to fully profit from AI adoption, banks must overcome the difficulties presented by traditional organisational structures and poor customer service mindsets (Thowfeek *et al*., 2020).

Various sub-fields with different emphasises depending on the relevant historical and technical origins are included in the concept of AI (Gentsch, 2017). A system's ability to accurately read external input, to learn from such data, and to use those learnings to fulfil specific goals and tasks through flexible adaptation is how artificial intelligence is defined by Kaplan and Haenlein (2019). The term AI is used by Fernández (2019) to describe a collection of theories and algorithms that enable computer systems to carry out tasks that typically require human intelligence, such as visual perception, voice recognition, or the

interpretation of a text considering its context, and that in some cases complement these abilities. Thowfeek *et al*. (2020) define artificial intelligence as the process of teaching computers to perform tasks which currently only humans are superior at. Although it is still a characteristic of humans, being adaptable to settings and behaviours is now being replaced by machine learning (Gentsch, 2017). The ability of systems or applications to learn without the use of explicit programming is known as machine learning (Chollet, 2021). AI aims to enable computers to perform tasks that only human brains are capable of (Boden, 2018; Ashta and Herrmann, 2021).

The financial sector is experiencing an emergence of prospects due to AI, and everyone finds it appealing due to its unique promise of cost reduction and increased differentiation (Ashta and Herrmann, 2021). The financial sector is experiencing volatility, uncertainty, complexity, and ambiguity, which has been referred to as a 'VUCA world' and as a result, business is changing because of a mix of technology breakthroughs, including AI (Millar *et al*., 2018). Financial markets (foreign exchange, bonds, derivatives, stocks, interest rates), as well as financial institutions (mutual funds, insurance companies, banks, payment firms, microfinance organisations), are included when discussing the financial sector, according to Millar *et al*. (2018). According to Millar *et al*. (2018), financial role-players are forced to cooperate and be more open, which further illustrates how AI is revolutionising their strategies.

The difficulty is that AI products are not vetted thoroughly enough during the development process to find any potential issues they might have after being released, whether those issues are moral or emotional harms (Ashta and Herrmann, 2021). Also, the need for AI systems to be immune to manipulation will become more and more urgent (Yudkowsky and Bostrom, 2011). According to Thowfeek *et al.* (2020), most banking systems are currently implementing initial AI prototypes. Thowfeek *et al.* (2020) go on to note that prototypes are often created in an experimental environment for internal use to determine and test their potential applications, which include front office apps like transactions, credit worthiness, and customer chatbots. There have been complaints made about how basic the current chatbots are, which supports the financial stability report's claim that they

provide too generic policy knowledge or simplistic solutions (Schindler, 2017; Kruse *et al.*, 2019).

As legacy operations prevent meaningful investments in digital operations, the divide between legacy and digital operations poses another difficulty for banks (Andrus *et al*., 2017; Kruse *et al*., 2019). Many banks are reducing their workforce in industrialised countries, but it's unclear whether AI in FinTech enterprises has made up for this loss of jobs and as a result, bankers are in a difficult situation: if they don't automate, they risk losing ground to their competitors (Dicamillo, 2019). According to Thowfeek *et al.* (2020), smart process automation and automated customer services are among the benefits of AI technology. Additionally, faster reaction times and individualised offerings result in increased customer experience and engagement, and eventually higher interest and profitability. Furthermore, conventional banking sectors will need to gradually implement the usage of AI to maintain public confidence, trust, and continued competitiveness (Thowfeek *et al*., 2020).

According to Lomazzo (2016), integration of several technologies, such as (robo, AI, blockchain, and goal-setting behavioural finance apps), has the potential to fundamentally disrupt the banking and investing business as we now know it. These technologies include updating information (KYC), improving data gathering, and/or improving the compliance function. Wealth management practice has changed because of the development of big data and AI (Singh and Kaur, 2017; Varghese, 2018). The most disruptive development in the financial technology sector has been the application of AI to automate or assist in managing investments, also referred to as robo-advisors (Belanche *et al*., 2019).

2.4 Robo-advisors

Various traditional financial products and services are now available online because of FinTech's significant growth in the financial sector (So, 2021). The use of robo-advisors, or online automated systems for investing, is growing in popularity (Abraham *et al*., 2019). The field of robo-advising is one of the innovations that has seen advancement (Jung *et al.*, 2018a; Chen *et al.*, 2019). Instead of scheduling sessions with human advisors, users

can obtain individualised investing services online using a platform called robo-advising, which is made up of interactive and intelligent components (So, 2021). It is anticipated to be the next development in the evolution of financial advising and asset management (Kearney, 2015; So, 2021). A FinTech breakthrough in the wealth management sector, is the robo-advisors that provide online advisory and investment services and, in essence, deliver advice to investors based on their preferences and risk tolerance objectives (Fisch *et al*., 2017).

Robo-advisors as defined by Waliszewski and Warchlewska (2021), are automated investment solutions that engage people with digital tools with advanced customer experience to assist them through a self-assessment process and pattern their investment behaviour toward basic goal-based decision-making. Furthermore, these tactics are conveniently supported by portfolio rebalancing techniques utilising trading algorithms based on passive investments and diversification strategies. Varghese (2018) defined robo-advisory as a FinTech innovation in the wealth management sector that offers an online advisory and investing service and is essentially online-dispensed advice tailored to the investor's preferences and risk tolerance targets. Robo-advisors are digital platforms that use AI to automatically create and maintain consumers' portfolios (Anshari *et al*., 2022).

Automated investing advice is still relatively new but is evolving swiftly (Baulkaran and Jain, 2021). Automated asset management, automated stock trading, algorithmic trading, and high frequency trading are only a few of the concepts that fall under the term autonomous investment (De Castro and Annoni, 2016). In contrast to human financial advisors, robo-advisors, according to Baulkaran and Jain (2021), are not subject to behavioural biases and cognitive constraints and are therefore designed to construct diversified portfolios objectively. An industry-wide developing trend involves the use of robots for wealth management and financial advice (Moulliet *et al*., 2016; Hakala, 2019). The market for robo-advice is projected to reach $135.11 billion in 2026 at a compound annual growth rate (CAGR) of 48.08% after expanding from $18.71 billion in 2021 to $28.10 billion in 2022 (ReportLinker 2022).

When providing online investment advice services, it is crucial to consider the complexity of the advisory services, the relevance of the service to the client, and the crucial role that trust plays (Hakala, 2019). AI-based robo-advisors build and invest in portfolios while taking the investor's risk tolerance and time horizon into consideration and manage the portfolios later while keeping track of market fluctuations and changes in asset characteristics, and alerting the investor to any changes that may have an impact on their financial situation (Jung *et al*., 2019).

Since a thorough risk assessment is not only required by law but also fosters relationships with clients and builds trust, risk profiling for robo-advising is the first step in achieving the sustainability of investment services and products (Jung *et al*., 2018b; Cheng *et al*., 2019). The growth of robo-advisors, according to Abraham *et al*. (2019), highlights the need for customers to be aware of their limits and receive the right financial education. Additionally, policymakers must consider how robo-advisors will affect the entire financial system and re-evaluate current regulatory and supervisory procedures (Abraham *et al*., 2019).

Robo-advisors design, monitor, and effectively rebalance low-cost portfolios using an algorithm based on modern-day portfolio theory (Vukovic and Bjerknes, 2017). Their low-cost advantage results from a decrease in fixed costs like adviser wages and a decrease in the requirement for physical office space, as well as from using affordable products like ETFs to build effective and diversified portfolios (Uhl and Rohner, 2018; Alsabah *et al*., 2021). In addition to providing systematic and transparent guidance, robo-advisors also help to reduce investor behavioural biases and the bias that might arise from the data collection and investor recommendation processes that are common in human advising (Uhl and Rohner, 2018; Hakala, 2019).

Robo-advisors have significantly disrupted traditional human advisory services, and as a result, major investment management firms have incorporated automation (Alsabah *et al*., 2021). Most of the communication between investors and investment advisors currently takes place through personal dealings (Cocca, 2016), whereas AI in the form of robo-advice has the potential to completely transform the wealth management sector (Hakala, 2019).

Due to the use of computer algorithms rather than human investment managers, automated accounts are typically less expensive, which helps robo-advisers attract new, younger clients. Robo-advisors are particularly appealing to younger investors who have more time to develop their assets before retiring (Hakala, 2019). According to Awuni (2019), robo-advisors are providing financial guidance to all people, particularly the younger generation, such as millennials and generation Z, who want to be in control of their money. Robo-advisors are also changing how many baby boomers and older generations acquire and use wealth services, which is disrupting human-based business models that traditionally charge higher fees (Awuni, 2019; Hakala, 2019).

Robo-advice will also give wealth management companies access to a sizable new market of millennials who are interested in accumulating wealth but previously had few options in terms of investment management (Singh and Kaur, 2017). Robo-advisors cater to the interests of a new generation of wealthy people who are more in control, technologically smart, and interested in investing anywhere, and anytime (Britton and Atkinson, 2017). As a result, the use of robo-advisors creates a new class of investors that the traditional wealth management sector has not previously been able to service (Jung *et al*., 2018). By making it simpler and more affordable to open investment accounts, receive financial advice, plan, and automate investment decisions, robo-advisors increase access to wealth management services (Abraham *et al*., 2019).

2.5 Wealth management

The wealth management sector has seen a significant change since its inception in the 1960s and 1970s (Gold and Kursh, 2017), both in terms of its strategy for asset management and the characteristics of its clients. The wealth management sector, like any other sector, has changed and adapted over time to become effective and lucrative (Gold and Kursh, 2017; Beyer, 2017). Technology advancements have changed how the wealth management sector is structured, particularly with the introduction of big data and AI (Singh and Kaur, 2017; Varghese, 2018). FinTech is the term for the application of cutting-edge technology in the financial sector (Varghese, 2018). Wealth management is becoming more widely accessible, more affordable, and more transparent thanks to FinTech (Singh and Kaur, 2017).

Wealth management is expanding quickly and is constantly changing (Gold and Kursh, 2017; Beyer, 2017). Globally, individual wealth has been steadily rising (Dziawgo, 2021). At a compound annual growth rate (CAGR) of 14.2%, the size of the worldwide wealth management market is predicted to increase from $1,517.0 billion in 2021 to $1,732.55 billion in 2022. Furthermore, the worldwide wealth management market is then anticipated to expand to $2,801.45 billion in 2026 at a CAGR of 12.8% (Wealth Management Global Market Report, 2022).

For high-net-worth individuals and families, wealth management is a financial service that incorporates asset allocation, portfolio management, financial planning, estate planning, and tax advice as defined by Ugolini (2018) and Lin *et al*. (2021). Varghese (2018) claims that traditionally, there are two ways to define wealth management: first, from the perspective of the provider, which includes the consultation process where clients' objectives and goals are recognised together with key organisations to match viable investment services and products addressing their wealth; and second, from the perspective of the client, where an expert(s) or institution is appointed to aid in drawing up a comprehensive financial plan to grow and preserve wealth. The definition of wealth management is the process of creating a customised plan for managing a client's assets (including liquid and non-liquid assets) within the constraints of a previously defined financial plan and carrying out that plan with varied levels of customer involvement (Dziawgo, 2021). Asset management, retirement planning, tax preparation, and financial and legal advising are all possible components of the wealth management service (Satutikirono and Sunitiyoso, 2021).

When an individual's combined balances from deposits, loans, and investments surpass a predetermined limit set by the banks, the banks tailor wealth management services to suit their demands (Lin *et al*., 2021). Based on their balances, banks divide high-net-worth clients into different levels and offer varied levels of specialised services (Santacruz, 2018). Banks classify a person's wealth based on their investable and liquid assets, omitting real estate and valuable collections (Guido *et al*., 2020). Wealth management and private banking services are primarily provided to wealthy customers, who can be categorised into either high-net-worth individuals (HNWI) with financial assets worth at

least $1 million USD or ultra-high-net-worth individuals (UHNWI) with financial assets worth at least $100 million USD (Dziawgo, 2021).

In the wealth management sector, the demographic is shifting in favour of a younger population that is also proportionally increasing the number of women and as a result, the wealth management sector's demographics have altered more broadly in favour of a younger population overall and more women than ever before (Beyer, 2017; Thompson, 2018; Varghese, 2018). According to Dziawgo (2021), the wealth management sector is undergoing a generational wealth transfer in favour of millennials and generation Z, causing it to adapt to its new client base, and one of the most important changes is to use widespread digital channels to do business and engage clients. Dziawgo (2021) further points to the fact that the future HNWIs and UHNWIs will be different from today's wealthy clientele in several ways, including financial literacy, general speed of life, rate of wealth accumulation, and outlook on sustainability. Consequently, wealth management companies will need to refocus to draw in and keep future generations of HNWI and UHNWI by offering a wide range of financial and non-financial services, building strong relationships with their clients, and providing services that are specifically tailored to their most sophisticated demands (Dziawgo, 2021).

According to Lin *et al.* (2021), maintaining the viability of wealth management requires delivering value for wealthy clients during a time of financial volatility. Financial performance, service excellence, customer confidence, and professionalism are crucial success elements for wealth management institutions (Ting, 2017; Gunardi *et al*., 2020). Investment and commercial banks strive to recruit and keep wealthy clients using a variety of strategies, including tailored services, the provision of key information, and digital communication channels (Santacruz, 2018; Lin *et al*., 2021). High-net-worth individuals significantly contribute to the fee and commission money produced by financial institutions; as a result, affluent consumers are attractive to these organisations (Santacruz, 2018; Lin *et al*., 2021). Due to their capacity to invest in stocks, bonds, or mutual funds, high-net-worth individuals are the main source of non-interest revenue for banks, creating low-risk fee and commission income (Ting, 2017; Vozková, 2018).

Due to technology and innovation, the financial services sector is undergoing a rapid change. This transition is referred to as FinTech, and the technology-driven change in wealth management is known as WealthTech, a subset of FinTech (Varghese, 2018). Growing in popularity, wealth technology appears to answer some of the major issues facing the entire wealth management sector (Dziawgo, 2021). WealthTech is defined as technological advancements and services developed to transform current investing options in wealth management and trading across all asset classes (Chishti and Puschmann, 2018).

Dziawgo (2021) highlights that the wealth management sector has been under a lot of strain and seems to be facing even greater difficulties than in the past due to not only internal industry developments, such as rapid digitalisation, considerable demand on cost management, ongoing generational wealth transfer, constantly changing customer profile, and threats from big tech entry, but also external concerns, such as political stability, natural occurrences (such as pandemics), or the threat of economic collapse. Subsequently, WealthTech has risen as a result and appears to address some of the major issues facing the entire wealth management sector (Dziawgo, 2021).

2.6 Theoretical background and conceptual model

Davis (1985) proposed the technology acceptance model (TAM) to assess users' internal perceptions regarding the acceptance of information technology as part of his investigation into the effects of technology adoption (Setiawan *et al*., 2021). The goal of the TAM model is to determine the adaptations that must be made to the new technology before it can be finally embraced by users (Setiawan *et al*., 2021). TAM to evaluate adoption in insurance customers' intents (Gidhagen and Persson, 2011), mobile banking (Akturan and Tezcan, 2012), and credit card adoption (Yoshino *et al*., 2020) are only a few examples of recent research that have combined TAM and technology adoption in a variety of sectors. According to Shaikh and Karjaluoto (2015), TAM is the best hypothesis for estimating how quickly new technologies would be adopted. Teo *et al*. (2011) also found TAM to be effective at forecasting and explaining this phenomenon. The TAM model was expanded by Hu *et al*. (2019) by including new elements, including user innovation and assistance from the government. Wang (2021) proposes using the

extended/modified TAM as a FinTech adoption model by adding variables to examine the influencing mechanisms involved in the acceptance of FinTech services to provide comprehensive predictors.

2.6.1 Technology acceptance model (TAM)

The 1986 theory of reasoned action (TRA) had shortcomings that the technology acceptance model (TAM) was designed to address (Hu *et al*., 2019). To understand the systematic acceptance of new technology, numerous models have been used (Wang, 2021). The Davis (1989) TAM is the analytical and representational model that is most frequently used (Wang, 2021). It was presented from a behavioural science perspective, integrating expectancy theory and self-efficacy theory, and is mostly used to research how people behave when using technology (Davis, 1985; Hu *et al*., 2019). Perceived usefulness and perceived ease of use are the two aspects that the TAM model differentiates into which have a substantial impact on the adoption of new technologies (Hu *et al*., 2019).

Wang (2021) suggests the TAM addresses the most important points in the theory of reasoned action (TRA) and the theory of planned behaviour (TPB), using the pertinent factors of user attitudes and behaviours to assess the acceptability of new technologies. According to Zhang *et al*. (2018) the TAM has become one of the most popular models in the field of information technology adoption research because it accomplishes an excellent job of explaining the differences in consumer propensity to adopt information technology and could be developed and specified in accordance with the analytical problem. Applying the latest information technology techniques to financial innovation is the foundation of FinTech services (Hu *et al*., 2019).

The TAM is a valuable and trustworthy research technique that offers superior measurement, uncomplicatedness, and experimental stability (Pavlou, 2003; Wang, 2021). TAM is frequently used to analyse the introduction of many emerging technologies, such as the application of radio frequency identification (RFID) domains (Cheng and Yeh, 2011) or how health-relevant information technologies should be applied (Shachak *et al*., 2019), because it may explain the primary variations in usage intentions compared to

alternative models (Schierz *et al*., 2010; Wang, 2021). The TAM is also used to determine the significance of new variables in determining the acceptance of a certain technology (Jeong *et al*., 2009; Wang, 2021).

Although Wang (2021) argued that the TAM is relatively simple and that pertinent explanatory variables should be added in the research of technology assessments, the TAM is very helpful in describing behavioural intention. Through the modification of the fundamental model and the addition of pertinent explanatory and mediating variables, numerous studies have successfully supported this claim (Setiawan *et al*., 2021). In this manner, the TAM's continuity in the field of study has been preserved (Rashed and Alajarmeh, 2015; Shachak *et al*., 2019).

The TAM provides a clearer knowledge of the challenges relating to user acceptance when the variables of related research arguments are incorporated (Jeong *et al*., 2009; Wong, 2021). The TAM and related theories were used by Wu *et al*. (2017) and Chopdar and Sivakumar (2019) to examine financial services and forecast individuals' attitudes. Priya *et al*. (2018) assessed how satisfied young Indian customers were with mobile financial services, and they found that the TAM had significant influences of user attitudes and on technology use intentions. In assessing customers' adoption of mobile wallet services, Singh *et al*. (2020a) also employed a TAM-based idea and discovered its relevance. FinTech application studies have also used the modified TAM framework (Setiawan *et al*., 2021; Wang, 2021). The extended TAM was used by Hu *et al*. (2019) to give comprehensive determinants and examine the influence mechanism underlying the adoption of FinTech services. Diana and Leon (2020) investigated the variables of continued intention of FinTech payments to learn more about what influences users' choices to utilise FinTech payment services.

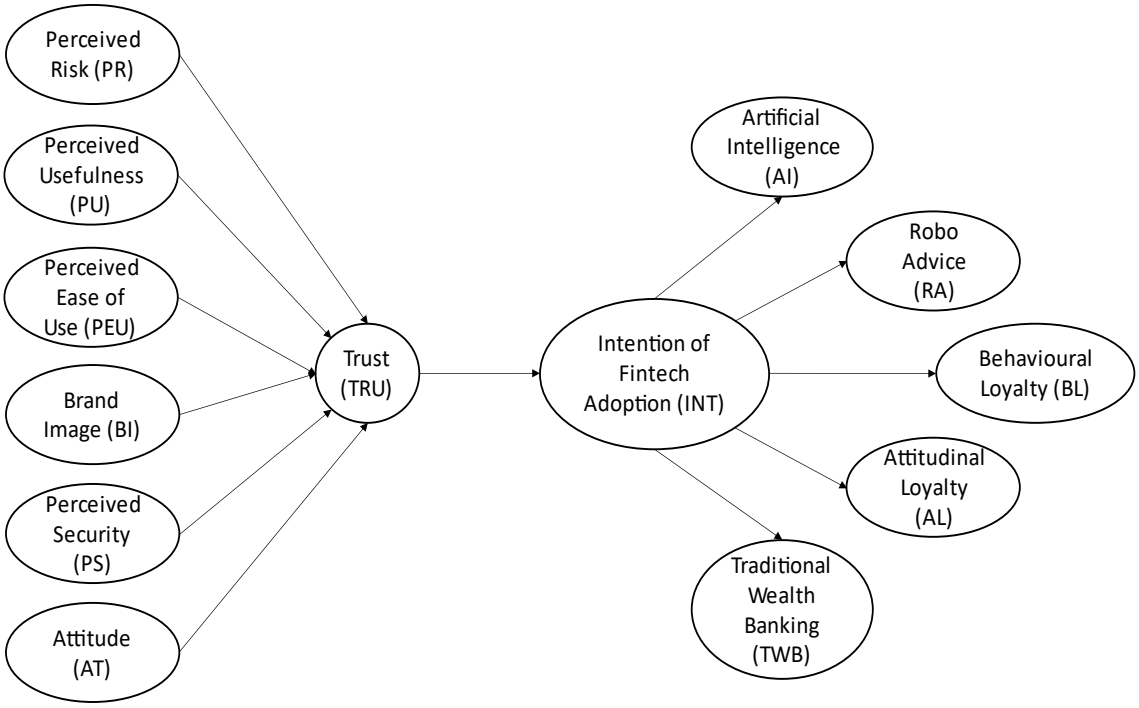
Perceived trust was one of the major elements that influenced consumer acceptability when researchers looked at the characteristics that determine user intention to use innovative financial services (Hemchand, 2016; Shaw and Kesharwani, 2019). According to Patil *et al*. (2020), perceived trust is a condition that allows customers to have a favourable financial service experience. Users can be persuaded to utilise FinTech

applications and may be more inclined to do so if they believe that these applications are trustworthy (Cao *et al*., 2018).

People who use FinTech applications still have control over how their personal information is used online and may be concerned that it will be misplaced or stolen (Kalinić *et al*., 2019). More significantly, research looking at the adoption of financial services applications have offered proof of this impact (Carranza *et al*., 2021). Despite their concerns about the inherent security risk in the technology, consumers are encouraged to accept and use FinTech because of its ease of use and economic benefits (Setiawan *et al*., 2021).

As a result, new research arguments are developed to propose advanced research contributions using the TAM as the basic research framework and by using explanatory factors that may be extremely relevant to a particular research topic (Wang, 2021). For the purposes of this research, it is argued that the modified TAM can be used to assess various variables that can be used to explain client perceptions of adopting FinTech applications in wealth banking at a major South African Bank. The modified conceptual TAM model is illustrated in Figure 2.1.

Figure 2.2: Conceptual model proposed for in this study.



2.7 Determinants of FinTech adoption

This study intends to investigate the elements that affect FinTech adoption and how clients feel about using these technologies within wealth management at a large South African bank. Perceived risk (PR), perceived usefulness (PU), perceived ease of use (PEU), brand image (BI), perceived security (PS), attitude (AT), trust (TRU), intention of Fintech adoption (INT), traditional wealth banking (TWB), robo-advice (RA), behavioural loyalty (BL), and attitudinal loyalty (AL) are all elements that influence FinTech adoption and the perceptions of clients to adopt FinTech applications in wealth banking at a major South African bank. According to Hu *et al*. (2019), these determining variables are taken from TAM, the most popular and effective explanator for Fintech uptake (Setiawan *et al*., 2021).

2.7.1 Perceived risk (PR)

According to Tang *et al.* (2020), who utilise the theory of perceived risk (PR) to analyse consumer behaviour, another factor that influences the adoption of new technologies is the degree of risk that consumers perceive. Risk aversion is a factor that greatly influences financial decisions, according to a study by Solarz and Swacha-Lech (2021). Research conducted by several scholars (Liébana-Cabanillas *et al.*, 2014; Sikdar and Makkad, 2015; Hu *et al*., 2019) suggests that PR is typically a lack of trust and the primary barrier that prevents the adoption of a new technology.

Another significant factor in the uptake of FinTech services is PR (Solarz and Swacha-Lech, 2021). According to Khedmatgozar and Shahnazi (2018), the degree of PR is the primary element that influences the adoption of e-services. Wu and Wang (2005) discovered a substantial correlation between PR and the desire to utilise mobile payments. According to Li *et al.* (2020), risk tolerance will boost the propensity to use mobile payments. Ryu (2018) conducted some interesting research on the effect of broadly recognised PR on the propensity to use FinTech. Financial, legal, security, and operational risks were the four main elements of PR that was examined. Ryu (2018) shows that the adoption of FinTech is significantly impacted by PR, with legal risk having the biggest negative effect (Solarz and Swacha-Lech, 2021). Similar research done by Tang *et al*. (2020), reveal that operational, financial, and legal risk all have a strong negative impact on a person's propensity to utilise FinTech.

According to Hu *et al*. (2019), PR may refer to both the financial risk (property damage brought on by consumers' worries about product yield rate or other carelessness) and privacy risk (the disclosure of personal data, transaction data, and other privacy information when consumers choose internet financial products) that users perceive when they choose FinTech services. Users' primary concern when utilising FinTech services, according to Bansal *et al*. (2010), is the exploitation of their personal information, which could have more serious repercussions (Hu *et al*., 2019). Based on these factors, customers' perceptions of the dangers associated with the use of FinTech can have a big impact on their desire to buy or use technology (Hu *et al*., 2019).

Big data, the internet of things, and cloud computing are typically used in FinTech services, therefore there are certain potential concerns for customers that use the service (Zhou *et al*., 2019). Additionally, when banks offer financial services to customers via technological means, they frequently require their private information to conduct a thorough evaluation of services, which will lower users' faith in bank services (de Oliveira Malaquias and Hwang, 2018). PR, according to Kim and Prabhakar (2000), would have an impact on users' trust (Hu *et al*., 2019).

2.7.2 Perceived usefulness (PU)

The perceived usefulness (PU) of a technology's potential to boost performance was defined by Davis in 1985 (Setiawan *et al*., 2021; Hu *et al*., 2021). PU refers to the decision made by users to use the service when they believe the use of FinTech will have a positive effect (Ryu, 2018). PU is determined by assessing the degree to which FinTech adoption can satisfy user demands, such as the ability of FinTech services to save time and benefit consumers (Setiawan *et al*., 2021).

Previous studies have demonstrated a positive correlation between PU and technology adoption (Jaruwachirathanakul and Fink, 2005; Singh *et al*., 2020b; Elhajjar and Ouaida, 2019). It has been demonstrated in several earlier research on the adoption of information technology, that PU can have a favourable effect on users' intentions (Featherman and Pavlou, 2003; Hong and Zhu, 2006; Barakat and Hussainey, 2013; Ng and Kwok, 2017; Hu *et al*., 2019). Chen and Barnes (2007) assert that the variable PU is crucial to forecast the adoption of new technologies (Setiawan *et al*., 2021). In their 2017 analysis of the factors that influence millennials' adoption of FinTech, Carlin *et al.* (2017), Olafsson, and Pagel found that life expectancy and financial literacy levels have a significant impact on the behavioural intentions of adopting FinTech (Setiawan *et al*., 2021).

2.7.3 Perceived ease of use (PEU)

Perceived ease of use (PEU) is related to how much personal effort is required to use new technology (Davis, 1985; Hu *et al*., 2019; Setiawan *et al*., 2021). PEU stands for the degree to which customers are at ease and try to understand how to use FinTech services (Hu *et al*., 2019). According to Setiawan *et al*. (2021), PEU was determined by the

effectiveness of using FinTech services, including the evaluation of the FinTech service interface and the simplicity of accessing FinTech services from different electronic devices. When users employ sophisticated information systems to carry out financial transactions via portable mobile devices, Riquelme and Rios (2010) suggest that perceived usefulness has a substantial impact on consumers' views and desire to adopt FinTech (Hu *et al*., 2019). FinTech services are more likely to be adopted by users if they perceive them to be practical, welcoming, and simple to use (Riquelme and Rios, 2010; Hu *et al*., 2019).

FinTech services offer bank clients better services and customer experiences, which can effectively compensate for the bank's business weakness to satisfy the individualised needs of consumers. As a result, FinTech's usability is the key factor to determine its adoption by users (Chau and Ngai, 2010; Abbad, 2013; Hu *et al*., 2019). Various researchers have found a strong link between attitudes toward adopting new technology and perceived ease of use in the field of banking (Akturan and Tezcan, 2012; Szopiński, 2016; Hu *et al*., 2019).

Kanchanatanee *et al*. (2014), Hu *et al.* (2019), and Niu *et al.* (2019) did earlier research that combined PEU with technology adoption. All these research findings demonstrate that PEU and technology adoption are significantly correlated, except for Kanchanatanee *et al*. (2014), who identified an indirect link between perceived ease of use and FinTech adoption (Setiawan *et al*., 2021). Taylor and Todd (1995) evaluated the TAM, TPB (theory of planned behaviour), and DTPB (decomposed theory of planned behaviour) models while participants used a computer resource hub and discovered that perceived usability had a favourable impact on perceived usefulness (Hu *et al*., 2019).

2.7.4 Brand image (BI)

Brand image (BI) is an intangible asset with economic value that distinguishes itself from unclear and distinctively recognised conceptions and produces a thorough reflection of beneficial effect on users (Hu *et al*., 2019). According to Lee and Chung (2009), brand preference is based on well-known brands, including firm reputation, and is used by users to choose FinTech companies based on a preferred brand image (Setiawan *et al*., 2021).

Consumer BI perceptions have been defined and viewed as a requirement for organisational trust in the context of the use of FinTech (Srivastava *et al*., 2010).

The provision of dependable services to customers is significantly influenced by the BI effect of service providers, and this effect helps users achieve their intended goals (Park *et al*., 2015). Higher BI among peers is one of the motivations for adopting the government administration information system (GAIS), according to Sang *et al*. (2010) and Hu *et al*. (2019). Various research that examine the adoption of FinTech have shown that BI significantly affects customers' opinions of quality (Riyadh *et al*., 2010; Setiawan *et al*., 2021), value (Shapiro *et al*., 2019), and satisfaction (Saleem and Rashid, 2011), and is integrated with brand equity (Brexendorf and Keller, 2017).

Users must submit a lot of sensitive personal data to receive FinTech services (Hu *et al*., 2019). A strong brand's reputation can increase consumer trust since it successfully lowers risk (Semuel and Lianto, 2014). BI is the assurance of products and services, allowing consumers to understand the business's focus on customer service, assisting businesses in forging strong relationships with consumers, increasing user recognition and satisfaction, and ultimately influencing consumer recognition and fostering trust (Siamagka *et al*., 2015). According to empirical research by Hu *et al*. (2019) and Caviggioli *et al*. (2020), BI is positively correlated with the adoption of FinTech.

2.7.5 Perceived security (PS)

Perceived Security (PS) can be defined as the extent to which a potential user believes that the system has a technological assurance for completing the transaction and disseminating sensitive data in a secure manner (Singh and Rajeev, 2021). The lack of PS, according to Casaló *et al.* (2007), prevents customers from utilising technological products because they lose trust in the transactions' security (Singh and Rajeev, 2021).

Lack of confidence in the security of the transactions, according to Gefen and Straub (2003), is one of the key reasons why people avoid engaging in online financial transactions, regardless of whether they use the internet (Singh and Rajeev, 2021). The level of client trust in online shopping is significantly impacted by PS and privacy (Chen and Barnes, 2007; Singh and Rajeev, 2021). Numerous studies have revealed that PS

has a favourable effect on behavioural intention to utilise FinTech services (INT) (Belanche-Gracia *et al*., 2015; Kumar *et al*., 2018; Patel and Patel, 2018; Singh and Rajeev, 2021).

2.7.6 Attitude (AT)

Schmidt and Krebs (1993) define attitude (AT) as a person's propensity to evaluate likes and dislikes toward an item, activity, person, institution, or event (Setiawan *et al*., 2021). According to Zhao *et al*. (2010), behaviour intention is the degree to which a person intends to execute a particular behaviour, while AT is described as the user's value opinions and personal characteristics connected to something (Hu *et al*., 2019). AT is determined by examining a person's comfort level, interest in, and belief that using FinTech services is a good decision (Setiawan *et al*., 2021). Prior research on attitudes and technology adoption has demonstrated a positive correlation between the two (Grabner-Kräuter and Faullant, 2008; Chuang *et al*., 2016; Hu *et al*., 2019; Setiawan *et al*., 2021).

According to the TAM study, plans to adopt new technology are predicated on having a good opinion regarding it (Ng and Kwok, 2017; Gupta and Arora, 2017). The classic TAM postulates that there is a strong positive relationship between consumers' views about a particular technology and their adoption intentions, which has been amply supported by studies in the banking sector (Hsu *et al.,* 2011; Aboelmaged and Gebba, 2013; Shaikh and Karjaluoto, 2015; Hu *et al*., 2019).

2.7.7 Trust (TRU)

In addition to PU and PEU, trust (TRU) has long been a focus of research on the adoption issue and is frequently utilised as another critical factor in user attraction (Hu *et al*., 2019). According to Hu *et al*. (2019), it is crucial to research how potential users' attitudes and willingness to adopt are affected by trust as well as the elements that can affect TRU in the context of FinTech. Researchers in the domains of sociology, management, organisational behaviour, and other disciplines have investigated the multidisciplinary idea of TRU (McKnight and Chervany, 2001; Lee and Turban, 2001; Yeon *et al*., 2019; Geraci *et al.,* 2021).

TRU indicates a person's perception of the security and privacy risks associated with using FinTech and comparable technologies (Tang *et al*., 2019). TRU was described by Liew *et al*. (2021) as a readiness to rely on a partner in whom one has self-confidence. User perception of an item's total usefulness is referred to as TRU (Hu *et al*., 2019). The most long-term obstacle to a financial system's performance is a lack of TRU (Gao and Waechter, 2017). TRU is the degree to which a person is prepared to assume that during online transactions, their expectations will be satisfied without posing any dangers. (Odusanya *et al*., 2020). Due to the uncertainty of FinTech transactions, TRU is generally more important to users of FinTech than it is for e-commerce or e-banking transactions (Liew *et al*., 2021).

TRU was revealed to be a key element of readiness to adopt by Chen *et al*. (2015), but they also discovered that perceived dangers (Tan and Lau, 2016) had a negative effect on TRU. When forecasting perception and intention to engage in a behaviour, TRU is a key aspect (Alalwan *et al*., 2017). The relationship between the intended good and the rewards is thought to be mediated by TRU (Tang *et al*., 2019). According to Hoang *et al*. (2021), users' TRU can influence behaviour, and that TRU is shaped by the users' innate traits. Researchers have discovered that TRU is directly related to BI and PR since FinTech adoption has some inherent hazards because of its intrinsic characteristics (Cavus *et al*., 2021).

In a variety of digital situations, including e-commerce, online banking, mobile banking, and mobile payments, TRU has a beneficial impact on behavioural intention (Ryu and Ko, 2020). TRU occurs when one party feels that another party can act in a way that will be beneficial to their interests and will refrain from acting in a way that might have a detrimental effect, according to Anderson and Narus (1990), who emphasise that TRU is only meaningful in uncertain situations (Liew *et al*., 2021). As a result, TRU will minimise the uncertainty in a scenario (Liew *et al*., 2021). According to Ooi and Tan (2016), TRU is the construct that has the greatest influence on behaviour intention and enhances the intention for online payments. Additionally, according to Mendoza-Tello *et al.* (2019), the intention to utilise increases with TRU.

Intent is the result of TRU, according to Odusanya *et al*. (2020), and TRU is therefore a prerequisite for intention (Liew *et al*., 2021). The key to improving connections between users and platforms is TRU, which is a crucial element in human interactions and a driving force behind human behaviour (Agag and El-Masry, 2017; Mendoza-Tello *et al*., 2019). Furthermore, fostering a culture of TRU helps to eliminate ambiguity (Ryu and Ko, 2020). The same applies to financial institutions leveraging FinTech platforms and mobile technology that are badly impacted by an absence of TRU (Odusanya *et al*., 2020). Although numerous research has examined how trust affects various digital business models, less emphasis has been paid to the theoretical and empirical validation in a FinTech platform environment (Ryu and Ko, 2020).

The user's awareness of bank brands and assessment of service risk will have a big impact on how much the public trust banks (Hu *et al*., 2019). Furthermore, a lot of academics have proven that when it comes to FinTech adoption, individuals' TRU in the services they receive is crucial (Hu *et al*., 2019). To put it another way, it is simpler to encourage behaviour when the user has a higher level of TRU in the service provider (Abu-Taieh *et al*., 2022). Al-Laheebi (2022) observed some evidence of a connection between the use of FinTech services and TRU in an indirect way.

2.7.8 Intention of FinTech adoption (INT)

According to Keil *et al*. (1995), intention is a conscious action or behavioural activity that is directed towards a certain purpose (Widiatmo, 2021). Intention to use (INT), according to Fishbein and Ajzen (1975), is the intensity of one's desire to engage in a particular behaviour (Widiatmo, 2021). The aim is one feature of the human psyche that gives the object more attention or pleasure and might motivate it to work toward a certain objective (Kusumah, 2017). The behavioural INT, according to research from Davis (1989), is the propensity to use technology in the future. The purpose to utilise is crucial in determining whether to accept or reject a person, thing, or proposal to perform labour (Widiatmo, 2021).

Various factors, such as technical research, have an impact on people's intentions (Ali *et al.*, 2015). An individual's desire to engage activities is the outcome of their behavioural

INT (Widiatmo, 2021). The INT to utilise a technology is predicted by multi-attribute models based on their evaluations of the system's usability and utility (Widiatmo, 2021). According to earlier research, PU and the INT to adopt FinTech are significantly and favourably correlated (Widiatmo, 2021),

The emergence of FinTech and its integration with established financial institutions have made it seem as though behavioural intention for usage has become a crucial indicator of the chance that individuals would use and adopt FinTech services (Te-Tai *et al*., 2014). INT of FinTech, according to Davis (1985), is a measure of the likelihood that a person will use the system (Singh and Rajeev, 2021). A user's behavioural intent is significantly impacted by the rate of technological innovation in the financial services industry compared to customer awareness (Singh *et al*., 2020b). Although, in practise, determining a person's intention to engage in an activity can be challenging (Singh and Rajeev, 2021). According to several studies, there is a big correlation between what you intend to do and what you really do (Dabholkar and Bagozzi, 2002; Vijayasarathy, 2004; Singh and Rajeev, 2021).

2.7.9 Loyalty

Nourallah (2020) provides a theoretical model that consider both attitudinal and behavioural loyalty and defines loyalty as a relationship between relative attitudes to items and repurchase behaviour. Attitudinal loyalty (AL) is a factor that precedes behavioural loyalty (BL), according to Jung and Shin (2019), who examined the concept of loyalty as a two-dimensional structure, leading to the emotional attachment to the brand manifesting as a recurrent purchase behaviour. The idea of loyalty should include both a favourable attitude of emotional attachment to the product as well as a behavioural element of repeat purchasing behaviour (Jung and Shin, 2019).

According to Jung and Shin (2019), BL, such as making recurrent purchases of a particular brand, is a result of AL. To establish a strong brand asset, it is important to increase customers' share of mind rather than market share, according to the perspective of customer-based brand assets (Keller, 2002; Bose *et al.,* 2022). According to a conceptualisation study of consumer loyalty, it contains attitudinal loyalty represented by

psychological preoccupation and behavioural intention, behavioural loyalty represented by repeating purchase patterns, and the composite stream represented by the actual activity (El-Manstry, 2016; Jung and Shin, 2019).

Customers can more readily transfer to another brand or company if their loyalty to one does not contain a positive attitude about the brand or company (Dandis *et al*., 2021). Therefore, in marketing and consumer behaviour studies, loyalty is generally regarded as a key outcome characteristic (Jung and Shin, 2019). Numerous loyalty studies demonstrate that attitude has a key role in BL (Slack *et al*., 2020). BL, such as frequent purchases and ongoing use, develops after psychological attachment to the products and services has been established (Jung and Shin, 2019).

Consequently, true loyalty encompasses both BL and the accompanying AL, the latter of which leads to a higher level of loyalty and commitment (Eelen *et al*., 2017). To examine the anticipated influence on repeat purchases, it is therefore thought that including both BL and AL is a more appropriate indicator of loyalty (Ali *et al.*, 2018).

2.8 Conclusion

The purpose of this chapter was to review the research that has been written about the elements that affect how FinTech applications are adopted on a personal level. The chapter also looked at the potential advantages of using FinTech applications and examined earlier studies pertaining to the adoption of FinTech applications. The adoption of FinTech applications' theoretical underpinnings were subsequently researched to create an understanding of the elements that might influence the uptake of FinTech applications within the wealth banking model of a large South African bank.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

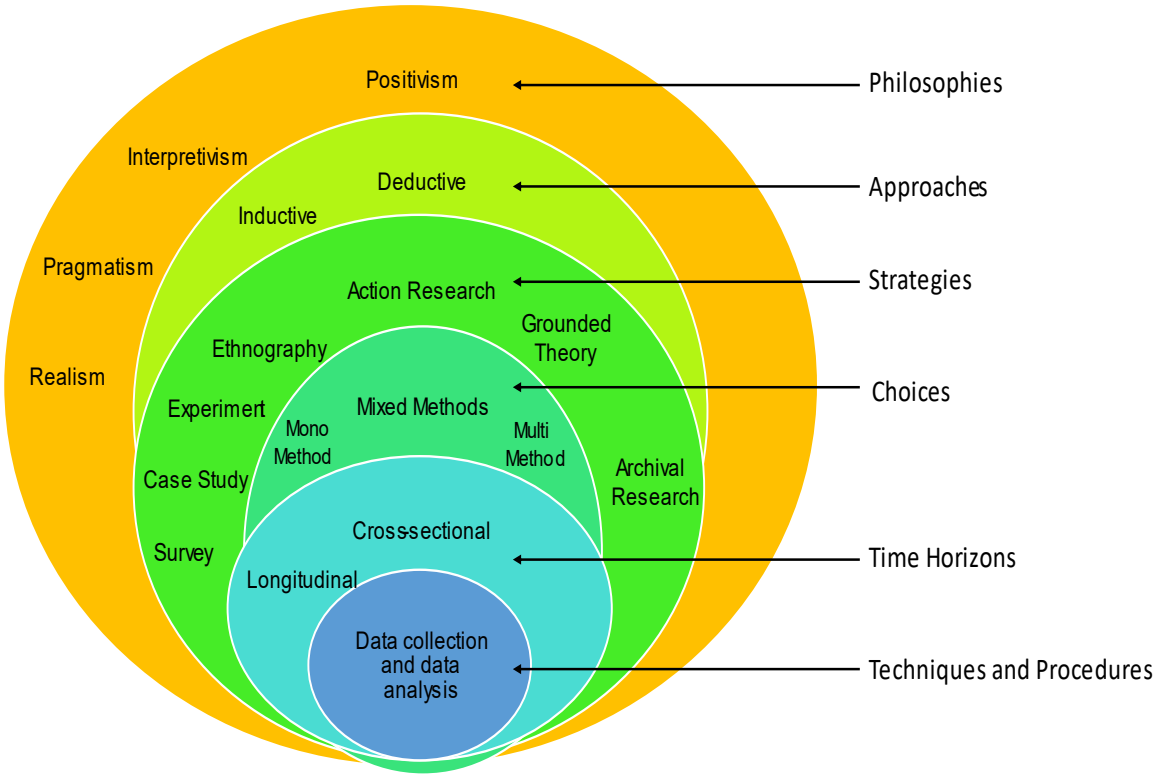
In this chapter, the study's research methodology is discussed. The chapter discusses the research theory and methodology used. Following that, it examines the research design and data collection techniques employed. The next section of the chapter focuses on the research tool employed, including how structures were operationalised. The demographic and sampling technique is discussed, followed by a discussion of the methodologies and data analysis. The chapter concludes by outlining the ethics practises used and the research's limitations before drawing a conclusion.

3.2 Research philosophy

There are several different frameworks and approaches for conducting research, and each has pros and cons. The research onion is amongst the most widely used and comprehensive research frameworks and is depicted below in Figure 3.1. It is commonly used in research and was utilised to guide the methodology of the study (Alturki, 2021).

When choosing an acceptable research methodology to use, the research onion gives a thorough picture and description of the most crucial steps that are required (Melnikovas, 2018). This framework is suitable for research since it has a strong transdisciplinary application (Alturki, 2021). The core components of the research onion include the study guiding philosophy, the approach to theory formation that will be taken, the methodological choice that will be made, the strategy that will be employed, the time frame, and any practices and protocols that will be used in relation to data collecting and analysis (Saunders *et al*., 2019).

Figure 3.1: Illustration of the research onion as a type of research framework.



Source: Adapted from Alturki (2021).

Understanding the research paradigm or philosophy that underpins this study is essential if one is to properly comprehend the methodology used to carry out the research. This paradigm was initially proposed by Kuhn in 1962 and referred to the theoretical way that thought occurred. In the end, a research paradigm can be thought of as the theoretical lens through which a person perceives the world; it is founded on their thoughts, which then direct how they perceive the world around them (Mackenzie and Knipe, 2006; Kivunja and Kuyini, 2017).

The research process begins with the research philosophy, according to Saunders *et al*. (2009, 2019). The positivist paradigm serves as the philosophical foundation for this study. The natural sciences are said to embrace positivism, with a focus on the identification of universal rules (Atiq, 2021). It is a quantitative approach of analysis that allows for the study of a wide range of data types while upholding objectivity. Positivists maintain an impartial perspective when conducting research (Saunders *et al*., 2019).

Positivism is a philosophy that is based on the systematic, and scientific analysis of social facts (Sekaran and Bougie, 2016). By developing a hypothesis that can be tested, positivist research seeks to understand what individuals prefer, what motivates them, and what actions they take. In positivist research, this is accomplished through identifying broad, recurrent patterns (Lin, 1998). Positivist research seeks to investigate phenomena in a deductive method such that one-way fundamental linkages can be discovered, allowing for generalisability in situational prediction (Orlikowski and Baroudi, 1991). Deductive theory development was used in this investigation. To give direction as to what may be the most likely outcomes of a study, hypotheses were established from theory. The goal of positivist research is to test or validate a given hypothesis. This is accomplished by investigating an existing hypothesis and putting it to the test using quantitative techniques (Bhattacherjee, 2012).

This study employed a quantitative approach. In quantitative research, a hypothesis is tested to determine whether it can explain a certain phenomenon (Bhattacherjee, 2012). When looking into quantitative research, it offers a better level of precision, which in turn paints a much clearer image of the topic under study. To do this, several statistical techniques are used to analyse the relationship between the variables to derive insights that help to explain what is happening (Saunders *et al*., 2019). Because qualitative research evaluates a particular situation, its results are less generalisable (Bhattacherjee, 2012; Saunders *et al*., 2019). Because the focus of this research was the widespread adoption of FinTech applications in wealth banking within a large South African bank's wealth management customer base, a qualitative component was not added. Bhattacherjee (2012) asserts that quantitative research makes a study more generalisable to a larger population.

3.3 Research design

The strategy for linking conceptual research issues to relevant and practical empirical research is known as research design (Asenahabi, 2019). It is a question that gives guidance about how to conduct research techniques (Creswell and Creswell, 2017). The importance of coherence in research design is emphasised by Saunders *et al*. (2019), who also depict the research process as an interactive continuum. A plan for interpreting

the analysed data must be included in the research design to produce acceptable results and conclusions that will allow the researcher to make suggestions or implications based on the study (Asenahabi, 2019). Asenahabi (2019) divides research design into three categories: mixed method, qualitative, and quantitative research design.

The systematic and empirical investigation of phenomena through the application of statistics, mathematics, and numerical data processing is the focus of quantitative research (Younus and Zaidan, 2022). Data selection and numerical analysis are common practices in quantitative research (Singh, 2006; Goertz and Mahoney, 2012; Younus and Zaidan, 2022). The method and measurements used in quantitative research design result in quantifiable and definable values (Kothari, 2004; Asenahabi, 2019). Quantitative research analyses indicate relationships between variables that are numerically measured, statistically analysed, and frequently include controls to assure the validity of the findings, such as in an experimental design (Saunders *et al*., 2019). This study adopted a quantitative research design.

Shields and Whetsell (2017) remark that the literature recognises three fundamental sorts of research purposes: exploration, explanation, and description (Casula *et al*., 2021). Focusing primarily on causes, descriptive research answers the question ‘what’ (Shields and Tajalli 2006; Strydom 2013; Casula *et al*., 2021). Casula *et al*., 2021 indicate that between exploration and explanation, descriptive research is in the middle of the knowledge continuum. Typically, a deductive method is used in quantitative research, with the goal of using facts to test hypothesis (Saunders *et al*., 2019), therefore a descriptive research type will be adopted for this study.

In general, positivism is linked to quantitative research, especially when planned and highly structured data collection approaches are applied (Saunders *et al*., 2019). One of the most common research paradigms, according to Bryman (2012), is positivism, which holds that only knowledge that is confirmed by one's senses qualifies as knowledge (Dawadi *et al*., 2021). It emphasises acquiring objectively verifiable information using quantitative methods, following the objective research approach (Dawadi *et al*., 2021).

Positivists distinguish between normative and scientific claims, and they hold that only the former are truly within the purview of the scientist because they can be verified by the senses (Bryman, 2012; Dawadi *et al*., 2021). Positive principles typically serve as the direction for quantitative researchers, and they use quantitative techniques to obtain objective results for their research (Dawadi *et al*., 2021). In the past, positivistic or quantitative research designs served as the dominant research methodologies (Dawadi *et al*., 2021). The positivist approach was chosen for this study because of its analytical and interpretive features.

The approach used in this study was a cross-sectional survey where structured questionnaires were used to collect data from respondents in a uniform and organised manner (Bhattacherjee, 2012). The client base of a major South African bank's wealth management division was surveyed. The survey, set out in the questionnaire design, considered the variables that affect how each person adopts FinTech applications for wealth management and how they affect the client relationship banking model.

3.4 Research strategy

A strategy is a methodological relationship between a researcher's philosophy and the methods they ultimately choose to gather and analyse data as part of a plan for how they will approach answering their research question and achieving a particular research objective (Saunders *et al*., 2019). Since survey research is typically used in quantitative research, it is typically carried out using questionnaires, organised interviews, or potentially structured observation. Subsequently, quantitative research is mostly connected with experimental and survey research methodologies (Saunders *et al*., 2019).

According to Mugenda and Mugenda (2003), the survey method is the process of gathering information from a sample group to assess the group's state at the time with respect to one or more factors (Asenahabi *et al*., 2019). It focuses on the current and tries to ascertain how the phenomenon under investigation is doing (Singh, 2006; Asenahabi *et al*., 2019). This approach is useful when a researcher is examining multiple variables with a sizable sample size and meticulous statistical analysis (Sjoberg *et al*., 2007; Asenahabi *et al*., 2019).

According to Asenahabi *et al*. (2019), observations made for survey research can either be cross-sectional (done at one or more points in time) or longitudinal (done at several periods across time). In contrast to longitudinal surveys, which concentrate on trend analysis using cohort and panel designs, cross sectional research is descriptive, exploratory, and explanatory (Jongbo, 2014). To generalise the sampled data to a population, it either conducts structured interviews or collects data using questionnaires (Fowler and Cosenza, 2009; Asenahabi *et al*., 2019). There are numerous ways to administer surveys, but the most common ones are in-person, over the phone, online, and via mail (Asenahabi *et al*., 2019).

Using questionnaires has several benefits and drawbacks (McLeod, 2018). The fact that questionnaires make it possible to obtain a lot of data quickly is a benefit. Additionally, a standardised questionnaire decreases response bias. Furthermore, questionnaires might be substantially more economical when compared to alternative methods. According to Asenahabi *et al*. (2019), one of the biggest flaws in survey design is the inability to control for sample bias, which can seriously impair the generalisability of the results to the population. Another is the survey's reliance on respondents' cooperation, which over time affects how reliable the results are. Wabwoba and Ikoha (2011) assert that it is difficult to discover information that the respondents are unaware of, and that information that is secretive or personal is likely to be false (Asenahabi *et al*., 2019). According to McLeod (2018) a drawback of surveys is that respondents could exaggerate or skew responses to present a favourable view of themselves (social desirability bias).

For this study, the survey research method will be used. A descriptive cross-sectional survey in the form of a questionnaire survey strategy will be used together with a seven-point Likert-type scale to ask participants to rank their preferences, with 1 representing ‘strongly disagree’ and 7 representing ‘strongly agree’. Data collection is more trustworthy when using a survey approach rather than merely having people make observations at random (Bhattacherjee, 2012). Given that the overall goal of this study is to collect quantifiable data that can be processed through a sophisticated model that can provide findings regarding the relationship between individual factors and end user adoption of FinTech applications and Wealth banking, moderated by attitude, this research paper

primarily aims to provide answers to the questions ‘what’ and ‘how’. Consequently, the survey research strategy is selected as the most appropriate.

3.5 Time horizon

The research time frame is defined by Melnikovas (2018) as cross-sectional or a short-term study, involving data collection at a given point in time, or longitudinal, comprising data collection repeated over a long period of time to compare data. To describe the occurrence of a phenomenon at a particular moment, cross-sectional studies frequently use a survey approach that is completed by a single respondent (Saunders *et al*., 2019). When a problem at a certain moment needs to be addressed, cross-sectional research is done to provide an answer or find a solution (Rindfleisch *et al*., 2008; Sahay, 2016).

The purpose of this study is to empirically investigate the factors influencing user adoption of FinTech applications in wealth banking at a major South African bank. A survey strategy will be used to collect data once, through the employment of a structured framework in the form of a questionnaire; therefore, this study is cross-sectional.

3.6 Sampling strategy

All individuals or objects that one desires to understand collectively are referred to as the population, whereas sampling is the act of choosing a subset of the population for study (Rahi, 2017; Rahman *et al*., 2022). The population or subgroup that has been identified can be measured by the information gathered using a pre-designed questionnaire (Rashid *et al*., 2021). It is suggested by Rashid, *et al*. (2021) that a sample can represent the entire population. Sampling is advantageous since it greatly reduces expenses and labour required to research the entire population (Rahi, 2017; Rashid *et al*., 2021).

According to Rahi (2017), there are several benefits to sampling, including faster data collection, more accurate results, and it is cost effectiveness. Choosing a sample technique relies on the study's purpose and may have both practical and theoretical ramifications (Rashid *et al*., 2021). There are two general types of sampling methods: probability sampling and non-probability sampling (Hashmi and Mohd, 2020; Das *et al*., 2021).

Probability sampling is a sampling technique where each unit has an equal chance of being chosen (Hashmi *et al*., 2021), while non-probability sampling is a sampling method in which it is unknown or uncertain how likely it is that each unit will be chosen (Rashid *et al*., 2021). Stratton (2021) affirms a variety of non-probability sampling techniques, the most popular of which are convenience sampling (participants choose whether they want to participate after hearing about the study from the researcher), snowball recruiting (the researcher receives referrals for participants), and purposive sampling (direct selection of participants is made by the researcher).

Purposive sampling is also referred to as a subjective or judgemental sample method, according to Etikan and Babtope (2019). Purposive sampling is a method for non-probability sampling based on a researcher choosing the necessary sample from a population for a study based on their knowledge and insight (Stratton, 2021). Purposive sampling has several benefits, according to Rahi (2017), including being cost and time efficient and making it simpler to focus on specific topics. According to Etikan and Babtope (2019), one of the drawbacks of purposive sampling is that it increases sample selection bias because the researcher is more likely to make an arbitrary decision. As a result, it is not necessarily trustworthy, and the study's findings might not apply to the entire population (Rahi, 2017; Etikan and Babtope, 2019).

A sample, according to Rahman *et al*. (2022), is a portion of all the data that has been obtained through surveys or in-depth observations in quantitative data analysis. Consequently, it can be viewed as a more compact unit of measurement that captures the actual data. As a result, it might be challenging for quantitative researchers to choose the responders out of a population. Since the sample frame of all FinTech application users in the wealth management client base was unknown, non-probability techniques were necessary. Non-probability sampling with a purposive sampling strategy were used.

Sample size has been the subject of extensive debate in academic literature (Rahi, 2017). Rashid, *et al*. (2021) claim that selecting the appropriate sample size is still difficult for researchers because statistical approaches are very sensitive to sample size and need to be chosen carefully. Rashid *et al*. (2021) affirm when considering sample size for analysis, the following heuristics are suggested: the rule of thumb (Krejcie and Morgan,

1970); further, a sample size of 50 is very poor, 100 is poor, 200 is realistic, 300 is good, 500 is very good, and 1000 is excellent (Comrey and Lee, 2013). Additionally, Hair *et al*. (2010) and Afthanorhan (2013) emphasise the critical need for a minimum of 200 samples for analysis (Rashid, *et al*., 2021).

The population that will be analysed will consist of the 5 431-client base of wealth clients as of 31 October 2022 and according to the decision model from Krejce and Morgan (Sekaran and Bougie, 2016) the recommended sample size should be 357. However, the researcher included all the clients within the wealth client base during the research.

3.7 Questionnaire design

Structured interviews and questionnaires are a common method of gathering survey data across many fields (Ambele and Richard, 2018). The primary data collection tool in survey research, however, has been questionnaires (Rossi *et al*., 2013; Moser and Kalton, 2017). A questionnaire by default asks an informant a series of questions, and the informant's answers supply the researcher with data (Bradburn *et al*., 2004; Neuman, 2016; Ambele and Richard, 2018). Due to the methodical and controlled way that questions are created to elicit answers to questions, questionnaires have emerged as one of the most significant and well-liked research instruments in a variety of research subjects (Litosseliti, 2018; McDonough, 2017).

In questionnaire design, in addition to the proper wording of the question items (Bradburn *et al*., 2004; O'Brien and McCay-Peet, 2017), a sizable portion of its success depends on how the questionnaire is utilised to collect data from the informants (Litosseliti, 2018; Ambele and Richard, 2018). Prior to creating a survey or questionnaire, the researcher must choose how to get the necessary data (Taherdoost, 2019). Scaling is the measuring subfield that entails building an instrument in this sense. One of the most used measurement tools in subjects like sociology, psychology, information technology, politics, economics, and other fields is the attitude and rating scale (Taherdoost, 2019). According to Krosnick and Fabrigar (1997), research methodology studies have not offered any concrete advice on how to choose the right rating scale for research projects (Taherdoost, 2019).

Likert-type scales are frequently used in survey questionnaires to evaluate observations and attitudes (Buttle, 1996; Rahi, 2017; Taherdoost, 2019). These rating systems, which can feature five or seven response categories, each have advantages and disadvantages (Rahi, 2017). A promoter of the five-point Likert scale claims that it was employed to improve response rates and quality, with a particular focus on lowering respondent irritability (Rahi, 2017). According to the literature, a five-point scale is easily understood by respondents and helps them express their opinions more effectively (Cox and Isham, 1980; Rahi, 2017). Symonds (1924) was the first to suggest that the seven-type Likert scale is the best way to maximise dependability (Rahi, 2017). The seven-point Likert scale seems to be more appropriate for electronic surveys (Finstad, 2010; Rahi, 2017).

In this study, primary data will be gathered and compiled using an online distribution of questionnaires. There are different sections in the questionnaire; respondents' biographical data, including age, race, gender, employment status, and education, will be collected in Section A. Demographics have been aligned according to the population that will take part in the study and the demographic variables asked are necessary to allow for more in-depth statistical analysis. Section B aims to gather data on the individual dimensions of perceived risk, perceived usefulness, perceived ease of use, brand image, perceived security, attitude, trust, intention to adopt fintech, artificial intelligence, robo-advice, behavioural loyalty, attitudinal loyalty, and traditional wealth banking that affect how clients perceive adopting FinTech applications in wealth banking at a major South African bank. Respondents can select the statement that best fits their preferences using the seven-point Likert scale.

The questionnaire with specific reference to age and income has been equipped with a drop-down button for easy selection from the respondents. The POPIA agreement with the information leaflet as well as approval from the bank to conduct research has been attached to the questionnaire. Contact details was obtained through selecting clients within the client base with marketing consent 'yes' indicators. These clients are POPIA compliant within the bank.

The scales and instruments used, as well as the sources that the remarks were taken from, are listed in Table 3.1 below. The questionnaire is included as Annexure A.

Table 3.1: Construct items and respective statements used in questionnaire.

Construct items and respective statements		
Construct	**Statement**	**Author(s)/Sources**
Perceived risk (PR)	Using FinTech services will expose my personal information. FinTech services are risky overall. When I conduct my banking, I like to speak with someone at the financial institution itself. I prefer to interact with a human when I do big financial transactions.	Hu *et al.* (2019) Slazus (2022)
Perceived usefulness (PU)	Using FinTech does meet my service needs. FinTech services does improve efficiency. Overall, FinTech services are useful to me. I believe there will be no time or geographic restrictions when using FinTech services, which is advantageous to me.	Hu *et al*. (2019) Khatri *et al.* (2020)
Perceived ease of use (PEU)	It is easy to use FinTech services. It is easy to have the equipment to use FinTech services (cell phone, APP, WIFI, etc). I believe using a FinTech service makes transactions incredibly simple. I believe learning about FinTech services can be done quickly.	Hu *et al*. (2019) Khatri *et al*. (2020)
Brand image (BI)	The wealth service providers do deliver quality products and services. I prefer to use FinTech services offered by well-known Wealth Service Providers. I have confidence in FinTech Service provided by Wealth Service Providers. In general, FinTech has a positive reputation.	Hu *et al*. (2019) Khatri *et al*. (2020) Nathan *et al*. (2022) Hoang *et al*. (2021)

Perceived security (PS)	I feel secure sending sensitive information across FinTech applications. Giving the FinTech applications my most private information makes me feel completely secure. Sensitive information transfer securely using financial applications overall. I believe that FinTech applications are reliable enough to complete a transaction.	Singh and Rajeev (2021) Won-Jun (2018)
Attitude (AT)	Utilising FinTech services is a smart move. FinTech services are of interest to me. Utilising FinTech Services is something I support. Using FinTech services give me a feeling of discovery.	Hu *et al*. (2019) Khatri *et al*. (2020) Hoang *et al*. (2021)
Trust (TRU)	I am confident that the FinTech Service's transaction system is secure. I think using FinTech services keeps money secure. FinTech services are generally reliable. I feel personal privacy is maintained when utilising FinTech services.	Hu *et al*. (2019) Khatri *et al*. (2020) Nathan *et al*. (2022)
Intention of FinTech adoption (INT)	I am willing to keep using FinTech services if I have already done so. For information connectivity, I wish to employ FinTech services. I will tell my friends about FinTech services. The services offered by FinTech services are something I want to employ.	Hu *et al*. (2019) Khatri *et al*. (2020) Nathan *et al*. (2022)

Artificial intelligence (AI)	The adoption of AI technology will improve our quality of life. I want to give the products and services utilising AI technology a try. I believe that intelligent products are generally reliable.	Cheng *et al*. (2019)
Robo advice (RA)	I expect a simple and convenient experience from the Robo-advisor. Robo-advisor investment management should provide a better return on investment than a financial professional. A robo-advisor would be more practical for me to utilise than a financial professional when assessing financial assets (cash, bonds, stocks and bank deposits). I have more faith in a robo-advisor's data correctness than I do in advice from a financial professional.	Cheng *et al.* (2019) Mesbah *et al*. (2019)
Behavioural loyalty (BL)	I am a loyal customer of my wealth service provider. I recommend my wealth service provider to others in a favourable manner. I shared a recommendation of my wealth service provider to somebody who asked for my view.	Ho and Wong (2022)

Attitudinal loyalty (AL)	I do not think utilising other wealth service providers are more advantageous than using my wealth service provider. I think my wealth service provider is currently offering the best offers (investments, banking services, stockbroking and portfolio management, wealth structuring and advisory services). I favour my wealth service provider services over those provided by other wealth service providers. I frequently discover that my wealth service provider is superior to other wealth service providers.	Ho and Wong (2022)
Traditional wealth banking (TWB)	Using traditional wealth banking services has a lot of benefits. Traditional wealth banking services produce better results than conventional financial services do. I am going to keep investing with the help of traditional wealth banking services. My experience handling personal finances has improved because of using traditional wealth banking services.	Kang *et al.* (2022)

Sources are provided within the table.

3.8 Data collection method

Data gathering is a sensitive matter in research investigations, so it must be done properly, using the proper methods and sources (Heath *et al*., 2018; Mkandawire, 2019). Mwita (2022) defines data collection as a systematic method of acquiring information required to address a specific research problem, offer a basis for accepting or rejecting research hypotheses, or to provide answers to research questions. This implies that if done improperly, it may not adequately address research issues and, eventually, fail to address research problems (Mwita, 2022). Choosing a strategy or tool for data collection

is therefore one of the most crucial decisions that every researcher must make (Heath *et al*., 2018).

The means, instruments, or procedures that researchers employ to gather data for their individual research topics are known as data collecting methods (Mwita, 2022). Although data gathering is almost generally done in the field, there are occasional instances where it is done in other locations, like libraries, historical archives, and other online sources (DeVaney, 2016). Numerous techniques exist for gathering data, but not all of them are suitable in all situations (Busetto *et al*., 2020; Hennink *et al.,* 2019). Each study methodology has advantages and disadvantages (Mwita, 2022). Failure to select the appropriate methodologies could have an impact on the entire research effort and reduce its effectiveness (Mwita, 2022). Invalid study findings and incorrect conclusions may result from using improper data collection techniques.

This study used a quantitative research design with the survey method in an online setting to gather primary data. Non-probability sampling with a purposive sampling strategy was used. A cross-sectional survey with structured questionnaires was used to collect data from respondents. Quantitative data analysis took place by way of coding the responses, data entry into a database, edit the data if applicable, data transformation, frequencies of subcategories occurring, and measuring of central tendency and distribution of the data were described using descriptive and inferential statistics. Data was first cleaned up and coded, putting it into a numerical representation.

The population that was analysed consisted of the 5 431-client base of wealth clients as of 31 October 2022, and the data was gathered in December 2022. According to the decision model from Krejce and Morgan (Sekaran and Bougie, 2016), the recommended sample size to be obtained should be 357. The respondents are clients within the wealth management database of a large South African bank. After approval to conduct research has been obtained from the bank, clients within the database with a ‘yes’ indicated for marketing consent, was identified and recruited by means of completing an anonymous electronic survey voluntary. However, all the clients within the wealth client base were included during the research.

Four inclusion criteria had to be met by respondents to qualify to take part in the study:

- Be a part of a large South African bank's client base for wealth management.
- Granted permission to receive marketing through e-mail.
- The wealth management division of a large South African bank gave its approval so that email surveys can be delivered to their clientele of affluent individuals.
- The University of the Free State gives ethical clearance to proceed with research.

3.9 Data analysis techniques

According to Widiono (2019), the descriptive analysis approach is a statistic used to evaluate data by summarising or describing data that has been acquired as it is without aiming to draw generalisations or general inferences. In contrast, the descriptive approach, as defined by Nazir (2003), is a technique for assessing the status of a class of events, an object, a condition, or a group of people (Widiono, 2019). This study will utilise a descriptive analysis approach.

3.10 Ethical considerations

Research ethics refers to an area that encompasses all pertinent debates, highlighting the significance of research attitudes in the age of modern science and technology and the urgent need for true and responsible research (Lee, 2021). Ethics and integrity continue to operate as a foundation for good and healthy research practices despite the expanding research landscape (Soehartono *et al*., 2022). As more nations commit to sponsoring research and as more researchers add to the body of knowledge, it is anticipated that the necessity and shared obligation of all stakeholders to follow norms and values will only increase (Titus *et al*., 2008; Soehartono *et al*., 2022).

To conduct desirable and responsible research with truthful, accurate, and sincere attitudes, researchers must adhere to certain ethical standards or behaviours (Lee, 2021). Research integrity is the adherence to ethical principles that results in trust and confidence in the presented techniques and results (Soehartono *et al*., 2022), where research ethics establishes the normative framework of permissible conduct in research (Resnik, 2020). Both are beneficial in promoting ethical scientific behaviour (Bird, 2006;

Braun *et al*., 2020). Absence of either component may have detrimental effects that could reduce public confidence in research (Soehartono *et al*., 2022).

The following ethical aspects are applicable to this research study.

3.10.1 Avoidance of harm

Participants must be made aware that they can stop with the questionnaire at any time without suffering negative consequences (Saunders *et al*., 2019). The main rule was to avoid harm, and each person was treated with respect and dignity. To achieve the goals of this study, the researcher ensured that the respondents were not harmed during the research study.

3.10.2 Anonymity and confidentiality

Anonymity and confidentiality are further ethical principles that must be considered; when someone responds to a study, their identity must always be kept confidential (Chatterjee *et al*., 2015). The researcher confirmed that the confidentiality and anonymity of the respondents were valued and upheld.

3.10.3 Respect

Whatever role respect for intellectual property may play in research, it is important to recognise ethical issues. Regardless of a person’s age, race, sexual orientation, or political or religious beliefs, they should be recognised for their professional job. According to the concept of social responsibility, an individual or organisation has a duty to behave in the society's best interests (Navalta *et al*., 2019). During this study, the researcher respected the views of the respondents, and the respondents respected the views of the researcher.

3.10.4 Loss of work time

Time loss is a potential risk, although the researcher encouraged participants to complete the questionnaire after work hours or at a time convenient or suited to them given the participants' schedules and time restrictions.

3.10.5 Objectivity

Objectivity refers to the readiness and capacity to objectively assess the evidence. Objective research is a study that has no bias; this is a crucial prerequisite for sound research (Nahrin, 2015).

3.10.6 Voluntary participation

Buchanan and Warwick (2021) assert that it is imperative to make it clear to participants that their participation in a study is entirely voluntary and harmless and that they are under no obligation to provide a response. A participant must be made aware that they can withdraw at any time without suffering negative consequences (Bhattacherjee, 2012; Saunders *et al*., 2019). Before a participant proceed to complete the questionnaire, each participant who is willing to take part in the study must be provided an informed consent form. This form states that the participant may withdraw from the activity at any moment without penalty (Saunders *et al*., 2019). All the respondents who took part in this research study did so willingly. Their right to leave the study, if their rights are infringed, will be explained to them by the researcher.

3.10.7 Reputational harm

The researcher will make sure that the questionnaire is designed so that it won't damage the reputation of the bank or the respondents who are taking part in the study.

3.10.8 Approval and consent

The principle of disclosure should be considered; before participants in a study are permitted to respond, they must be made aware of the characteristics or the main objective of the research study. This provides the participants the choice to decide whether they wish to take part in the study (Buchanan and Warwick, 2021). Participants in this study were informed of their rights, the goals of the study, how the research would be conducted, and that they would need to sign a consent form if they wished to take part in the research study (Saunders *et al*., 2019).

3.11 Conclusion

The study's research technique was examined in this chapter. The research design, data collection technique, research instrument, and explanation of the sample population were covered in detail in this chapter. The data analysis issues and any ethical issues pertaining to the study's conduct, were discussed. The research study's findings will be covered in full in the following chapter and the outcomes of the data analysis will be provided.

CHAPTER 4
DATA ANALYSIS RESULTS

4.1 Introduction

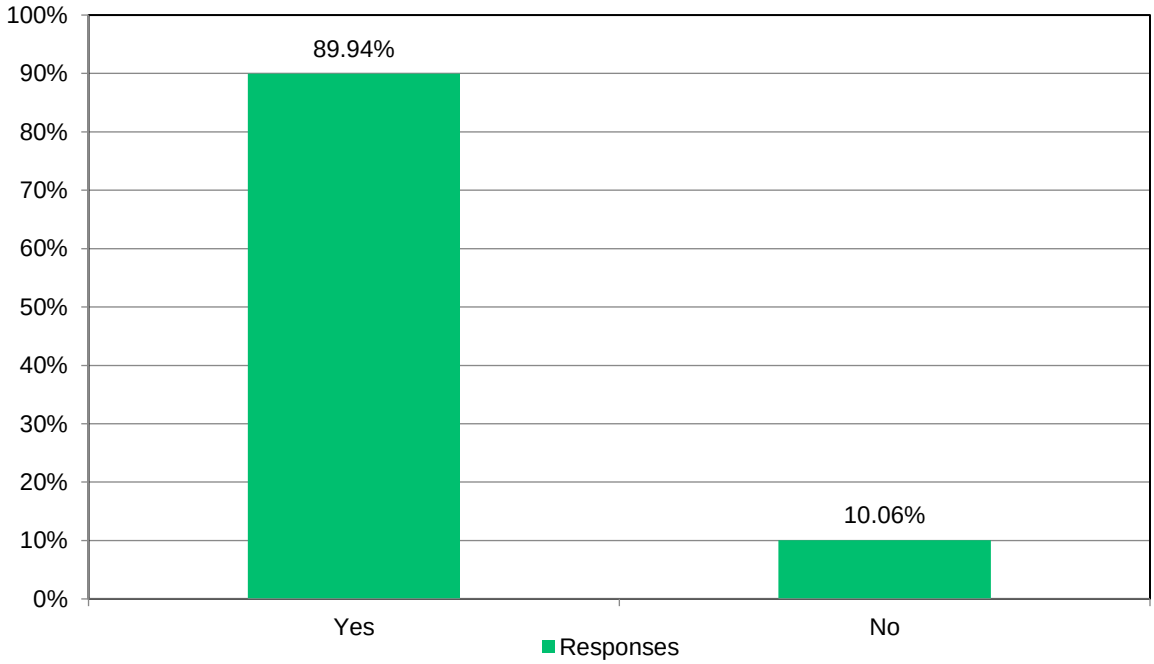
The research design and methodology were covered in detail in the previous chapter. During the distribution of the surveys, the study's ethical considerations was also covered in detail and adhered to. A large South African bank's wealth clients answered 507 questionnaires, which are further discussed in this chapter along with the data analysis and findings.

This study's data were collected and compiled utilising questionnaires that were distributed online. The data is organised into two primary, section A focusses on biographical factors, whereas section B seeks information on various factors that influence how clients perceive using FinTech applications in wealth banking at a large South African bank. The information is presented by means of descriptive analysis. Graphs and tables are used to present the data, which is then thoroughly analysed in the explanation that follows.

4.2 Participation rate

Questionnaires were distributed to respondents using an online survey enabled by Survey Monkey. The population that was analysed consisted of the 5 431-client base of wealth clients within a large South African Bank. According to the decision model from Krejce and Morgan (Sekaran and Bougie, 2016) the recommended sample size should be 357. A sample size (N) of 507 responses was obtained, which is sufficient for this study. Of the 507 responses, 456 respondents agreed and completed the questionnaire and 51 of the respondents declined the invitation to complete the survey. In essence 456 responses will be used as the sample size (N) for the data analysis. Figure 4.1 is a graphical illustration of the response rate of 507, where 456 respondents or 89.94% agreed and completed the questionnaire and 51 or 10.06% of the respondents declined to do the survey.

Figure 4.1: Response rate of the sample.



4.3 Analysis and interpretation of biographical data

This section aims to provide insight on the respondents by presenting biographical data. Biographical data includes sex, age, race, gender, employment status, education, earnings, province of residence, primary banking relationship, primary wealth service provider, wealth service offerings, and if the wealth and investment manager are known.

4.3.1 Sex

Figure 4.2 is a graphical illustration of the sex distribution of the respondents, where 72.37% indicated they were male and 27.63% indicated they were female. None of the respondents answered ‘other’ in this section.

4.3.2 Age

Figure 4.3 represents the respondents’ ages and indicates that 3.95% or 18 of the respondents were between the ages of 18 and 24 years, 7.92% or 36 between the ages 25 and 34 years. Ages 35 to 44 years made up 13.62% or 62 of the respondents and ages 45 to 54 years 23.90% or 109 of the respondents. Ages 55 to 64 years accounted

for 6.32% or 120 of the respondents, 17.34% or 79 were between ages 65 and 75 years, and only 7.02% were aged older than 75 years.

Figure 4.2: Sex distribution of the respondents in this study.

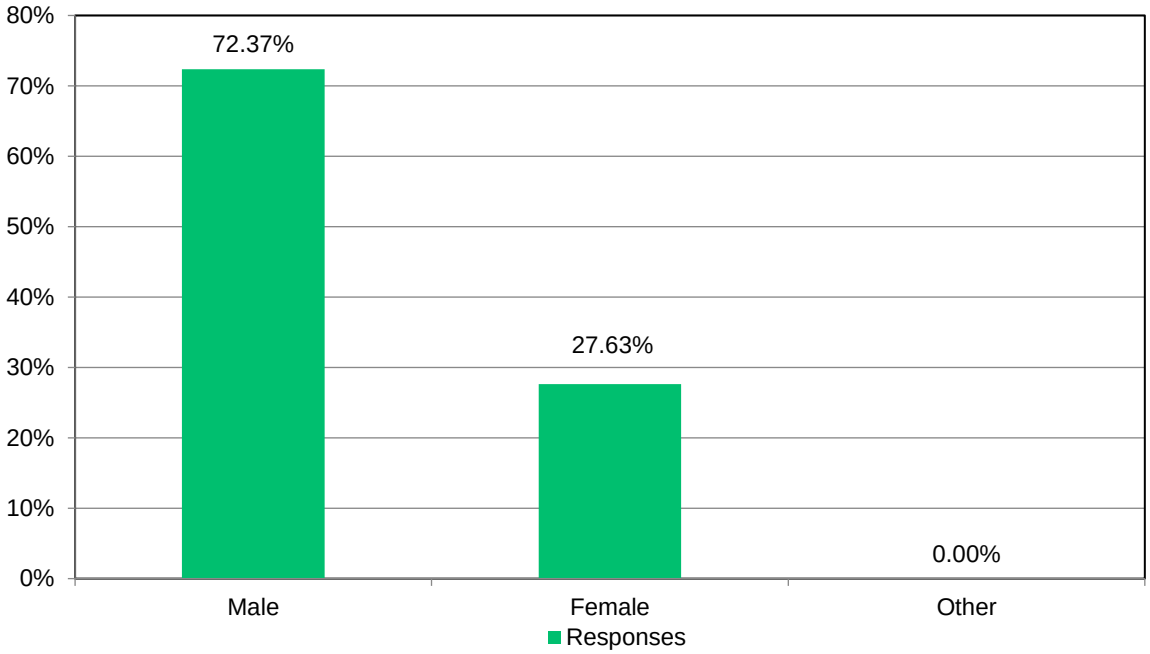
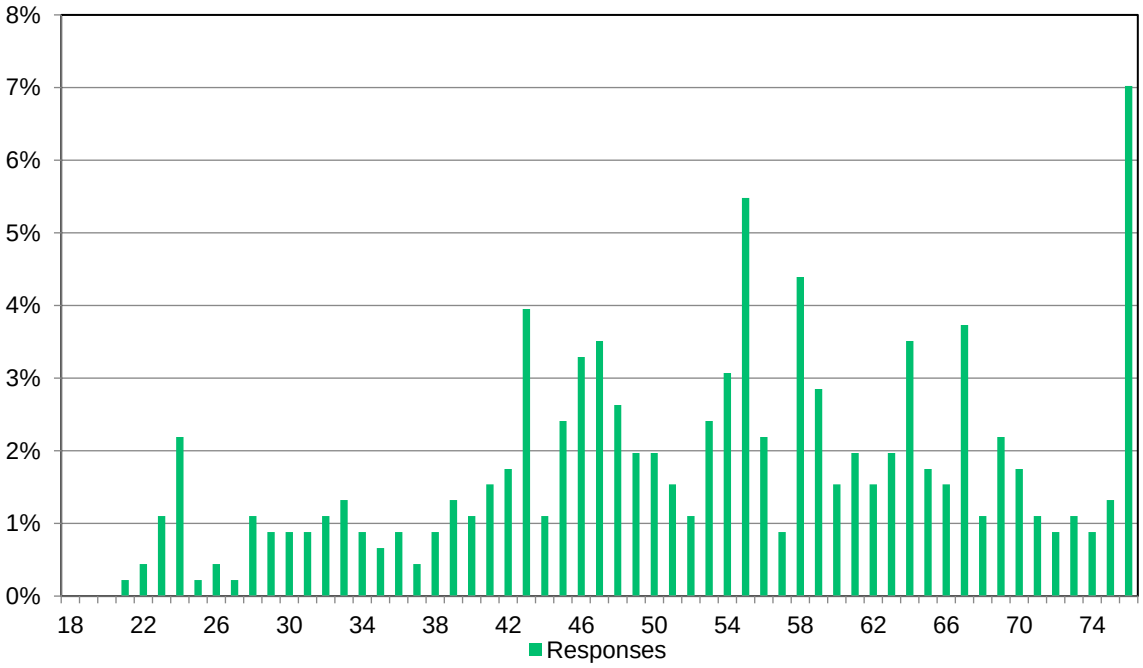


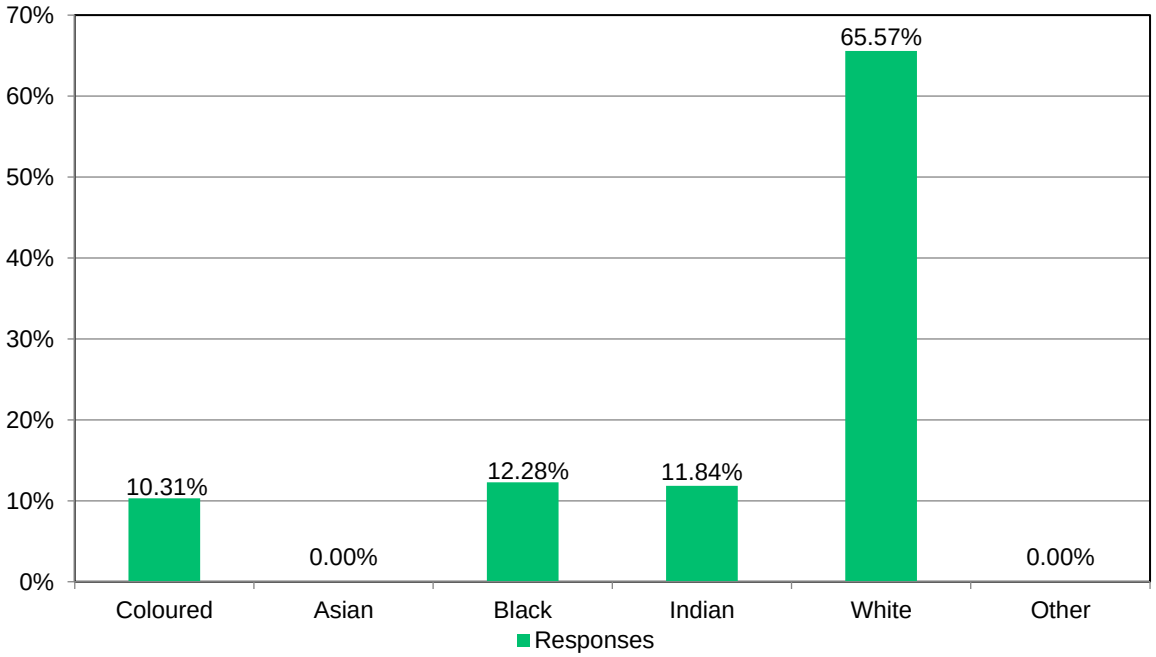
Figure 4.3: Illustration of the age distribution of the respondents.



4.3.3 Race/ethnicity

Figure 4.4 provides a graphical representation of race/ethnicity and illustrates that 10.31% or 47 of the respondents were coloured, 12.28% or 56 were black, 11.84% or 54 were indian, 65.57% or 299 were white, whilst asian and other were 0%.

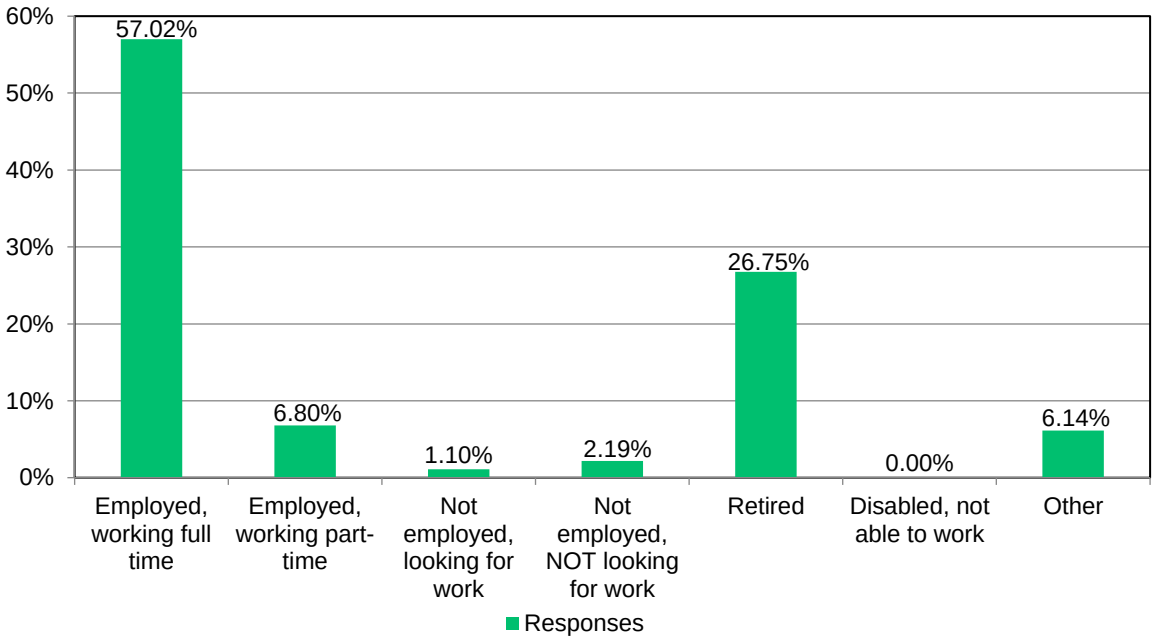
Figure 4.4: Illustration of the race/ethnicity of the respondents.



4.3.4 Employment

Figure 4.5 gives the employment status representation of respondents illustrating 57.02% or 260 of the respondents are full time employed and 6.80% or 31 are part time employed. Respondents not employed looking for work made up 1.10% or 5, whilst 2.19% or 10 are not employed and not looking for work. Retirees made up 26.75% or 122 with 6.14% or 28 of the respondents indicating other as employment status. Zero percent of the respondents indicated that they are disabled and unable to work.

Figure 4.5: Employment status of the respondents of this study.



4.3.5 Education

The results represented in Figure 4.6 shows the highest level of education of the respondents where most of the respondents, 41.23% or 188, obtained a bachelor's degree, 23.25% or 106 obtained a postgraduate honours, and 20.61% or 94 obtained a tertiary diploma. Respondents that obtained a postgraduate masters were 6.36% or 29, while 6.14% or 28 completed high school and only 1.32% or 6 obtained postgraduate doctorate degrees. Other levels of education made up 1.10% or 5 of the total respondents, whilst zero percent indicated no schooling.

4.3.6 Residing province

Figure 4.7 depicts the distribution of the respondents across the different South African provinces with 15.79% or 72 residing in the Free State, 16.01% or 73 residing in Northwest, 16.23% or 74 residing in Gauteng, 4.82% or 22 residing in Limpopo, 6.58% or 30 residing in KwaZulu-Natal, 5.70% or 26 residing in Mpumalanga, 13.38% or 61 residing in Western Cape, 7.68% or 35 residing in the Eastern Cape and 13.82% or 63 residing in the Northern Cape.

Figure 4.6: Illustration of the highest level of education of the respondents.

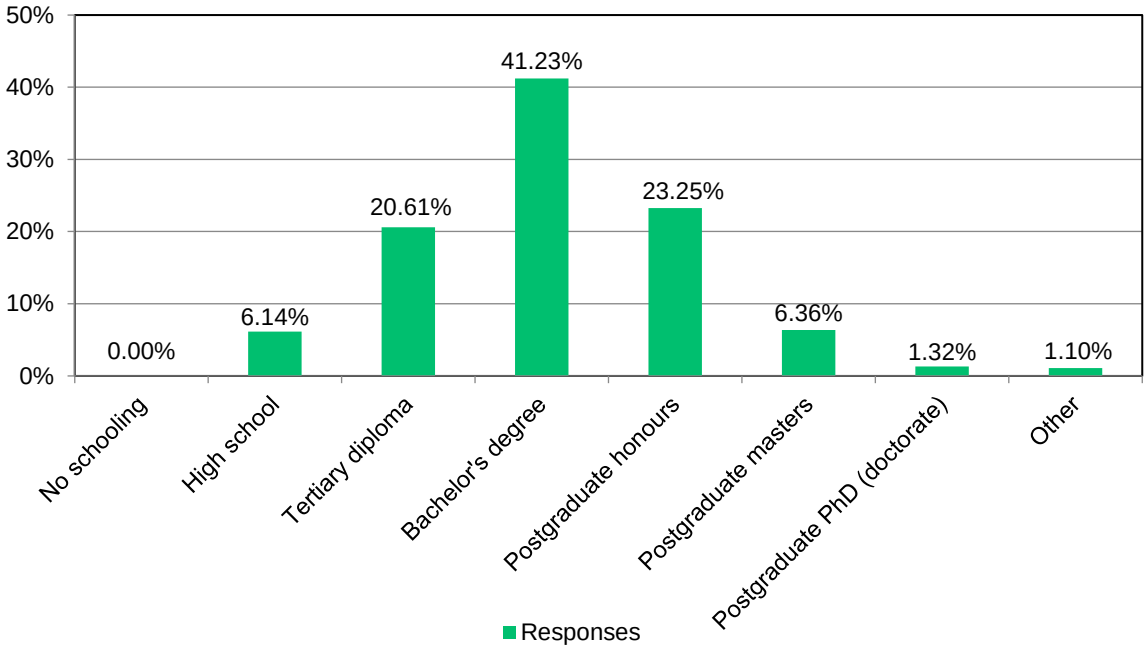
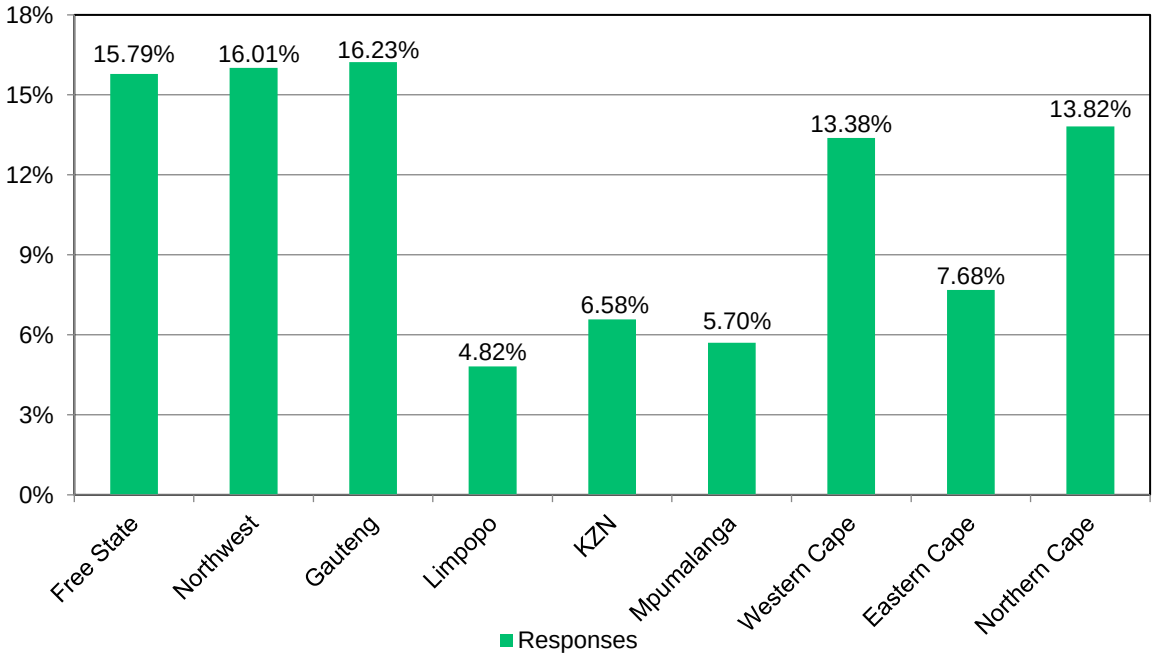


Figure 4.7: Illustration of the residing provinces of the respondents.



4.3.7 Earnings

The personal earnings of the respondents of this research study are illustrated in Figure 4.8 and summarised in Table 4.1 below. Most of the respondents receive less than R2.5 million a year (66.27%, 301 respondents), with 25.96% of the respondents earning between R2.6 million and R3.9 million, 2.86% earning between R4 million and R4.5 million, 3.52% between R4.6 million and R8 million, and only 1.32% more than R8.1 million per year.

Figure 4.8: Illustration of the personal earnings of the respondents.

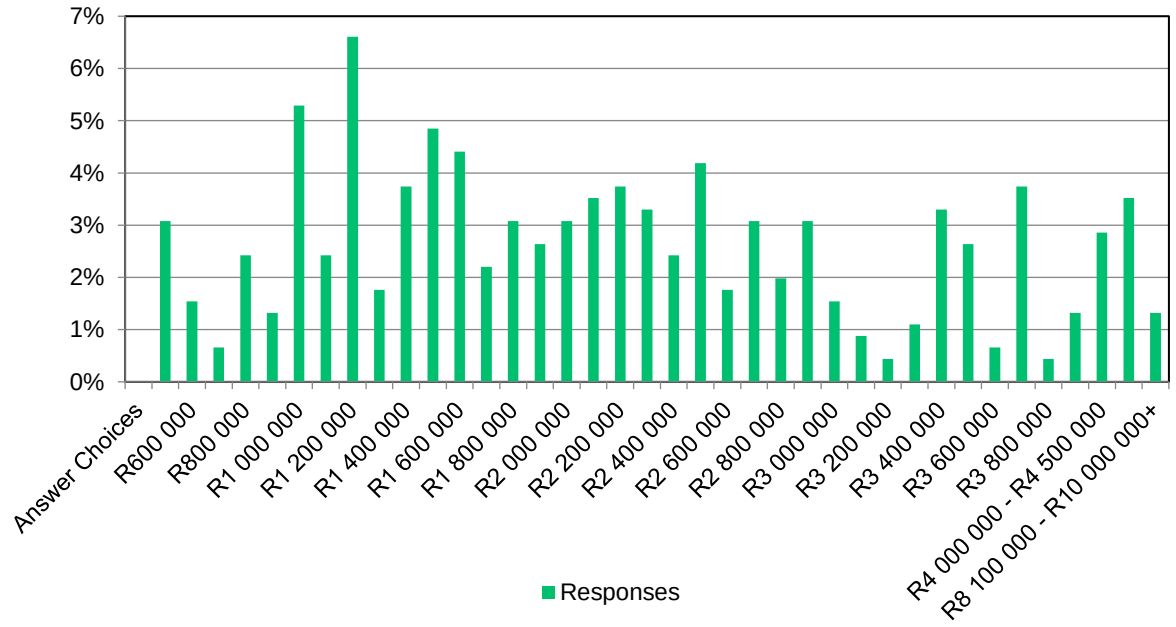


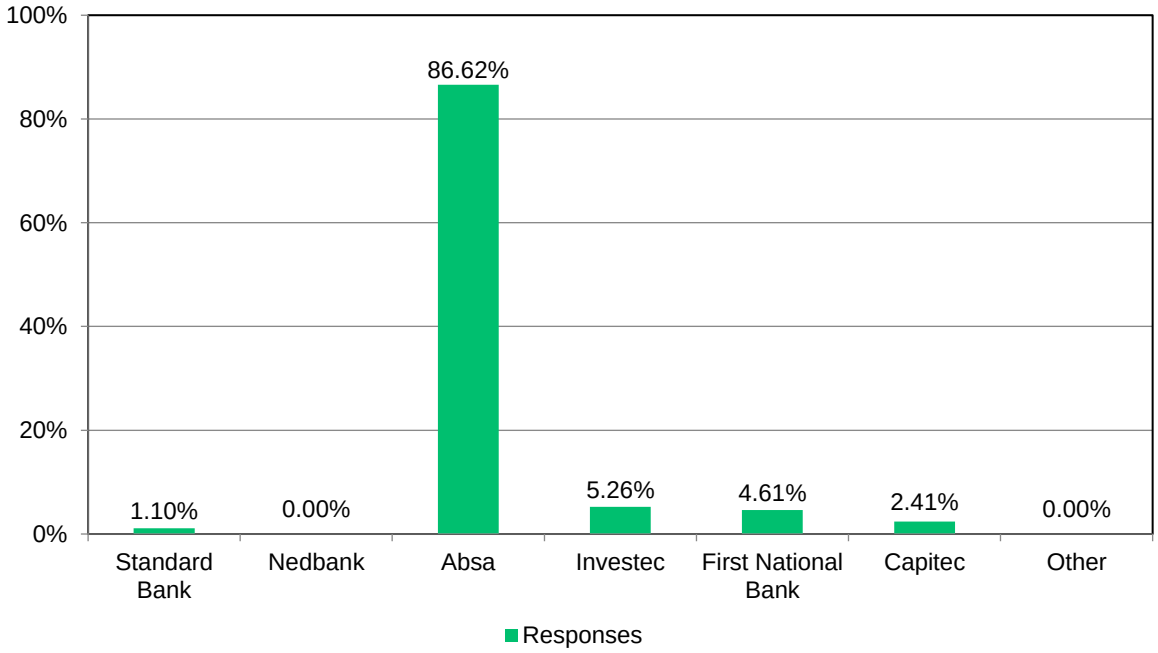
Table 4.1: Summary of the personal earnings of the respondents.

Respondents	Percentage	Earnings
301	66.27%	R500 000 – R2 500 000
118	25.96%	R2 600 000 – R3 900 000
13	2.86%	R4 000 000 – R4 500 000
16	3.52%	R4 600 000 – R8 000 000
6	1.32%	R8 100 000 – R10 000 000+

4.3.8 Primary bank

The principal banking relationship, where respondents' salaries are paid into, is depicted in Figure 4.9. Absa is the primary bank for most respondents (86.62% or 395), followed by Investec (5.26% or 24), First National Bank (4.61% or 21), Capitec (2.41% or 11), and Standard Bank (1.10% or 5), while Nedbank and other institutions are not used by the respondents as their primary banking relationships.

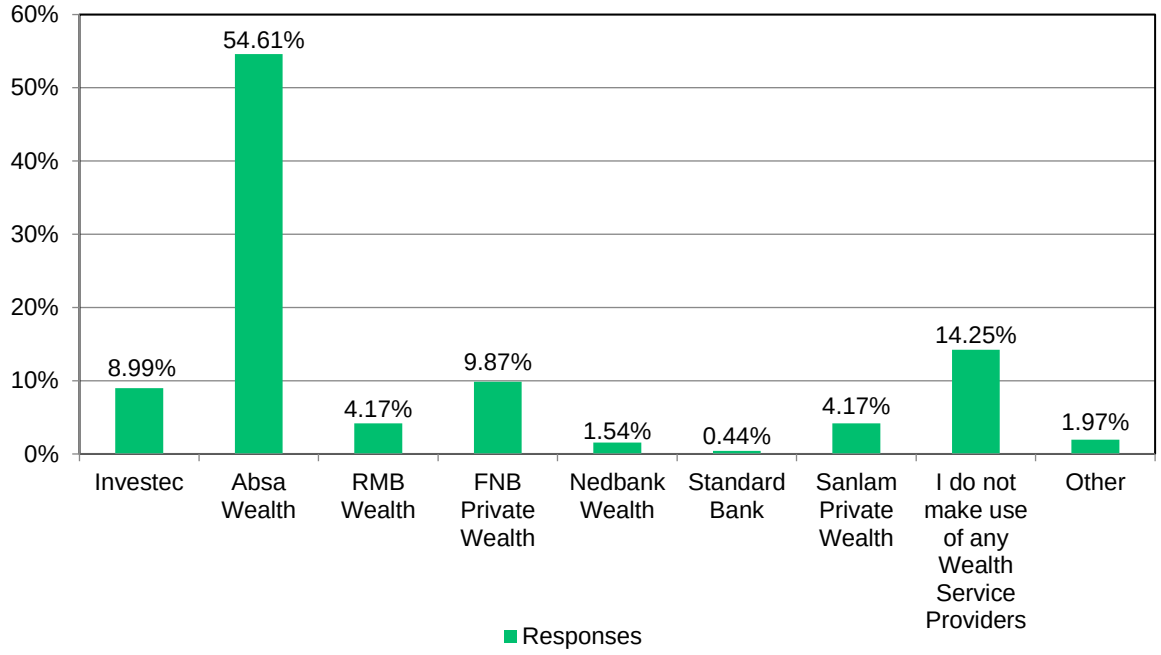
Figure 4.9: Primary bank used by the respondents.



4.3.9 Wealth service providers

In Figure 4.10, the wealth service providers which highlights the investment management services chosen by wealth clients, are shown. Of the respondents, 54.61% or 249, used Absa Wealth, 9.87% or 45, used FNB Private Wealth, 8.99% or 41, used Investec, 4.17% or 19, used RMB Wealth, 4.17% or 19, used Sanlam Private Wealth, 1.54% or 7, used Nedbank Wealth, and 0.44% or 2, used Standard Bank. Other wealth service providers made up 1.97% or 9 of the respondents and 14.25% of the respondents indicated that they do not make use of any wealth service providers for their wealth investment management.

Figure 4.10: Illustration of the wealth service providers used by the respondents.



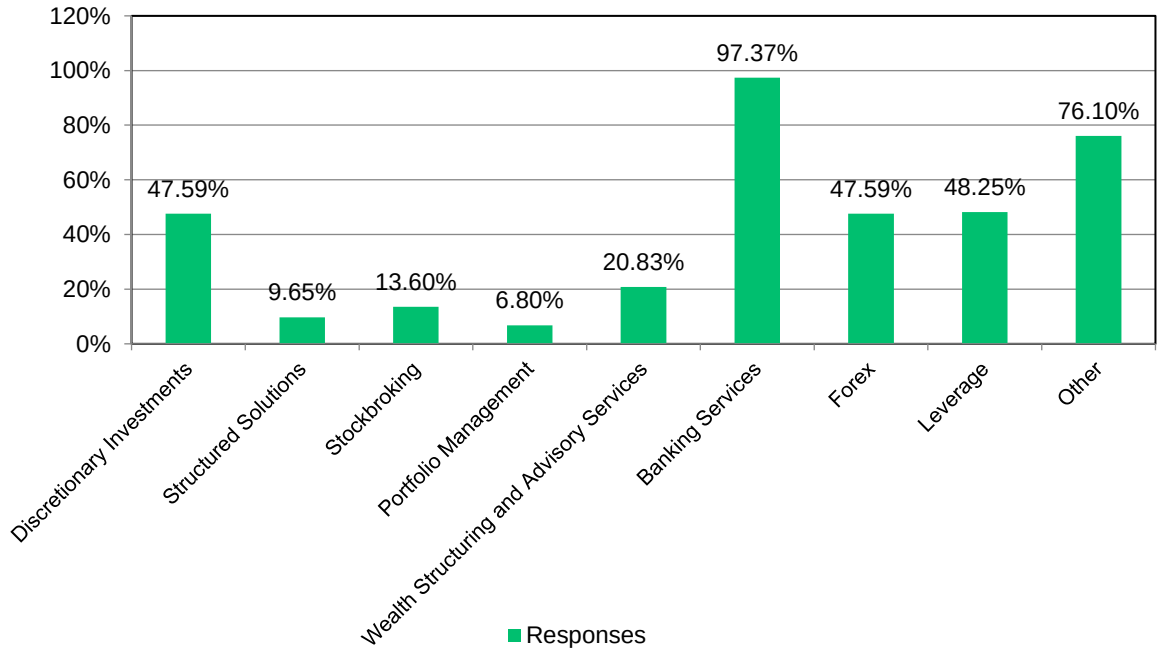
4.3.10 Wealth service offerings

In this paragraph the various wealth service offerings utilised by the respondents are provided by means of an illustration in Figure 4.11 and a summary in Table 4.2.

Table 4.2: Summary of the wealth service offerings utilised by the respondents.

Wealth service offering utilised	Responses
Banking	97.37% or 444
Leverage	48.25% or 220
Forex	47.59% or 217
Discretionary investments	47.59% or 217
Wealth structuring and advisory services	20.83% or 95
Stockbroking	13.60% or 62
Structured solutions	9.65% or 44
Portfolio management	6.80% or 31
Other wealth service offerings	76.10% or 347

Figure 4.11: Graphical illustration of the wealth service offerings utilised by the respondents.

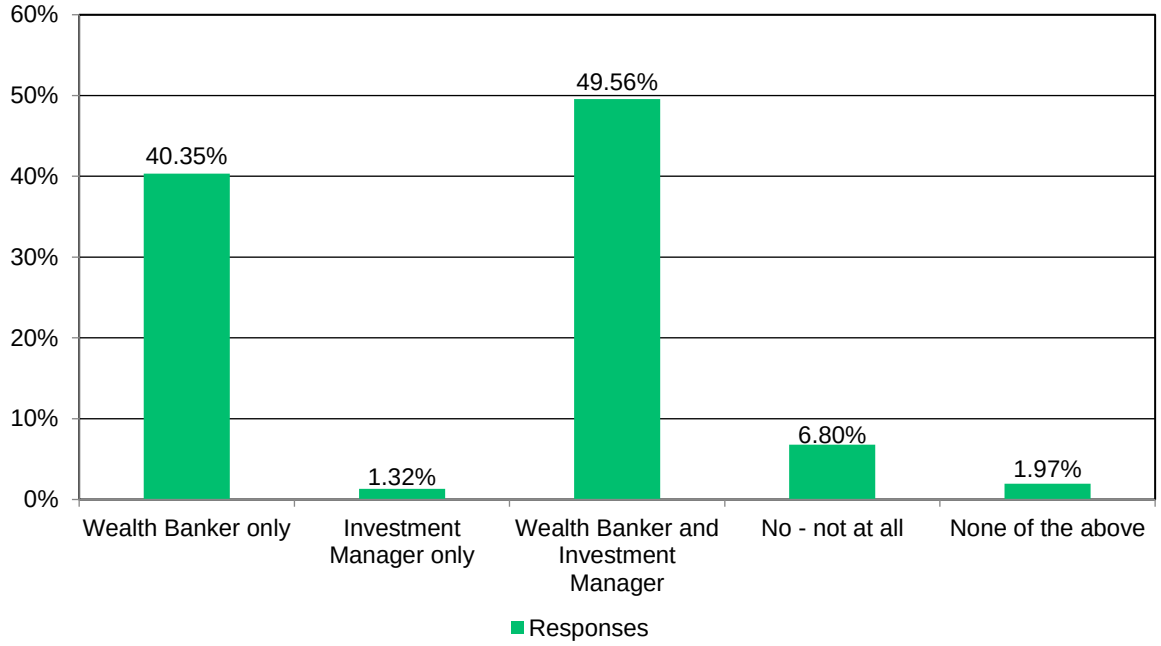


97.37% or 444 of the respondents utilise banking, 48.25% or 220 utilise leverage, 47.59% or 217 utilise forex and discretionary investments, 20.83% or 95 utilise wealth structuring and advisory services, 13.60% or 62 use stockbroking, 9.65% or 44 use structured solutions, 6.80% or 31 use portfolio management offerings, and 76.10% or 347 use other wealth service offerings.

4.3.11 Banking and investment relationship

In Figure 4.12, the number of respondents that know their wealth banker and/or investment manager is illustrated. In summary, 49.56% or 226 respondents know their wealth banker and/or investment manager, 40.35 % or 184 respondents know their wealth banker, and 1.32%, or 6 respondents know their investment manager. Additionally, 6.80% or 31 respondents do not know their banker or investment manager, and 1.97% or 9 respondents said that none of the questions were relevant.

Figure 4.12: Wealth banker and investment manager relationship.



4.4 Analysis and interpretation construct items and respective statements

This section aims to provide insight on the individual constructs and interpretation of respective statements. Data gathered and analysed on the individual dimensions include perceived risk, perceived usefulness, perceived ease of use, brand image, perceived security, attitude, trust, intention to adopt FinTech, artificial intelligence, robo-advice, behavioural loyalty, attitudinal loyalty, and traditional wealth banking and how these affect client's perceptions to adopt FinTech applications in wealth banking at a major South African bank. Respondents was able to select the statement that best fits their preferences using a seven-point Likert scale, with one (1) representing 'strongly disagree' and seven (7) representing 'strongly agree' (Table 4.3).

The information is presented by means of descriptive analysis. An overview of the different parts of the questionnaire will be presented via graphs and tables used to present the data, which is then thoroughly analysed in the explanation that follows. Weighted averages are used in the tables. Weighted average is a calculation that considers the varying degrees of importance of the numbers in a data set. In calculating the weighted average, each number in the data set (or responses) is multiplied by a predetermined

weight and divided by the sum of the weight (total responses) before the final calculation is made. Therefore, an average resulting from the multiplication of each component by a factor reflects its importance. Using Survey Monkey the weighted average charts the average rating for each answer choice.

Using a seven-point Likert scale the formula to calculate the weighted average for Survey Monkey is:

$$\text{Weighted Average} = \frac{(\text{x1w1} + \text{x2w2} + \text{x3w3} + \text{x4w4} + \text{x5w5} + \text{x6w6} + \text{x7w7})}{\text{Sum/Total}}$$

where x = response count for answer choice and w = weight of answer choice.

Source: Adapted from (SurveyMonkey, 2022)

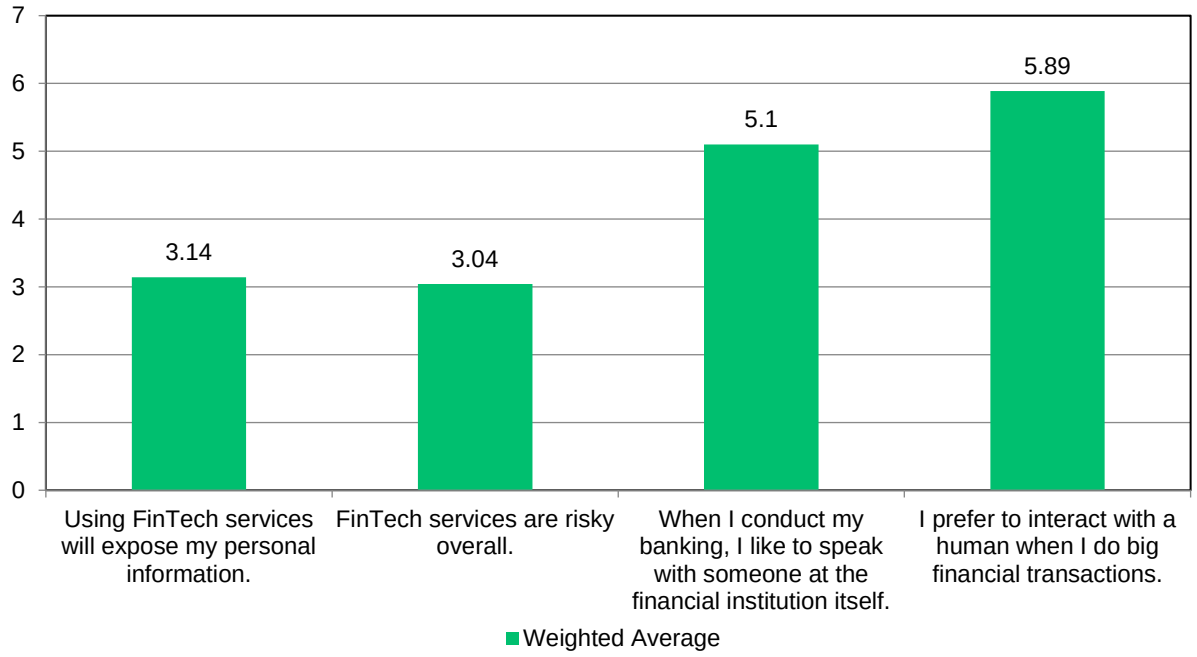
Table 4.3: Answer choice and weighting according to the seven-point Likert scale used.

Answer choice	Weight
Strongly Disagree	1
Disagree	2
Slightly Disagree	3
Neutral	4
Slightly Agree	5
Agree	6
Strongly Agree	7

4.4.1 Perceived risk (PR)

The perceptions of the respondents of perceived risk (PR) in connection with the adoption of FinTech, is illustrated and summarised in Figure 4.13 and Table 4.4 respectively. The statements that relate to perceived risk (PR) are each examined, listed, briefly summarised, and analysed independently.

Figure 4.13: Illustration of the perceptions of the respondents with regards to PR with the adoption of FinTech.



Most of the respondents (76.11%) believed that FinTech services would not reveal their personal information, and most respondents (75%) thought there was no overall danger associated with FinTech. When conducting their banking, most respondents (77.20%) thought it would be nice to speak with someone at the financial institution directly, and most respondents (90.10%) strongly preferred interacting with people while making significant financial transactions. The weighted average for this statement was 5.89, indicating that most respondents strongly prefer contact with a human when making significant financial transactions.

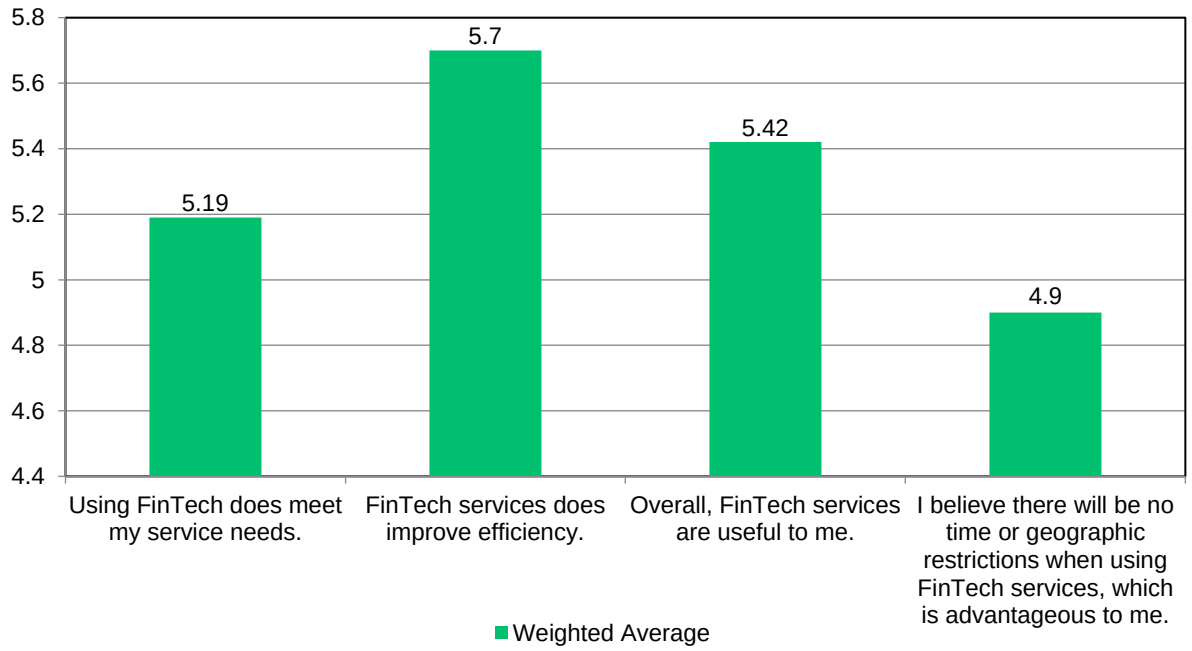
Table 4.4: Summary of the perceptions of the respondents to PR with the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Perceived Risk (PR)	I prefer to interact with a human when I do big financial transactions.	Strongly Disagree	3	0.66%	5.89
		Disagree	10	2.19%	
		Slightly Disagree	31	6.80%	
		Neutral	2	0.22%	
		Slightly Agree	70	15.35%	
		Agree	173	37.94%	
		Strongly Agree	168	36.84%	
	When I conduct my banking, I like to speak with someone at the financial institution itself.	Strong Disagree	3	0.66%	5.10
		Disagree	19	4.17%	
		Slightly Disagree	80	17.54%	
		Neutral	2	0.44%	
		Slightly Agree	148	32.46%	
		Agree	131	28.73%	
		Strongly Agree	73	16.01%	
	Using FinTech services will expose my personal information.	Strongly Disagree	7	1.54%	3.14
		Disagree	148	32.46%	
		Slightly Disagree	192	42.11%	
		Neutral	4	0.88%	
		Slight Agree	95	20.83%	
		Agree	10	2.19%	
		Strongly Agree	0	0%	
	FinTech services are risky overall.	Strongly Disagree	20	4.39%	3.04
		Disagree	167	36.62%	
		Slightly Disagree	155	33.99	
		Neutral	9	1.97%	
		Slightly Agree	97	21.27%	
		Agree	8	1.75%	
		Strongly Agree	0	0%	

4.4.2 Perceived usefulness (PU)

In relation to the adoption of FinTech, the statements in Figure 4.14 illustrate the respondents' perceptions of perceived usefulness (PU). The statements that relate to perceived usefulness (PU) are each examined, listed, briefly summarised, and addressed independently.

Figure 4.14: Illustration of the respondents' perceptions of PU in relation to the adoption of FinTech.



Most of the respondents (85.09%) believed that using FinTech has allowed them to get the services they need. Many respondents (87.69%) thought FinTech services were generally helpful and said that using FinTech services would allow them to circumvent time and geographic constraints, which would be to their benefit (69.08%). The majority of responders (94.95%) strongly agreed that FinTech services boost efficiency. The weighted average for this statement was 5.70 which shows that respondents generally agree that FinTech does increase efficiency.

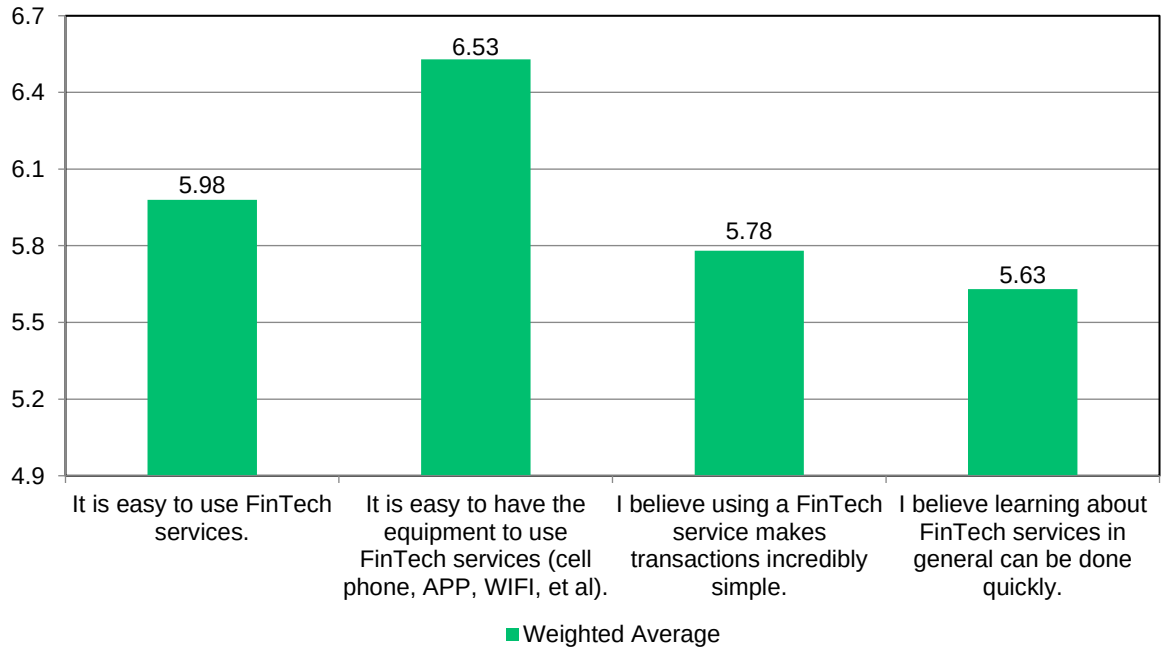
Table 4.5: Summary of the respondents' perceptions of PU in relation to the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Perceived Usefulness (PU)	FinTech services does improve efficiency.	Strongly Disagree	0	0%	5.70
		Disagree	2	0.44%	
		Slightly Disagree	15	3.29%	
		Neutral	6	1.32%	
		Slightly Agree	140	30.70%	
		Agree	224	49.12%	
		Strongly Agree	69	15.13%	
	Overall, FinTech services are useful to me.	Strong Disagree	2	0.44%	5.42
		Disagree	4	0.88%	
		Slightly Disagree	45	9.89%	
		Neutral	5	1.10%	
		Slightly Agree	137	30.11%	
		Agree	218	47.91%	
		Strongly Agree	44	9.67%	
	Using FinTech does meet my service needs.	Strongly Disagree	0	0%	5.19
		Disagree	6	1.32%	
		Slightly Disagree	52	11.40%	
		Neutral	10	2.19%	
		Slight Agree	188	41.23%	
		Agree	183	40.13%	
		Strongly Agree	17	3.73%	
	I believe there will be no time or geographic restrictions when using FinTech services, which is advantageous to me.	Strongly Disagree	16	3.51%	4.90
		Disagree	37	8.11%	
		Slightly Disagree	80	17.54%	
		Neutral	8	1.75%	
		Slightly Agree	90	19.74%	
		Agree	151	33.11%	
		Strongly Agree	74	16.23%	

4.4.3 Perceived ease of use (PEU)

The respondents' perceptions of perceived ease of use (PEU) in relation to FinTech adoption were discovered by means of a few statements. Figure 4.15 represents the statements showing the respondent's perceptions of perceived ease of use (PEU) in relation to FinTech adoption and each statement relating to PEU are tabled (Table 4.6), summarised, and discussed separately below.

Figure 4.15: Illustration of the respondents' perception of PEU to the adoption of FinTech.



The vast majority of respondents (95.39%) said that using FinTech services was simple and strongly agreed that using a FinTech service considerably simplifies transactions (92.55%). Many of the respondents (91.45%) agreed that learning about FinTech services could be accomplished swiftly, while almost all of the respondents (99.78%) agreed that it is simple to have the necessary tools to employ FinTech services. The weighted average for this statement was 6.53 meaning that the majority of respondents firmly agree that the tools required to use FinTech services are accessible.

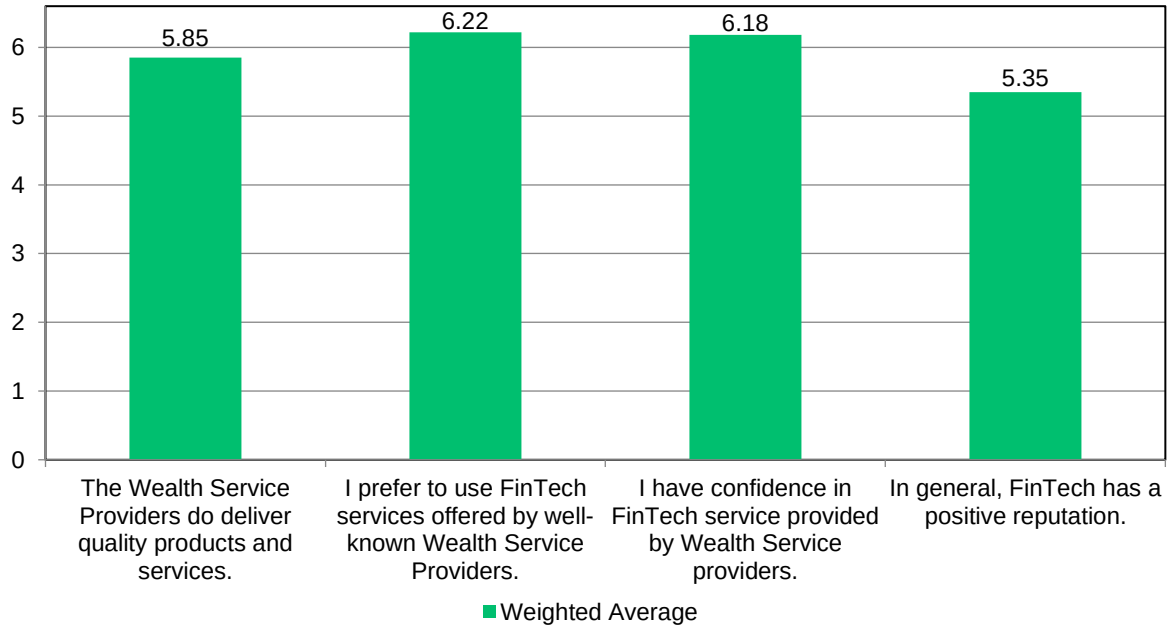
Table 4.6: Summary of the respondents' answers relating to the PEU when adopting FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Perceived Ease of Use (PEU)	It is easy to have the equipment to use FinTech services (cell phone, APP, WIFI, et al).	Strongly Disagree	0	0%	6.53
		Disagree	0	0%	
		Slightly Disagree	0	0%	
		Neutral	1	0.22%	
		Slightly Agree	25	5.48%	
		Agree	162	35.53%	
		Strongly Agree	268	58.77%	
	It is easy to use FinTech services.	Strong Disagree	0	0%	5.98
		Disagree	2	0.44%	
		Slightly Disagree	11	2.41%	
		Neutral	1	0.22%	
		Slightly Agree	79	17.32%	
		Agree	229	50.22%	
		Strongly Agree	127	27.85%	
	I believe using a FinTech service makes transactions incredibly simple.	Strongly Disagree	0	0%	5.78
		Disagree	2	0.44%	
		Slightly Disagree	28	6.14%	
		Neutral	4	0.88%	
		Slight Agree	119	26.10%	
		Agree	186	40.79%	
		Strongly Agree	117	25.66%	
	I believe learning about FinTech services can be done quickly.	Strongly Disagree	11	2.41%	5.63
		Disagree	14	3.07%	
		Slightly Disagree	12	2.63%	
		Neutral	2	0.44%	
		Slightly Agree	130	28.51%	
		Agree	175	38.38%	
		Strongly Agree	112	24.56%	

4.4.4 Brand image (BI)

In connection to the adoption of FinTech, the statements in Figure 4.16 illustrate the respondents' perceptions of brand image (BI). The statements related to BI will each be examined, summarised (Table 4.7), and discussed independently in the sections that follow.

Figure 4.16: Illustration of the respondents' perceptions of BI when adopting FinTech.



Most respondents (95.62%) believed that wealth service providers indeed offer high-quality goods and services and agreed that they have faith in the FinTech services offered by wealth service providers (98.25%). Many respondents (87.05%) believed that FinTech had a good reputation overall and said they preferred to utilise well-known FinTech service providers and wealth service providers (98.02%). The weighted average for this statement was 6.22 concluding that most respondents firmly agree that they prefer to employ FinTech services provided by well-known wealth service providers.

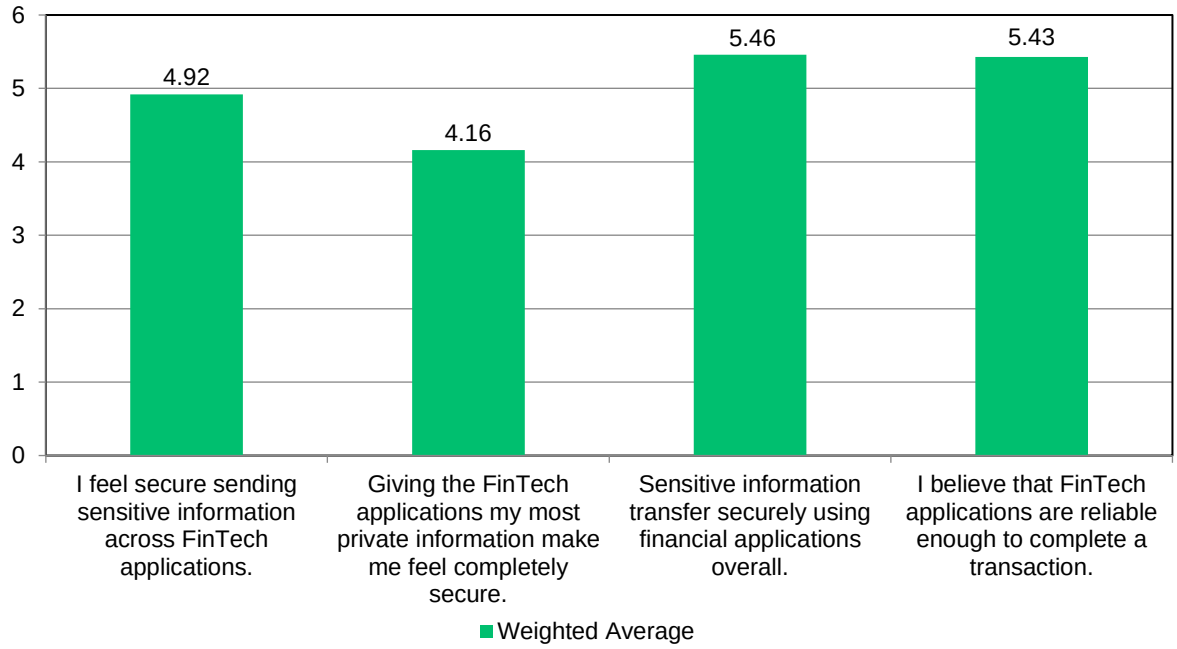
Table 4.7: Summary of the respondents' perceptions of BI when adopting FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Brand Image (BI)	I prefer to use FinTech services offered by well-known Wealth Service Providers.	Strongly Disagree	0	0%	6.22
		Disagree	0	0%	
		Slightly Disagree	2	0.44%	
		Neutral	7	1.54%	
		Slightly Agree	22	4.82%	
		Agree	281	61.62%	
		Strongly Agree	144	31.58%	
	I have confidence in Fintech Service provided by Wealth Service Providers.	Strong Disagree	0	0%	6.18
		Disagree	0	0%	
		Slightly Disagree	2	0.44%	
		Neutral	6	1.32%	
		Slightly Agree	32	7.02%	
		Agree	282	61.84%	
		Strongly Agree	134	20.39%	
	The Wealth Service Providers do deliver quality products and services.	Strongly Disagree	0	0%	5.85
		Disagree	0	0%	
		Slightly Disagree	7	1.54%	
		Neutral	13	2.85%	
		Slight Agree	64	14.04%	
		Agree	328	71.93%	
		Strongly Agree	44	9.65%	
	In general, FinTech has a positive reputation.	Strongly Disagree	0	0%	5.35
		Disagree	0	0%	
		Slightly Disagree	51	11.18%	
		Neutral	8	1.75%	
		Slightly Agree	151	33.11%	
		Agree	222	48.68%	
		Strongly Agree	24	5.26%	

4.4.5 Perceived security (PS)

Perceived security (PS) in relation to FinTech adoption is depicted in statements in Figure 4.17 and summarised in Table 4.8. Below, each assertion pertaining to perceived security is listed, briefly summarised, and discussed.

Figure 4.17: Illustration of the respondents' perceptions around PS in relation to the adoption of FinTech.



Sending sensitive information between FinTech applications felt secure to many of the respondents (75.66%). Giving the FinTech applications their most sensitive information made them feel entirely secure, according to about half of the respondents (50.87%). Most respondents (89.69%) agreed that FinTech applications are trustworthy enough to conduct a transaction and that financial applications often provide for the secure transfer of sensitive information (90.13%). The weighted average for this statement was 5.46 which reflects the respondents' strong overall opinion that sensitive information is sent safely via financial applications.

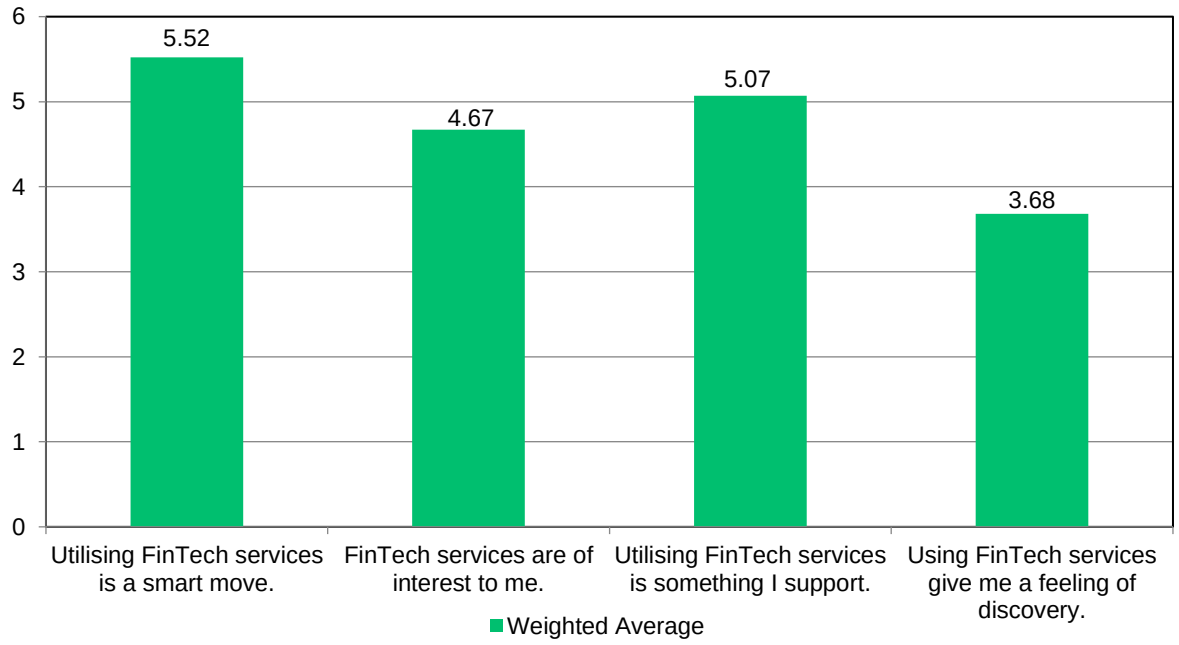
Table 4.8: Summary of the perceptions of the respondents relating to PS in the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Perceived Security (PS)	Sensitive information transfer securely using financial applications overall.	Strongly Disagree	0	0%	5.46
		Disagree	3	0.66%	
		Slightly Disagree	32	7.02%	
		Neutral	10	2.19%	
		Slightly Agree	155	33.99%	
		Agree	218	47.81%	
		Strongly Agree	38	8.33%	
	I believe that FinTech applications are reliable enough to complete a transaction.	Strong Disagree	1	0.22%	5.43
		Disagree	8	1.75%	
		Slightly Disagree	33	7.24%	
		Neutral	5	1.10%	
		Slightly Agree	148	32.46%	
		Agree	225	49.34%	
		Strongly Agree	36	7.89%	
	I feel secure sending sensitive information across FinTech applications.	Strongly Disagree	0	0%	4.92
		Disagree	11	2.41%	
		Slightly Disagree	91	19.96%	
		Neutral	9	1.97%	
		Slight Agree	172	37.72%	
		Agree	14	3.07%	
		Strongly Agree	159	34.87%	
	Giving the FinTech applications my most private information makes me feel completely secure.	Strongly Disagree	1	0.22%	4.16
		Disagree	63	13.82%	
		Slightly Disagree	150	32.89%	
		Neutral	10	2.19%	
		Slightly Agree	122	26.75%	
		Agree	98	21.49%	
		Strongly Agree	12	2.63%	

4.4.6 Attitude (AT)

Observations of respondents' attitudes (AT) toward the adoption of FinTech are shown in the statements in Figure 4.18. The following section will list, summarise, and discuss each statement related to attitude. A summary is provided in Table 4.9.

Figure 4.18: Illustration of the perceptions of the respondents towards AT in the adoption of FinTech.



Many respondents (65.35%) said they were interested in FinTech services, while a bit more (76.63%) agreed that using FinTech services was a good idea. When using FinTech services, slightly more than half of the respondents (55.48%) did not feel any sense of discovery, but utilising FinTech services, according to the majority of the respondents (88.13%), is a wise choice. The weighted average for this assertion was 5.52 indicating that utilising FinTech services is a wise option according to the general opinion of the respondents.

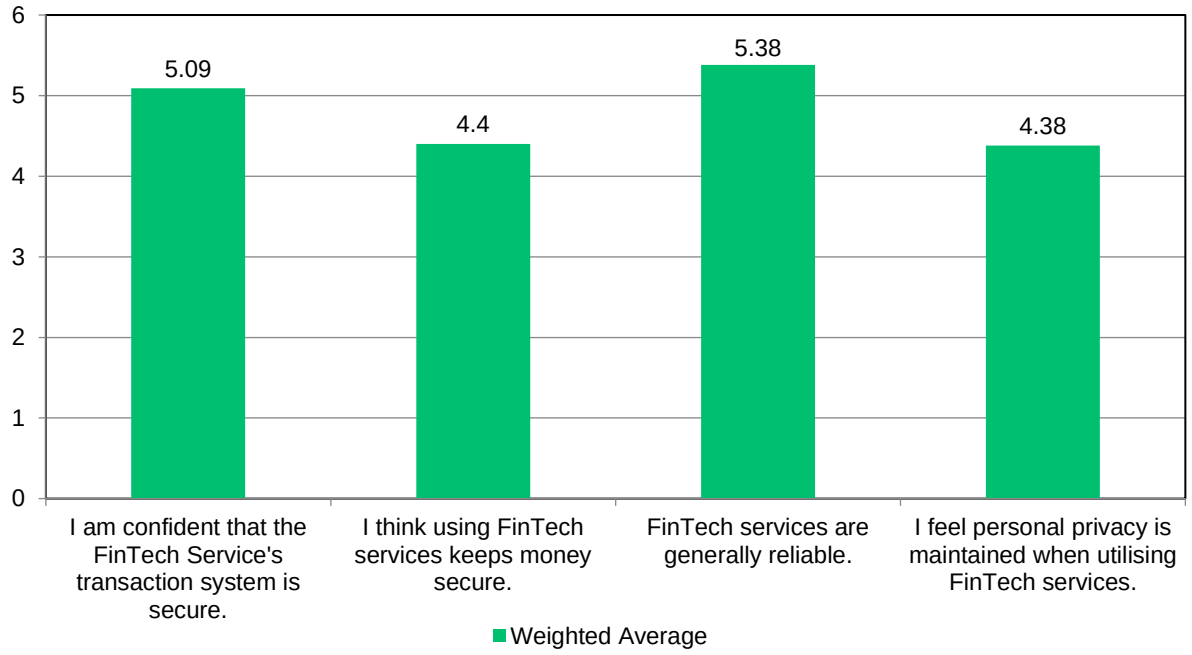
Table 4.9: Summary of the perceptions of the respondents towards AT in the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Attitude (AT)	Utilising FinTech services is a smart move.	Strongly Disagree	0	0%	5.52
		Disagree	2	0.44%	
		Slightly Disagree	49	10.75%	
		Neutral	3	0.66%	
		Slightly Agree	110	24.12%	
		Agree	239	52.41%	
		Strongly Agree	53	11.62%	
	Utilising FinTech services is something I support.	Strong Disagree	6	1.32%	5.07
		Disagree	36	7.89%	
		Slightly Disagree	54	11.84%	
		Neutral	6	1.32%	
		Slightly Agree	113	24.78%	
		Agree	202	44.30%	
		Strongly Agree	39	8.55%	
	FinTech services are of interest to me.	Strongly Disagree	24	5.26%	4.67
		Disagree	61	13.38%	
		Slightly Disagree	67	14.69%	
		Neutral	6	1.32%	
		Slight Agree	86	18.86%	
		Agree	156	34.21%	
		Strongly Agree	56	12.28%	
	Using FinTech services give me a feeling of discovery.	Strongly Disagree	77	16.89%	3.68
		Disagree	67	14.69%	
		Slightly Disagree	109	23.90%	
		Neutral	17	3.73%	
		Slightly Agree	70	15.35%	
		Agree	92	20.18%	
		Strongly Agree	24	5.26%	

4.4.7 Trust (TRU)

The perceptions of respondents about trust (TRU) in relation to the adoption of FinTech are shown through the statements in Figure 4.19. Each statement relating to trust is summarised in Table 4.10 and the participants' responses to it are discussed below.

Figure 4.19: Illustration of the responses of the participants with regards to TRU in the adoption of FinTech.



Most of the respondents (80.43%) expressed confidence in the security of the FinTech services transaction system, while 59.35% of the respondents thought that using FinTech services keeps money secure. About two thirds of the participants (60.45%) thought that using FinTech services support their right to privacy, and 85.27% believed FinTech services are generally dependable. This statement recorded a weighted average of 5.38 which indicates that the average sentiment among respondents was that FinTech services are generally reliable.

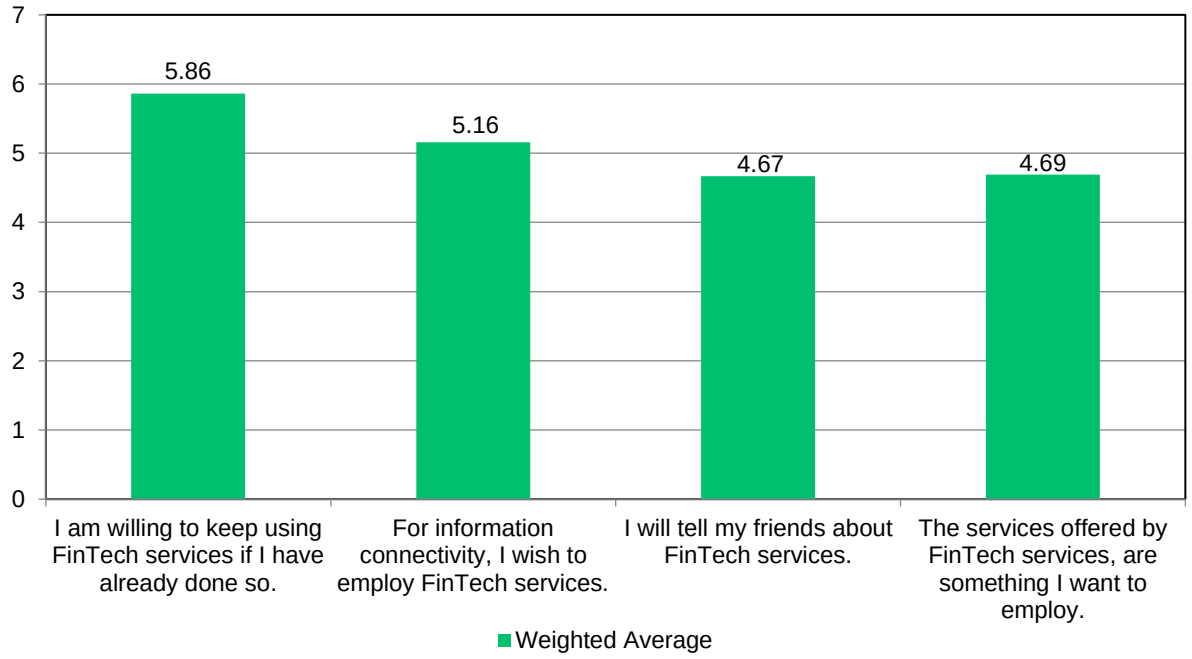
Table 4.10: Summary of the responses of the participants with regards to TRU in the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Trust (TRU)	FinTech services are generally reliable.	Strongly Disagree	0	0%	5.38
		Disagree	6	1.32%	
		Slightly Disagree	51	11.21%	
		Neutral	10	2.20%	
		Slightly Agree	127	27.91%	
		Agree	219	48.13%	
		Strongly Agree	42	9.23%	
	I am confident that the FinTech Services transaction system is secure.	Strong Disagree	0	0%	5.09
		Disagree	10	2.20%	
		Slightly Disagree	71	15.60%	
		Neutral	6	1.32%	
		Slightly Agree	171	37.58%	
		Agree	171	37.58%	
		Strongly Agree	24	5.27%	
	I think using FinTech services keeps money secure.	Strongly Disagree	11	2.42%	4.40
		Disagree	42	9.23%	
		Slightly Disagree	119	26.15%	
		Neutral	13	2.86%	
		Slight Agree	142	31.21%	
		Agree	107	23.52%	
		Strongly Agree	21	4.62%	
	I feel personal privacy is maintained when utilising FinTech services.	Strongly Disagree	20	4.40%	4.38
		Disagree	42	9.23%	
		Slightly Disagree	110	24.18%	
		Neutral	8	1.76%	
		Slightly Agree	142	31.21%	
		Agree	112	24.62%	
		Strongly Agree	21	4.62%	

4.4.8 Intention of FinTech adoption (INT)

The statements given in Figure 4.20 illustrate the participants' responses to their perceptions of the intentions to adopt FinTech (INT). Each statement relating to intention of FinTech adoption is summarised in Table 4.11 and analysed and discussed below.

Figure 4.20: Illustration of the participants' responses to their perceptions of INT.



For information connectivity, most of the respondents (77.20%) wish to use FinTech services, while 66% of the respondents said they would share information regarding FinTech services. About two thirds of the respondents (67.54%) said they would use the services provided by FinTech companies, and if they already use FinTech services, the vast majority of respondents (97.15%) believed they will keep doing so. The weighted average for this statement was 5.86 suggesting that most of the respondents that already use FinTech services, will continue to do so in the future.

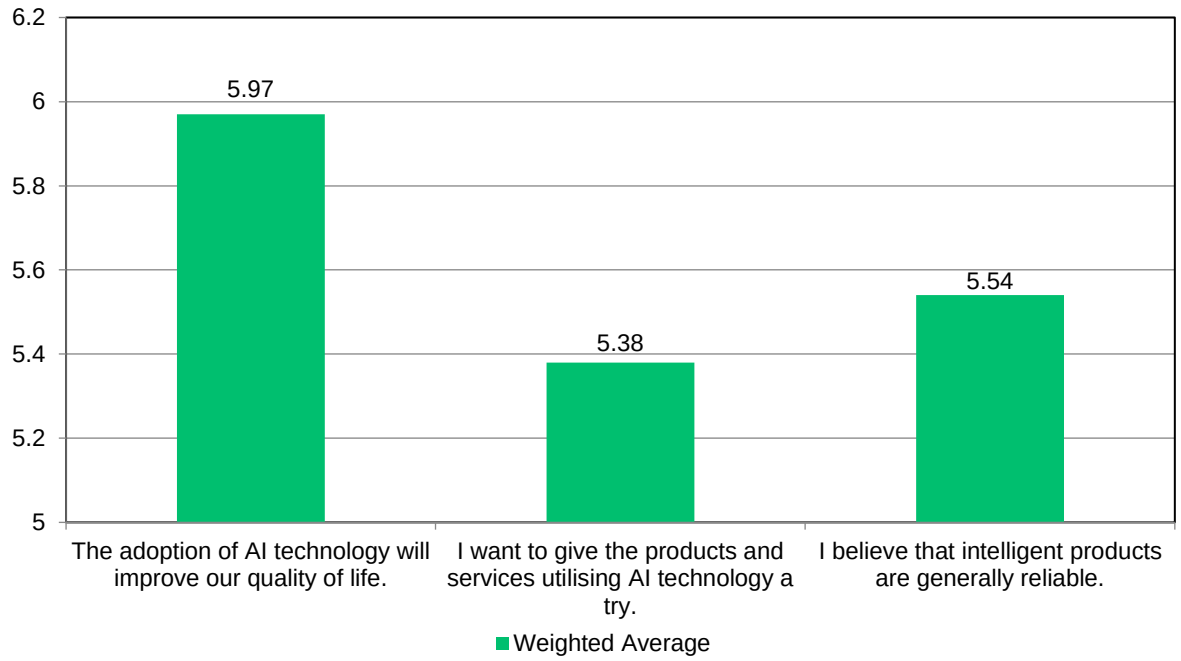
Table 4.11: Summary of the responses of the participants to the statements provided to them of their perceptions of INT.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Intention of FinTech Adoption (INT)	I am willing to keep using FinTech services if I have already done so.	Strongly Disagree	0	0%	5.86
		Disagree	0	0%	
		Slightly Disagree	6	1.32%	
		Neutral	7	1.54%	
		Slightly Agree	99	21.71%	
		Agree	277	60.75%	
		Strongly Agree	67	14.69%	
	For information connectivity, I wish to employ FinTech services.	Strong Disagree	9	1.97%	5.16
		Disagree	17	3.73%	
		Slightly Disagree	68	14.91%	
		Neutral	10	2.19%	
		Slightly Agree	90	19.74%	
		Agree	220	48.25%	
		Strongly Agree	42	9.21%	
	The services offered by FinTech services are something I want to employ.	Strongly Disagree	42	9.21%	4.69
		Disagree	50	10.96%	
		Slightly Disagree	47	10.31%	
		Neutral	9	1.97%	
		Slight Agree	67	14.69%	
		Agree	202	44.30%	
		Strongly Agree	39	8.55%	
	I will tell my friends about FinTech services.	Strongly Disagree	10	2.19%	4.67
		Disagree	52	11.40%	
		Slightly Disagree	86	18.86%	
		Neutral	7	1.54%	
		Slightly Agree	99	21.71%	
		Agree	179	39.25%	
		Strongly Agree	23	5.04%	

4.4.9 Artificial intelligence (AI)

In Figure 4.21, the respondents' perceptions of artificial intelligence (AI) in relation to FinTech adoption is illustrated through their responses to the statements provided. Each statement relate to artificial intelligence is analysed, tabled (Table 4.12) and discussed separately below.

Figure 4.21: Illustration of the perceptions of the respondents of artificial intelligence (AI) in relation to FinTech adoption.



Most respondents (81.14%) were interested in trying out goods and services that use AI technology and said that usually intelligent items are trustworthy (85.53%). The vast majority of survey participants (91.88%) said that implementing AI technology may enhance people's quality of life. The weighted average for this statement was 5.97, confirming that the respondents generally agree that implementing AI technology can enhance quality of life.

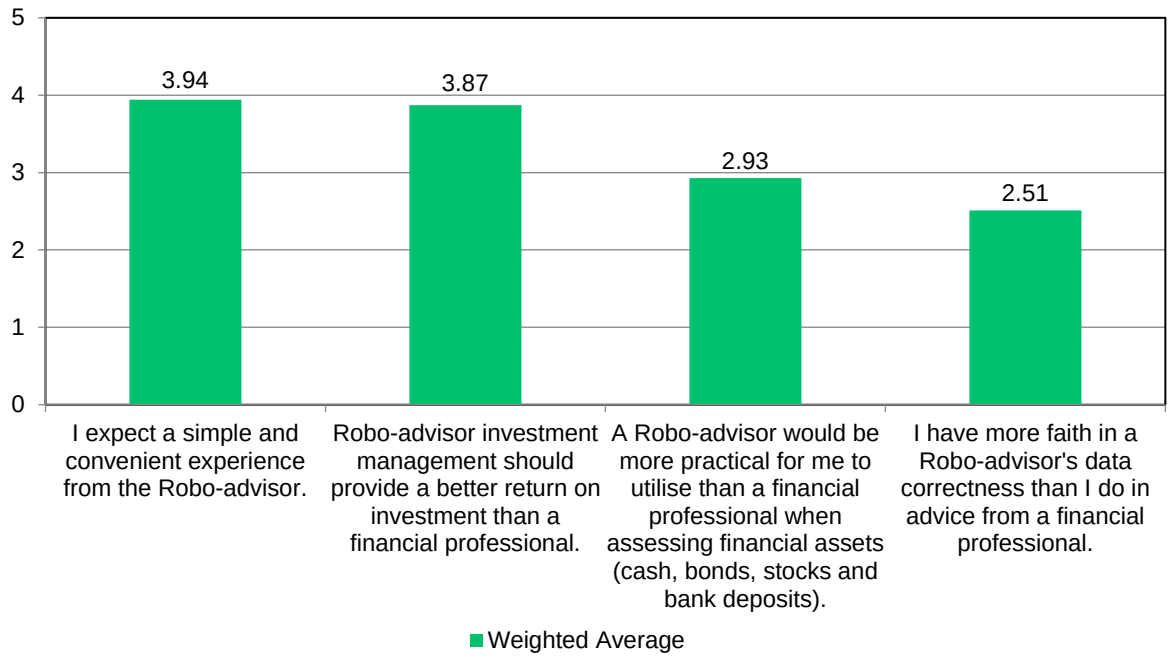
Table 4.12: Summary of the perceptions of the respondents of artificial intelligence (AI) in relation to FinTech adoption.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Artificial Intelligence (AI)	The adoption of AI technology will improve our quality of life.	Strongly Disagree	1	0.22%	5.97
		Disagree	2	0.44%	
		Slightly Disagree	29	6.36%	
		Neutral	5	1.10%	
		Slightly Agree	68	14.91%	
		Agree	185	40.57%	
		Strongly Agree	166	36.40%	
	I believe that intelligent products are generally reliable.	Strong Disagree	2	0.44%	5.54
		Disagree	2	0.44%	
		Slightly Disagree	53	11.62%	
		Neutral	9	1.97%	
		Slightly Agree	120	26.32%	
		Agree	166	36.40%	
		Strongly Agree	104	22.81%	
	I want to give the products and services utilising AI technology a try.	Strongly Disagree	2	0.22%	5.38
		Disagree	14	3.07%	
		Slightly Disagree	61	13.38%	
		Neutral	9	1.97%	
		Slight Agree	99	21.71%	
		Agree	188	41.23%	
		Strongly Agree	83	18.20%	

4.4.10 Robo-advice (RA)

The participants' responses to the questions related to robo-advice (RA) in the adoption of FinTech, is illustrated in Figure 4.22. The statements pertaining to robo-advice in the adoption of FinTech is presented, summarised, and addressed below (Table 4.13).

Figure 4.22: Illustration of the responses of the participants to the statements related to RA in the adoption of FinTech.



Less than half of the respondents (49.56%) said that investment management by robo-advisors should offer a higher return on investment than that of a financial expert, 70.61% believed that using a robo-advisor instead of a financial expert would not be realistic when evaluating financial assets, and 78.51% don't have more confidence in a financial professional's data accuracy than that of a robot advisor. About half of the respondents (51.53%) anticipated a straightforward and practical encounter with the robo-advisor. The weighted average for this statement was 3.94 illustrating that the respondents generally expected the robo-advisor to be easy to use and convenient.

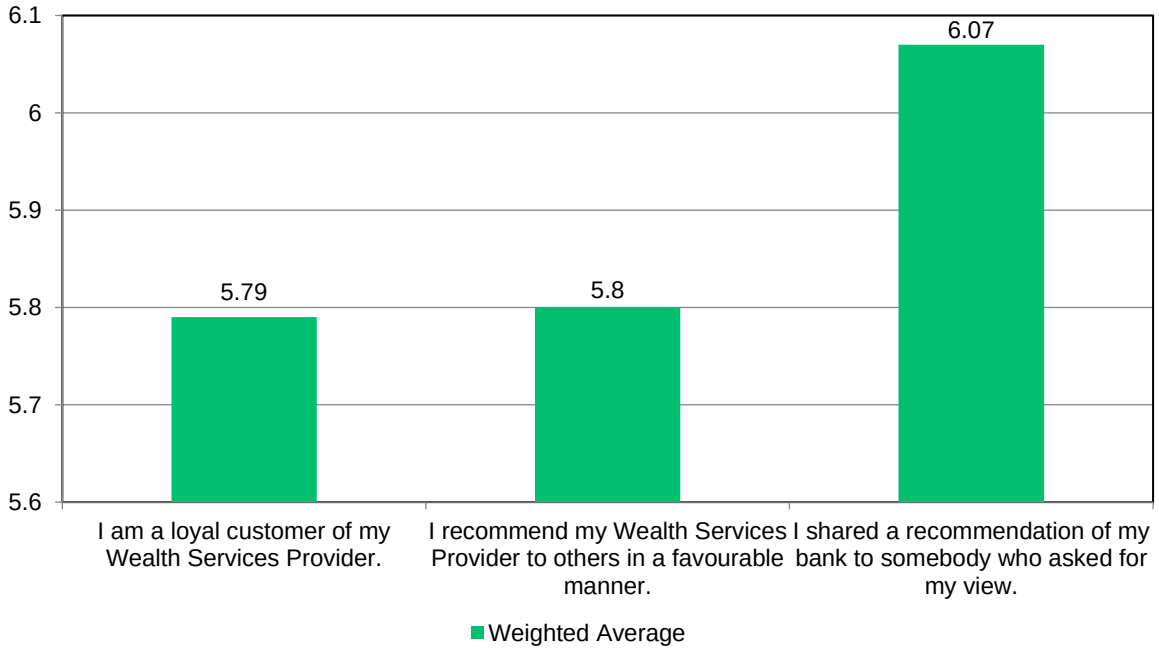
Table 4.13: Summary of the participants' responses to the statements related to RA in the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Robo-Advice (RA)	I expect a simple and convenient experience from the robo-advisor.	Strongly Disagree	71	15.57%	3.94
		Disagree	88	19.30%	
		Slightly Disagree	50	10.96%	
		Neutral	12	2.63%	
		Slightly Agree	79	17.32%	
		Agree	134	29.39%	
		Strongly Agree	22	4.82%	
	Robo-advisor investment management should provide a better return on investment than a financial professional.	Strong Disagree	76	16.67%	3.87
		Disagree	86	18.86%	
		Slightly Disagree	53	11.62%	
		Neutral	15	3.29%	
		Slightly Agree	82	17.98%	
		Agree	119	26.10%	
		Strongly Agree	25	5.48%	
	A robo-advisor would be more practical for me to utilise than a financial professional when assessing financial assets (cash, bonds,	Strongly Disagree	111	24.34%	2.93
		Disagree	137	30.04%	
		Slightly Disagree	74	16.23%	
		Neutral	8	1.75%	
		Slight Agree	76	16.67%	
		Agree	33	7.24%	
		Strongly Agree	17	3.73%	
	I have more faith in a robo-advisor's data correctness than I do in advice from a financial professional.	Strongly Disagree	156	34.21%	2.51
		Disagree	118	25.88%	
		Slightly Disagree	84	18.42%	
		Neutral	21	4.61%	
		Slightly Agree	51	11.18%	
		Agree	21	4.61%	
		Strongly Agree	5	1.10%	

4.4.11 Behavioural loyalty (BL)

The responses of the participants to the statements they were given on behavioural loyalty (BL) regarding the adoption of FinTech is depicted in Figure 4.23. The statements with regards to behavioural loyalty is listed, analysed, and explored independently in Table 4.14 below.

Figure 4.23: Illustration of the perception of BL in the adoption of FinTech according to the participants.



Most respondents (93.20%) said they were devoted clients of their wealth service provider, and they have positive things to say about their wealth service provider (94.30%). Most respondents (96.72%) said they would suggest their wealth service provider to someone who asked for their opinion. The weighted average for this statement was 6.07, suggesting that the respondents would generally recommend their wealth service provider to someone who asked for their opinion.

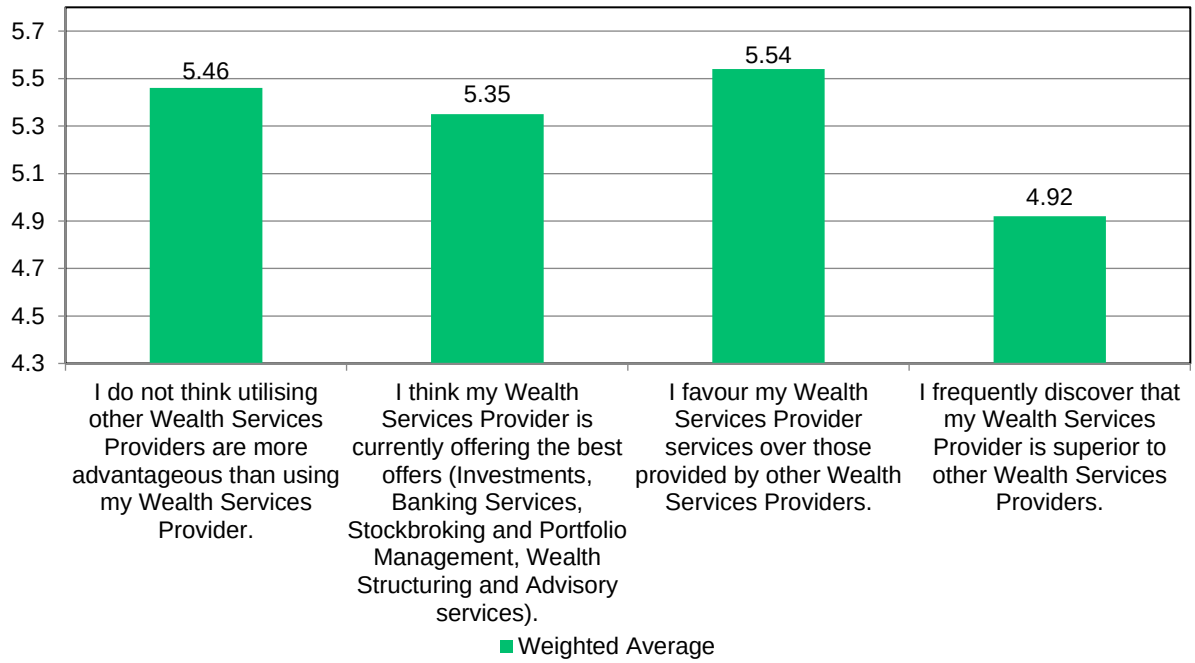
Table 4.14: Summary of the perception of the respondents of BL in the adoption of FinTech by the statements provided to them.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Behavioural Loyalty (BL)	I shared a recommendation of my wealth service provider to somebody who asked for my view.	Strongly Disagree	0	0%	6.07
		Disagree	0	0%	
		Slightly Disagree	8	1.75%	
		Neutral	7	1.54%	
		Slightly Agree	46	10.09%	
		Agree	277	60.75%	
		Strongly Agree	118	25.88%	
	I recommend my wealth service provider to others in a favourable manner.	Strong Disagree	0	0%	5.80
		Disagree	0	0%	
		Slightly Disagree	5	1.10%	
		Neutral	21	4.61%	
		Slightly Agree	67	14.69%	
		Agree	328	71.93%	
		Strongly Agree	35	7.68%	
	I am a loyal customer of my wealth service provider.	Strongly Disagree	0	0%	5.79
		Disagree	0	0%	
		Slightly Disagree	9	1.97%	
		Neutral	22	4.82%	
		Slight Agree	70	15.35%	
		Agree	309	67.76%	
		Strongly Agree	46	10.09%	

4.4.12 Attitudinal loyalty (AL)

The statements about attitudinal loyalty (AL) in connection to the adoption of FinTech was addressed by the respondents and their perceptions are illustrated in Figure 4.24 below. The results are also tabulated and summarised in Table 4.15 and a discussion about the responses are given after that.

Figure 4.24: Illustration of the responses to the statements about AL in the adoption of FinTech.



Many of the respondents (86.41%) do not believe that hiring another wealth service provider is better than using their own wealth service provider, and they thought that their current wealth service provider has the best deals (84.86%). 73.24% of the respondents reported that they frequently found their wealth service provider to be better than other wealth service providers, while 88.82% preferred the services offered by their wealth service provider above those of other wealth service providers. The weighted average for this statement was 5.54 indicating that the respondents generally preferred the services offered by their wealth service provider above those offered by other wealth service providers.

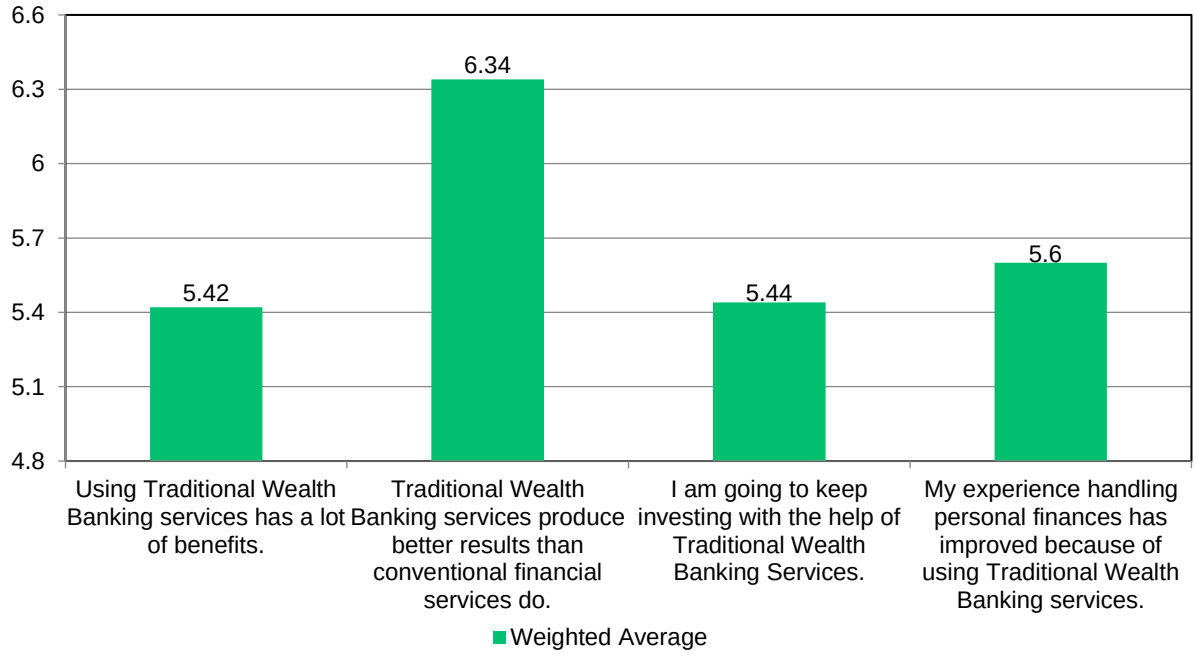
Table 4.15: Summary of the responses to the statements about AL in the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Attitudinal Loyalty (AL)	I favour my wealth service provider services over those provided by other wealth service providers.	Strongly Disagree	0	0%	5.54
		Disagree	1	0.22%	
		Slightly Disagree	24	5.26%	
		Neutral	12	2.63%	
		Slightly Agree	116	25.44%	
		Agree	254	55.70%	
		Strongly Agree	35	7.68%	
	I do not think utilising other wealth service providers are more advantageous than using my wealth service provider.	Strong Disagree	1	0.22%	5.46
		Disagree	2	0.44%	
		Slightly Disagree	29	6.36%	
		Neutral	30	6.58%	
		Slightly Agree	117	25.66%	
		Agree	245	53.73%	
		Strongly Agree	32	7.02%	
	I think my wealth service provider is currently offering the best offers (Investments, Banking Services, Stockbroking and Portfolio	Strongly Disagree	0	0%	5.35
		Disagree	2	0.44%	
		Slightly Disagree	40	8.77%	
		Neutral	27	5.92%	
		Slight Agree	151	33.11%	
		Agree	198	43.42%	
		Strongly Agree	38	8.33%	
	I frequently discover that my wealth service provider is superior to other wealth service providers.	Strongly Disagree	1	0.22%	4.92
		Disagree	4	0.88%	
		Slightly Disagree	85	18.64%	
		Neutral	32	7.02%	
		Slightly Agree	176	38.60%	
		Agree	136	29.82%	
		Strongly Agree	22	4.82%	

4.4.13 Traditional wealth banking (TWB)

In Figure 4.25, the statements showing the respondent's perceptions of traditional wealth banking (TWB) in relation to FinTech adoption is presented. Each statement relating to traditional wealth banking is tabulated in Table 4.16 below and a discussion on the results are given after that.

Figure 4.25: Illustration of the respondents' perceptions of TWB in relation to FinTech adoption.



Many respondents (86.18%) believed there were several advantages to adopting traditional wealth banking services, and believed they would keep using traditional wealth banking services for their investments (84.40%). 85.97% of the respondents believed that adopting services from traditional wealth banking had enhanced their ability to manage their personal money and the vast majority of respondents (94.30%) believed that traditional wealth banking services outperform traditional financial services in terms of results. The weighted average for this statement was 6.34 illustrating that the respondents generally agreed that traditional financial services don't produce as good results as traditional wealth banking services.

Table 4.16: Summary of the respondents' perceptions of TWB in relation to the adoption of FinTech.

Construct	Statement	Rating scale question	Total respondents	Percentage respondents	Weighted Average
Traditional Wealth Banking (TWB)	Traditional wealth banking services produce better results than conventional financial services do.	Strongly Disagree	0	0%	6.34
		Disagree	0	0%	
		Slightly Disagree	9	1.97%	
		Neutral	17	3.73%	
		Slightly Agree	40	8.77%	
		Agree	132	28.95%	
		Strongly Agree	258	56.58%	
	My experience handling personal finances has improved because of using traditional wealth banking services.	Strong Disagree	0	0%	5.60
		Disagree	1	0.22%	
		Slightly Disagree	21	4.61%	
		Neutral	42	9.21%	
		Slightly Agree	95	20.83%	
		Agree	233	51.10%	
		Strongly Agree	64	14.04%	
	I am going to keep investing with the help of traditional wealth banking services.	Strongly Disagree	0	0%	5.44
		Disagree	1	0.22%	
		Slightly Disagree	52	11.43%	
		Neutral	18	3.96%	
		Slight Agree	111	24.40%	
		Agree	220	48.35%	
		Strongly Agree	53	11.65%	
	Using traditional wealth banking services has a lot of benefits	Strongly Disagree	0	0%	5.42
		Disagree	2	0.44%	
		Slightly Disagree	48	10.53%	
		Neutral	13	2.85%	
		Slightly Agree	140	30.70%	
		Agree	199	43.64%	
		Strongly Agree	54	11.84%	

4.5 Conclusion

This chapter's main objective was to discuss and present the findings of the study after the sample's questionnaires were examined. With an emphasis on descriptive statistics, the biographical and interpreting construct items and corresponding statements effecting the perceptions for the adoption of FinTech applications with the wealth banking model were provided.

In the following chapter, the findings are further examined, and the study's conclusions and suggestions are presented. Each proposed hypothesis is explored in greater detail with a discussion based on other academic research and this study's findings. The chapter will also go into detail about the significance of the discoveries of this study and its implications for theory and practice.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter 4 dealt with the findings and interpretations of the quantitative data of the study. The data were analysed in consideration of biographical and individual variables and dimensions that affect how clients perceive adopting FinTech applications in wealth banking at a major South African bank.

The main objective of this field study was to evaluate the perceptions of clients to adopt FinTech applications in wealth banking at a major South African bank. The approach of this study was to first conduct a broad literature review to understand and to gather data on the individual dimensions of perceived risk, perceived usefulness, perceived ease of use, brand image, perceived security, attitude, trust, intention to adopt fintech, artificial intelligence, robo-advice, behavioural loyalty, attitudinal loyalty, and traditional wealth banking that affect how clients perceive adopting FinTech applications in wealth banking at a major South African bank. Upon obtaining this information, the research methodology was established to be a quantitative investigation by way of Likert scale questions to establish the factors that impact the perception of FinTech adoption of wealth clients. A research survey was conducted to validate, challenge, and compare the outcomes with the literature.

This chapter contains a summary of the findings of the study, objectives, recommendations, limitations, possible future research, and conclusions.

5.2 Summary and major findings of the study

The primary objective of the study was to evaluate the perceptions of clients to adopt FinTech applications in wealth banking at a major South African bank. The secondary objectives were to provide an overview of FinTech applications and wealth banking, to assess the impact of technology advancements on client behaviour, to evaluate the bank/client trusted relationship when incorporating artificial intelligence in wealth banking,

and to identify the aspects of relationship quality that impact a client's perception when adopting artificial intelligence within wealth banking.

According to the findings of this study, wealth management has an aging client base with ages 45 to 64 making up 50% of the client base surveyed, with the younger generation and females lagging substantially. The wealth management client base is dominated by white males. The majority of the wealth client base are well educated with 60% of clients having a bachelor's degree or post graduate diploma. The wealth management client base are from all the various provinces within South Africa and the majority are working either full time or part time with retirees making up the rest. Their incomes also fluctuated, however most of the client's indicated that they earn in the brackets of up R5 000 000.

The demographics of the respondents don't appear to be much younger in terms of the age distribution in particular. The present wealth services industry offers little options for the younger populations, despite their interest in FinTech solutions. Wealth management is falling behind overall growth trends in the distribution of female clients. More women are using money management services globally and additionally, more women have extra money to invest. Also, women generally inherit more wealth due to their higher life expectancy.

The respondents also make use of various wealth service providers and use a combination of various wealth service offerings. Wealth management clients have a well-established relationship with either their wealth banker, investment manager, or both. The wealth management client base surveyed has a strong preference to get advice with the human element involved, especially when large transactions are at stake. As a general rule, wealth clients also prefer speaking to someone at the financial intuition.

It was found that FinTech services improve efficiency for wealth management clients, whilst adding to the client's usefulness and service needs. Obtaining equipment to use FinTech services, according to the client base surveyed, was easy while the overall feeling was that FinTech services are easy to use, makes transactions easy and learning about FinTech can be done relatively quickly. FinTech services was also seen as a smart move.

Only well-known wealth service providers' service offerings are used with peace of mind by wealth management clients. The wealth management client base also felt that sensitive information is transferred securely using financial applications overall and are reliable enough to complete a transaction. FinTech services are generally experienced as reliable and a secure system. The respondents that already used FinTech services indicated that they are willing to keep using FinTech services.

AI technology adoption is seen as value adding in that AI technology can improve quality of life and are generally reliable, with most of the wealth client base willing to give AI products and services a try. It is expected that a robo-advisor should provide a convenient and simple experience for clients, and the respondents indicated that they have more faith in data correctness from a robo-advisor compared to a financial professional. The customer must understand what they truly want, the available range of returns, and the risk parameters in order to use robo-advice. An advisor is the best person to portray this part because it is a complex process. One of the disadvantages mentioned was that robo-advice uptake was a problem. To persuade the client to commit and uphold the long-term goals, the human aspect was necessary. Another problem with robo-advisors is that they have a restricted selection of investments and can only use retail funds, not institutional ones.

Wealth service providers used by the wealth client base surveyed indicated that when asked for their view, they will share a recommendation of their wealth service provider. The wealth client base also indicated that they favour their wealth service provider services over those provided by other wealth service providers, while a few indicated that utilising other wealth service providers are more advantageous than using their current wealth service provider. The respondents also felt that wealth banking services produce better results than conventional financial services, leading to an improvement in handling personal finances.

With greater engagement from diverse role players competing for market share, the status of the South African wealth management business is expanding overall. Following the financial crisis of 2008, portfolio diversification has increased in the sector, and the market has reacted favourably to more value-based financial advice.

The wealth management sector in South Africa is several years behind that of the US and the UK. FinTech is barely present in the core wealth management sector right now. There aren't many entry-level robo-advisors in the South African wealth market, but those that do exist pose little danger to the market leaders. The country's market is stagnant, so there are no incentives for the major businesses to adopt the new technology and offer premium robo-advice services. Other wealth technology products, such as micro-investing, portfolio management platforms, etc., do not have substantial FinTech penetration in the wealth management sector.

5.3 Recommendations

The recommendations were formulated and discussed to assist in improving the wealth management client's perceptions when adopting FinTech in a wealth banking model. This is done in order to assist wealth service providers to become more competitive in service offerings and client value relationship management. The following recommendations are made based on the results found in Chapter 4.

- Overview of FinTech applications and wealth banking.

  Wealth management should capitalise on the overall positive sentiment of perceived security (PS) of FinTech applications within product design, service offerings and client dealings. This study has shown that 75.66% of the respondents felt that sending sensitive information between FinTech applications are secure. A slim majority (50.87%) in the field study indicated that they felt entirely secure to provide FinTech applications with their most sensitive information, while 89.69% agreeing that FinTech applications are trustworthy enough to conduct a transaction. Overall FinTech applications is viewed as secure to convey sensitive information by the majority of the respondents (90.13%).

- Assess the impact of technology advancements on client behaviour.

  Wealth management should acknowledge the impact of technology advancements on client behaviour, especially utilising technology advancements in taking a long-term view on competitive advantage and getting a better understanding of the client base in planning strategy. This is supported by this field study's findings of FinTech allowing

clients to get the services they need (87.69%), FinTech being generally helpful (87.69%), restrictions such as time and geography that will become almost obsolete and an advantage (69.08%), and FinTech boosting efficiency (94.95%). Therefore, it is clear that technology advancements have a positive impact on client behaviour.

- Evaluate the bank/client trusted relationship when incorporating artificial intelligence in wealth banking.

  Ensuring a trusted relationship is non-negotiable for wealth management and should take high priority in evaluating the bank/client relationship when incorporating or planning FinTech services in wealth banking. In this field study, 80.43% of the respondents expressed confidence in the security of FinTech services, whilst 59.35% indicated that FinTech services keep money secure. 60.45% of the respondents felt that the right to privacy was upheld by FinTech services and 85.27% indicated that FinTech services are reliable overall. This indicates that trust in FinTech services is a major factor in the bank/client relationship when incorporating FinTech.

- Identify the aspects of relationship quality that impact a client's perception when adopting artificial intelligence within wealth banking.

  Understanding what drives client perception in relationship quality and even more importantly, how these perceptions need to be combined to find the right balance of quality, is non-negotiable for wealth management. Several factors submitted in this field study play a role in the relationship quality and client perception when adopting FinTech. Two of the factors playing a role in this field study are perceived risk (PS) and brand image (BI). When making significant financial transactions, 90.10% of respondents indicated that they would prefer human contact, and 77.20% indicated that when conducting their banking, they would like to speak to someone at the financial institution directly. Almost all of the respondents (98.25%) indicated that they had confidence in FinTech services provided by wealth service providers and 98.02% of the respondents indicated that they had a preference to use FinTech service offerings by well-known service providers.

- Address the aging client base.

  It is important for the wealth management business to understand the risk of an aging book and even more importantly, it is critical to implement proper wealth transfer strategies (follow the wealth) to include the next generation. How this generation will be serviced as part of innovative products and solutions within a wealth client proposition will become key to retain and maintain the relationship. Given that most of the wealth management clients surveyed was older than 45 years of age, poses a risk to the wealth management business as wealth is passed on to the next generation. The population shows that respondents between the ages of 45 and 64 years made up 50.22% of the population, whilst ages 65 years and older made up 17.34%.

- Address the availability of new asset classes.

  With a diversified and growing investment market with increasing options, wealth management need to look at how they can deliver alternative asset classes to add value to a growing and more diversified client base. Long term, alternative asset classes are becoming more common thanks to FinTech, however for now, the emergence of alternative asset classes like cryptocurrency has largely benefited the wealth management sector. The complexity of the guidance has increased due to the new asset classes, which is always a profitable area for the wealth management providers. Managing complexity such as volatility, risk of various asset classes might be in the form of robo-advisors. In this field study, 51.53% of the respondents anticipated a straightforward and practical encounter with the robo-advisor, whilst 49.56% of the respondents said that investment management by robo-advisors should offer a higher return on investment than that of a financial expert.

- Acknowledge the FinTech opportunities.

  Wealth management need to find the FinTech disruptor of the status quo. In wealth management business, FinTech does not appear to be disrupting the status quo; instead, it has made it possible to advance. Although FinTech in general and robo-advisers in particular, are facilitating access to wealth management, the traditional wealth management sector is nonetheless thriving. Overall, FinTech has improved the

services offered by the traditional wealth management sector. Although it is generally agreed that digitising the firm and utilising digital platforms will lead to future growth. This is further supported by the fact that 94.95% of the respondents felt FinTech boosted efficiency, whilst 99.78% agreed that it is easy to obtain the necessary equipment to use FinTech, 95.39% felt FinTech services are simple to use, and 92.55% agreed that FinTech simplifies transactions.

- Acknowledge a fully digital FinTech platform as the future of wealth management business.

  Wealth management need to accept that the future lies in a fully digital FinTech platform that serves as a one-stop shop for all wealth management needs, regardless of the amount of money invested. Regardless of the market, digital and online engagement is the future of the wealth management industry and wealth technology. Deep personalisation is inevitable with the rise of artificial intelligence and big data, and that is unquestionably crucial in this sector. The current nature of advice professionals will evolve, becoming a more individualised one-stop solution thanks to the more sophisticated client interaction digital platforms. Supporting this is the 77.20% respondents who wish to use FinTech services and the 67.54% of the respondents that said that they would use the services provided by FinTech companies. If they already use FinTech services, 97.15% of the respondents believed that they would keep doing so.

- Include opportunities for generation X and Y.

  Wealth management is missing the next generation of wealth clients in their current status quo. The demographics do not appear to be significantly younger, particularly in the age distribution. The wealth management industry currently only offers a few options for the younger populations, despite their interest in FinTech solutions. They are becoming more active in passive and alternative investing like ETFs. Capturing this market with the wealth space will secure huge returns as this is the next generation of wealthy clients. 21.94% of the respondents were between the ages of 25 and 44 years and 3.95% were between the ages of 18 and 24 years.

- Investigate and include women clientele opportunities.

  Wealth management need to devote time, funds, and energy into the understanding of women clientele in their client base and the role they play in either families or on their own. This is almost non-existing within wealth management and an important factor that is missed. The current state of wealth management lags behind international trends in the distribution of its customers among women. More women are interested in money management services; women generally inherit more wealth due to their higher life expectancy; and more and more women have extra money to invest. One recommendation is to use female advisors as points of contact with the growing female target population. The majority of the clients are couples, and the decision-making process is largely a shared one. Only 27.63% of the respondents were female, compared to 72.37% that were male.

- Always consider regulatory concerns.

  Although not formally tested, it is noteworthy to mention especially after the 2008 financial crisis, that FinTech makes regulation more complex because is it not static, and it offers alternatives such as WealthTech that includes robo-advisors. Banks and regulators will have to make sure that a sound regulatory environment is upheld and that when clients transact via FinTech services, that all regulatory compliances are met to ensure client and system trust as well as the protection of private and institutional data. Should a regulatory breach occur, it can have serious reputational implications and financial loss.

5.4 Limitations of the study

Some of the limitations of the study is provided below:

- To cover all wealth management businesses and institutions in South Africa would be impractical.
- Gaining access to more experienced wealth managers and wealth management service providers.
- Getting them to talk about the drawbacks of their existing procedures and potential conflicts of interest in their models.

- Time management is necessary because there isn't enough time to cover the subject in depth.
- The study's limitations include those aspects that may have challenges to this research.
- The findings of the study can not necessarily be generalised throughout the wealth management business because this study only examined the wealth management clients of one large South African bank.
- Finally, it should be highlighted that the shortcomings mentioned above don't inherently invalidate the contributions made by this study but rather provide room for further investigation.

5.5 Possible future research

FinTech has generated some attention and research possibilities under researchers, some of which has focused on WealthTech and its effects, but no research has been conducted specifically in relation to South Africa or other financial institutions. The results obtained in this research study will widen the regional knowledge gap. It is suggested that another study should expand the analysis to include other South African wealth management service providers. Future academics will also need to look into how wealthy clients feel about using FinTech services in conjunction with the wealth banking paradigm. The results of this study are limited to high-net-worth clients and wealth management. Therefore, it enables academics to broaden their future studies into the mass affluent market.

This study was an exploratory investigation into the factors that influence clients' perceptions when FinTech is adopted in wealth management. The research did not cover the broad affluent market because it was restricted to the high-net-worth and ultra-high-net-worth clients of a large South African bank. More research is needed in the entry level and mass affluent groups to fully understand the acceptance of FinTech and WealthTech and the impact of FinTech adoption in the wealth domain.

5.6 Conclusion

The purpose of this research was to examine the effects of the client's view on the adoption of FinTech and how those perceptions will affect the wealth client base of a major South African bank. The financial services sector is undergoing a rapid shift because of technology and innovation; this transformation in wealth management is driven by technology and is referred to as WealthTech, a subset of FinTech.

The purpose of the study was to comprehend how FinTech, shifting market dynamics, and shifting customer demographics impact the uptake of FinTech, particularly in the wealth management sector. It is of utmost importance for wealth management businesses to comprehend how the situation is growing and how to react to it when FinTech adoption is managed within the wealth banking model due to the topical nature of FinTech and especially WealthTech. FinTech and the adoption thereof would enhance management effectiveness, service quality as well as market leading products by utilising newer information technology. By using technology in the wealth banking industry and combining it with personal management of the wealth relationship model, a market leading value proposition can be realised.

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Appendices:

Appendix A: Research Instrument

The adoption of FinTech applications in Wealth Banking.

FinTech Adoption

Information to Respondents

You are invited to participate in a project entitled: The adoption of FinTech applications in Wealth Banking.

This study will be conducted as the principle investigator (PI) by Mr. Pierre Nel, MBA student at the University of the Free State, Bloemfontein, South Africa. This project is being supervised by Prof. Johan Coetzee at the Department of Economics and Finance at the University of the Free State in Bloemfontein, South Africa, Tel: 051 4019266, E-mail: CoetzJ@ufs.ac.za

Project explanation

This project aims to gather information from wealth clients about their perceptions to adopt FinTech applications in wealth banking in a major South African bank. This project aims to gain better understanding of the systematic acceptance of new technology by adding variables to examine the influencing mechanisms involved in the acceptance of FinTech services to provide comprehensive predictors. The study will hopefully identify the pertinent factors of user attitudes and behaviours to assess the acceptability of new technologies in the wealth management model, especially in a world that is increasingly more digital in nature.

What will I be asked to do?

You are being asked to participate in this project by completing an anonymous electronic survey. It is expected that the survey will be completed in 10-15 minutes.

What will I gain from participating?

Your participation will enable you to provide answers to a wide range of questions that are designed to assess various variables that can be used to explain client perceptions of adopting FinTech applications in wealth banking as well as mechanisms that will be involved in the acceptance of FinTech services within the wealth banking model. The information from this project will be summarised and de-identified and published in relevant academic and other journals. The public output may be a catalyst for changes being implemented in the banking industry because of the findings. For you as an individual this may result in the future provision of banking services that may be more appropriate to your needs.

How will the information I give be used?

The data gathered in this project will be used for publication purposed in academic journals, textbooks and other suitable outlets. The publication should inform the wider community, and in particular wealth banking, about the mechanisms to adopt FinTech applications in wealth banking and particular wealth banking clients at a

major bank in South Africa.

What are the potential risks of participating in this project?

The researcher does not believe there are any risks involved in participating in this project. Participation is voluntary and confidentiality and anonymity is assured. Publication will only be in the form of aggregated data and no individual will be named or be able to be identified in any publication.

How will this project be conducted?

You are being asked to participate in this project by completing a survey.

Who will be conducting the study?

This study will be conducted as the principle investigator (PI) by Mr. Pierre Nel, MBA student at the University of the Free State, Bloemfontein, South Africa. This project is being supervised by Prof. Johan Coetzee at the Department of Economics and Finance at the University of the Free State in Bloemfontein, South Africa, Tel: 051 4019266, E-mail: CoetzJ@ufs.ac.za

* 1. Based on the above, do you want to participate in this project by completing a survey?

- ◯ Yes
- ◯ No

2. What is your sex?

- ◯ Male
- ◯ Female
- ◯ Other

3. What is your age?

4. Which race/ethnicity best describes you?

- ◯ Coloured
- ◯ Asian
- ◯ Black
- ◯ Indian
- ◯ White
- ◯ Other

5. Which of the following categories best describes your employment status?

- ◯ Employed, working full time
- ◯ Employed, working part-time
- ◯ Not employed, looking for work
- ◯ Not employed, NOT looking for work
- ◯ Retired
- ◯ Disabled, not able to work
- ◯ Other

6. What is the highest level of education you have completed?

- ◯ No Schooling
- ◯ High School
- ◯ Tertiary Diploma
- ◯ Bachelor's Degree
- ◯ Postgraduate Honors
- ◯ Postgraduate Masters
- ◯ Postgraduate PHD (Doctorate)
- ◯ Other

7. How much money did YOU personally earn in 2022? This includes money from jobs; net income from business, farm, or rent; pensions; dividends; interest; social security payments; and any other money income received by YOU. Please report the total amount of money you earned - do not subtract the amount you paid in taxes or any deductions listed on your tax return.

8. What province do you reside in?

- ◯ Free State
- ◯ Northwest
- ◯ Gauteng
- ◯ Limpopo
- ◯ KZN
- ◯ Mpumalanga
- ◯ Western Cape
- ◯ Eastern Cape
- ◯ Northern Cape

9. Primary Bank (This is the bank where the account is held where your salary is paid into)

- ◯ Standard Bank
- ◯ Nedbank
- ◯ Absa
- ◯ Investec
- ◯ First National Bank
- ◯ Capitec
- ◯ Other

10. Primary Wealth Services Provider (This is your Wealth Services Provider used for your investment management)

- ◯ Investec
- ◯ Absa Wealth
- ◯ RMB Wealth
- ◯ FNB Private Wealth
- ◯ Nedbank Wealth
- ◯ Standard Bank
- ◯ Sanlam Private Wealth
- ◯ I do not make use of any Wealth Service Providers
- ◯ Other

11. Wealth Service Offerings Used

Wealth Services include:

Discretionary Investments:
Onshore and Offshore discretionary fund solutions, unit trusts and share portfolios.

Structured Solutions:
Bespoke structured notes and derivatives.

Stockbroking:
Onshore and Offshore stockbroking exchanges

Portfolio Management:
Equity, Multi-Asset Class, Property, Offshore and Bespoke Portfolios.

Wealth Structuring and Advisory Services:
Trust and Wills, Legal and tax advisory services, Insurance and Estate Planning.

Banking Services:
Cash Management, Traditional cheque account.

Forex:
Direct dealing, Asset swops, Currency hedging.

Leverage:
Credit, Commercial property finance, Mortgage and vehicle loans and Investment backed lending.

- [ ] Discretionary Investments
- [ ] Structured Solutions
- [ ] Stockbroking
- [ ] Portfolio Management
- [ ] Wealth Structuring and Advisory Services
- [ ] Banking Services
- [ ] Forex
- [ ] Leverage
- [ ] Other

12. My Wealth Banker and Investment Manager is known to me

- ◯ Wealth Banker only
- ◯ Investment Manager only
- ◯ Wealth Banker and Investment Manager
- ◯ No - not at all
- ◯ None of the above

The following statements relate to your perceptions and preferences regarding FinTech adoption.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

13. **Perceived Risk (PR)**

The statements below relate to your perceptions of **Perceived Risk (PR)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
Using FinTech services will expose my personal information.	◯	◯	◯	◯	◯	◯	◯
FinTech services are risky overall.	◯	◯	◯	◯	◯	◯	◯
When I conduct my banking, I like to speak with someone at the financial institution itself.	◯	◯	◯	◯	◯	◯	◯
I prefer to interact with a human when I do big financial transactions.	◯	◯	◯	◯	◯	◯	◯

14. **Perceived Usefulness (PU)**

The statements below relate to your perceptions of **Perceived Usefulness (PU)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
Using FinTech does meet my service needs.	○	○	○	○	○	○	○
FinTech services does improve efficiency.	○	○	○	○	○	○	○
Overall, FinTech services are useful to me.	○	○	○	○	○	○	○
I believe there will be no time or geographic restrictions when using FinTech services, which is advantageous to me.	○	○	○	○	○	○	○

15. **Perceived Ease of Use (PEU)**

The statements below relate to your perceptions of **Perceived Ease of Use (PEU)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
It is easy to use FinTech services.	○	○	○	○	○	○	○
It is easy to have the equipment to use FinTech services (cell phone, APP, WIFI, et al).	○	○	○	○	○	○	○
I believe using a FinTech service makes transactions incredibly simple.	○	○	○	○	○	○	○
I believe learning about FinTech services in general can be done quickly.	○	○	○	○	○	○	○

16. **Brand Image (BI)**

The statements below relate to your perceptions of **Brand Image (BI)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Wealth Service Providers are institutions offering investment advisory services that combines financial services to address affluent clients needs.

Wealth Services include:
Discretionary Investments, Structured Solutions, Stockbroking, Portfolio Management, Wealth Structuring and Advisory Services, Banking Services, Forex, Leverage.

Wealth Products include:
Onshore and Offshore discretionary fund solutions, unit trusts and share portfolios, Bespoke structured notes and derivatives, Onshore and Offshore stockbroking exchanges, Equity, Multi-Asset Class, Property, Offshore and Bespoke Portfolios, Trusts and Wills, Legal and tax advisory services, Insurance and Estate Planning, Cash Management, Traditional cheque account, Direct dealing, Asset swops, Currency hedging, Credit, Commercial property finance, Mortgage and vehicle loans and Investment backed lending.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
The Wealth Service Providers do deliver quality products and services.	○	○	○	○	○	○	○
I prefer to use FinTech services offered by well-known Wealth Service Providers.	○	○	○	○	○	○	○
I have confidence in FinTech service provided by Wealth Service providers.	○	○	○	○	○	○	○
In general, FinTech has a positive reputation.	○	○	○	○	○	○	○

17. **Perceived Security (PS)**

The statements below relate to your perceptions of **Perceived Security (PS)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech applications refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I feel secure sending sensitive information across FinTech applications.	◯	◯	◯	◯	◯	◯	◯
Giving the FinTech applications my most private information make me feel completely secure.	◯	◯	◯	◯	◯	◯	◯
Sensitive information transfer securely using financial applications overall.	◯	◯	◯	◯	◯	◯	◯
I believe that FinTech applications are reliable enough to complete a transaction.	◯	◯	◯	◯	◯	◯	◯

18. **Attitude (AT)**

The statements below relate to your perceptions of **Attitude (AT)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
Utilising FinTech services is a smart move.	○	○	○	○	○	○	○
FinTech services are of interest to me.	○	○	○	○	○	○	○
Utilising FinTech services is something I support.	○	○	○	○	○	○	○
Using FinTech services give me a feeling of discovery.	○	○	○	○	○	○	○

19. **Trust (TRU)**

The statements below relate to your perceptions of **Trust (TRU)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I am confident that the FinTech Service's transaction system is secure.	○	○	○	○	○	○	○
I think using FinTech services keeps money secure.	○	○	○	○	○	○	○
FinTech services are generally reliable.	○	○	○	○	○	○	○
I feel personal privacy is maintained when utilising FinTech services.	○	○	○	○	○	○	○

20. **Intention of FinTech Adoption (INT)**

The statements below relate to your perceptions of **Intention of FinTech Adoption (INT)** regarding FinTech adaption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

FinTech services refer to mobile payment application, banking application, Robo-advisor, lending application.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I am willing to keep using FinTech services if I have already done so.	○	○	○	○	○	○	○
For information connectivity, I wish to employ FinTech services.	○	○	○	○	○	○	○
I will tell my friends about FinTech services.	○	○	○	○	○	○	○
The services offered by FinTech services, are something I want to employ.	○	○	○	○	○	○	○

21. **Artificial Intelligence (AI)**

The statements below relate to your perceptions of **Artificial Intelligence (AI)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

Artificial Intelligence (AI) technology is the ability of a computer or robot that is controlled by a computer to do tasks usually done by humans.

Artificial Intelligence Services include virtual chat bots and virtual agents.

Artificial Intelligence Products include speech recognition and machine vision.

Intelligent Products is software, sensors, processes and date driving significant improvements with regards to products performance and function.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
The adoption of AI technology will improve our quality of life.	○	○	○	○	○	○	○
I want to give the products and services utilising AI technology a try.	○	○	○	○	○	○	○
I believe that intelligent products are generally reliable.	○	○	○	○	○	○	○

22. **Robo-Advice (RA)**

The statements below relate to your perceptions of Intention of **Robo-Advice (RA)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

Robo-advisor is a type of automated financial advisor that provides algorithm-driven wealth management services with little to no human intervention.

Investment management refers to the handling of financial assets and other investments by professionals for clients.

Financial professional is someone who provides expertise for clients decisions around money matters, personal finances and investments.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I expect a simple and convenient experience from the Robo-advisor.	○	○	○	○	○	○	○
Robo-advisor investment management should provide a better return on investment than a financial professional.	○	○	○	○	○	○	○
A Robo-advisor would be more practical for me to utilise than a financial professional when assessing financial assets (cash, bonds, stocks and bank deposits).	○	○	○	○	○	○	○
I have more faith in a Robo-advisor's data correctness than I do in advice from a financial professional.	○	○	○	○	○	○	○

23. **Behavioural Loyalty (BL)**

The statements below relate to your perceptions of **Behavioural Loyalty (BL)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

Wealth Service Providers are institutions offering investment advisory services that combines financial services to address affluent clients needs.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I am a loyal customer of my Wealth Services Provider.	◯	◯	◯	◯	◯	◯	◯
I recommend my Wealth Services Provider to others in a favourable manner.	◯	◯	◯	◯	◯	◯	◯
I shared a recommendation of my bank to somebody who asked for my view.	◯	◯	◯	◯	◯	◯	◯

24. **Attitudinal Loyalty (AL)**

The statements below relate to your perceptions of **Attitudinal Loyalty (AL)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

Wealth Service Providers are institutions offering investment advisory services that combines financial services to address affluent clients needs.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
I do not think utilising other Wealth Services Providers are more advantageous than using my Wealth Services Provider.	○	○	○	○	○	○	○
I think my Wealth Services Provider is currently offering the best offers (Investments, Banking Services, Stockbroking and Portfolio Management, Wealth Structuring and Advisory services).	○	○	○	○	○	○	○
I favour my Wealth Services Provider services over those provided by other Wealth Services Providers.	○	○	○	○	○	○	○
I frequently discover that my Wealth Services Provider is superior to other Wealth Services Providers.	○	○	○	○	○	○	○

25. **Traditional Wealth Banking (TWB)**

The statements below relate to your perceptions of **Traditional Wealth Banking (TWB)** regarding FinTech adoption.

To ensure clarity, the definitions to certain concepts used in the statements are:

FinTech can be defined as a computer programme and other technology that is used to support and enable banking and financial services.

Traditional Wealth Banking Services is an investment service that combines other financial services to address the needs of affluent clients through a personalised wealth management advisor.

Conventional Financial Services is basic bank term deposits, savings and current accounts and lending products and limited personalised financial advisory products and services.

Please rank the following statements on a rating scale from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral Option	Slightly Agree	Agree	Strongly Agree
Using Traditional Wealth Banking services has a lot of benefits.	○	○	○	○	○	○	○
Traditional Wealth Banking services produce better results than conventional financial services do.	○	○	○	○	○	○	○
I am going to keep investing with the help of Traditional Wealth Banking Services.	○	○	○	○	○	○	○
My experience handling personal finances has improved because of using Traditional Wealth Banking services.	○	○	○	○	○	○	○

Appendix B: Approval to do research

Leadership, Learning and Talent

5th Floor Absa Towers West
15 Troye Street
Johannesburg 2001
South Africa

Swift address: ABSA ZA JJ

19 October 2022

University of the Free State
PO Box 339
Bloemfontein
9301

Dear Sir / Madam

APPROVAL TO CONDUCT RESEARCH

We hereby confirm that the Absa Wealth Management department in Absa Bank Limited have granted approval to conduct research for:

Name	: Pierre Retief Nel
Student Number	: 2005041153
ID No	: 7409275070080
Qualification	: MBA (Masters in Business Administration)
Year	: 2022

Regards

Alex Kennedy
Regional Segment Head – Wealth & Private Banking
T +27 11 225 8032
Absa, Forum Building, Ground Floor, 16 Donald Murray Avenue, Bloemfontein, 9301, South Africa

Appendix C: Ethical Clearance

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

01-Dec-2022

Dear Mr Pierre Nel

Application Approved

Research Project Title:
The adoption of Fintech applications in wealth banking.

Ethical Clearance number:
UFS-HSD2022/1854/22

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis
Chairperson: General/Human Research Ethics Committee

205 Nelson Mandela Drive
Park West
Bloemfontein 9301
South Africa

P.O. Box 339
Bloemfontein 9300
Tel: +27 (0)51 401 9337
duplessisA@ufs.ac.za
www.ufs.ac.za

Appendix D: Language Editing Certificate

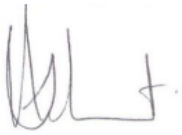
Dr M Schutte-Smith
Posbus 34995
Faunsig, 9325
084 607 1205
schuttem@ufs.ac.za

20 January 2023

To whom it may concern,

Herewith I, Marietjie Schutte-Smith (ID 8304050227089) declare that I have proofread and edited the following thesis by Pierre Nel: 'The adoption of Fintech applications in wealth banking'. This includes the evaluation of the grammar, content relevance, format of the dissertation, consistency, indexing and referencing. All changes were indicated by track changes and comments. The student confirmed by email that the changes and suggestions will be addressed.

Best regards,



M Schutte-Smith
PhD (Chemistry, UFS)