THE INFLUENCE OF FINANCIAL TECHNOLOGY ADOPTION ON BANKS FINANCIAL PERFORMANCE: THE CASE OF SELECTED PRIVATE BANKS IN ETHIOPIA

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DECLARATION

I, **EtsehiwotTamrat**, Declare that this work titled "***The influence of financial technology adoption on banks financial performance in the case of some private banks in Ethiopia",*** is my own effort and study and that all sources of materials used for the study have been duly acknowledged. I have produced it independently except for the guidance and suggestion of the research advisor.

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Name of student Date and signature

This study research paper has been submitted for examination with my approval as a university adviser.

MengistuBogale (PhD _____

Date and signature

Contents

ABSTRACT

The emphasis of this research is to analyze the impact of financial technology adoption on banks financial performance in the case of some private banks in Ethiopia. The researcher collected primary data on the impact of financial technology adoption on banks financial performance in the case of selected private banks in Ethiopia. The researcher used explanatory method to work on the project. The target population of the study was employees of Dashen Bank, Awash Bank, Bank of working at professional level. The study used Systematic sampling which is similar to simple random sampling, but it is usually slightly easier to conduct. Every member of the population is listed with a number, but instead of randomly generating numbers, individuals are chosen at regular intervals. The study employed statistical techniques such as explanatory statistics to analyze the data due to the quantitative nature of the study. The results are presented in respect of the impact of financial technology adoption on banks financial performance, in the form of total deposit, customer base and total loan. SPSS is statistical software tool used for analysis and presentation of data and it is used for the analysis of data collection. The research revealed that private banks could enhance their total deposit and total loan portfolios by embracing greater financial inclusion and automation. Increasing automation is also key to achieving a substantial expansion in their customer base.

Key Terms: financial technology; performance; sustainability; ASE; automation. Alternative payment method

CHAPTER ONE

INTRODUCTION

1.1. BACK GROUND OF THE STUDY

The term "fin-tech" is established by the fusion of "financial" and "technology." Fin-tech is commonly understood as technological innovation enabled by information technology in the finance industry. Fin-tech often indicates startup companies that provide alternative financial products and innovative financial solutions, although it also includes traditional financial institutions like banks (Puschmann, 2017).

Financial services and banking can adopt and evolve continuously using internet-based digital technologies to remain stakeholder-focused and competitive. The use of Internet based digital technologies in the financial services industry refers to Fin-Tech, which results in new business models and creating new services. Digital cash, digital currency, digital payments, digital invoicing, crypto currency, digital mortgage, digital remittance, digital investment, digital leasing, cash management, digital advising, digital factoring, digital insurance, crowd funding, digital lending are some of the examples of Fin-Tech services in the banking industry (Gomber et al., 2017).

Fin-tech substantially impacts society and how to save, take loans, make payments, and send remittances (Milian et al., 2019). Daud et al. (2022) found that the term artificial intelligence, clouding, and data technologies regarding fin-tech promotes the financial stability of 63 nations from 2006 to 2017. Through the channel of information and resource allocation effect, fin-tech development promotes enterprise transformation in China from 2012 to 2018 (Luo et al., 2022).

On the one hand, fin-tech helps efficiency-enhancing in the finance sector, changes the traditional business model, and brings customers the best experience in banking transactions (Vives, 2017, 2019). In China, from 2003 to 2017, Lee et al. (2021) found a positive effect of fintech on bank performance, namely, fin-techimpose the cost efficiency and technology banks use. In Jordan, Alkhazaleh and Haddad (2021) showed a positive relationship between banks' customer satisfaction and fin-tech products. The customers highly appreciated the ease of use and performance, security, transaction cost, availability, and accessibility of fin-tech products

Financial technology (FinTech), the product of the digitalization of financial services, drives the innovation of targeted application and development in the financial market. Traditional commercial banks, as transmitters of monetary policy and mediators of the nation's economy, have gradually developed and adopted emerging digital financial technologies (Bilan et al. 2019).

The role played by the banking industry is vital for the economic development and sustainability of the individual, industry as well as country. Therefore, it becomes important for the banks to bring value to stakeholders by reinventing processes and services (Ho et al., 2009) to achieve continuous performance in the banking industry. The growth can be possible by adopting and using state of art technology-enabled products and services to stakeholders and service delivery (Sharma, 2017). The convenient and efficient features of FinTech have rapidly expanded the scale of the financial market, and the emergence and development of new financial products have also significantly increased the degree of financial inclusion. Although the technological upgrading of FinTech and the replacement of financial functions have impacted banks on a large scale in technology and operation, they have also played an important role in promoting financial innovation in the banking industry (Thakor 2020).

Overall, the evolution of FIN Tech has been driven by a combination of technological innovation, changing consumer preferences, and regulatory developments. As the industry continues to evolve, we can expect to see further advancements in areas such as artificial intelligence, cybersecurity, and financial inclusion, shaping the future of finance for years to come.

Thus, banking products and services innovations due to adopting technology have completely changed the way banking industry operates and works. Ideally, FinTech helps to improve the business processes by streamlining its operations and services. (Ambastha&Momaya, 2004; Arulraj&Annamalai., 2020; Momaya, 2001).

1.2 Ethiopian Private Banks Background

The primary roles of commercial banks involve growing their customer base, collecting funds from depositors, and providing loans to borrowers, particularly in developing nations. Therefore, these three functions are crucial elements contributing to a bank's performance, specifically its profitability. Ethiopia has twenty five private Banks. From these twenty five banks three of them are leading private commercial banks according to their customer base, Total deposit volume and Total loan volume which can be highly affected by Fin tech adoption. These three private banks are Dashen Bank, Awash Bank and Bank of Abyssinia.

Customer base is an important component that can play vital role for the success and growth of a bank. It shows how accessible the service of the bank is among the society. The higher the customers base the higher return of service and product sale. The processes of getting more customer base will be efficient by the adoption of Fin tech. The leading private banks in Ethiopia i.e.Dashen Bank, Awash Bank and Bank of Abyssinia have large number of customers throughout the country and performing well in the banking industry.

Total deposit is the most important component in banking industry, which can determine the growth and profitability of an organization. The higher incremental deposit leads higher increment in capacity of lending and investment that leads for higher profit generation. For example in the last four years Bank of Abyssinia achieved higher increments of deposit per annum which led to higher investment on digital banking department, adoption of new financial technologies such as virtual banking centers and increasing of many newly opened branches throughout the country.

Fin-tech adoption has brought a high competitiveness and new technologies in some private banks in Ethiopia.

DashenBank has achieved commendable progress in fin-tech adoption. Working with IBM and its business partners Eidiko Systems Integration Pvt. Ltd. and Afcor PLC, Dashen Bank has gained an agile, secure, and reliable integration platform which optimizes the bank’s resources across cloud and on-premise environments. By adopting a hybrid cloud strategy, the bank can now deploy and expand its digital channels across any technology environment, enhancing the open banking experience with key stakeholders such as fin-techs, neo-banks and corporate and telecom partners. Dashen Bank can now constantly onboard and integrate new apps and partners with a fast time-to-market. (Dashen bank today, August 18,2022)

Awash Bank in partnership with Amref Health Africa has unveiled a new financial technology to modernize savings and credit services. The technology named Saccos Business Solution, will provide basic and intermediate banking services and will also play an important role in accelerating credit and savings services of various unions, strengthening their accessibility and making the sector competitive, said Mr. HenokTessema, Senior Chief of Retail and SME Banking on the program. The technology announced by the bank offers free loans and savings to youth development projects and will provide membership management and registration, share and profit debt management services and other services. (Awash bank news, 2024).

Terrpay announced a partnership with Bank of Abyssinia for bank account payouts in Ethiopia. This strategic collaboration will enable TerraPay's network partners in key global corridors such as USA, UK, Saudi Arabia and Australia to make instant, secure and low cost cross border money transfers to all bank accounts in Ethiopia. (Bank of Abyssinia news, Augest14,2021)

1.3 STATEMENT OF THE PROBLEM

Over the past few years, there has been a notable surge in banks' adoption of financial technology (fin-tech) solutions within the financial services sector. This shift towards integrating fin-tech tools and platforms has brought about significant changes in how traditional banking functions and customer engagements are conducted.

Despite this transformative trend, the impact of this technological evolution on banks' financial performance remains largely unexplored. Recognizing the importance of comprehending how fin-tech adoption influences critical financial performance metrics like profitability, efficiency, customer satisfaction, and market competitiveness, both banks and policymakers stand to benefit. Hence, this research aims to analyze into the correlation between fin-tech adoption and banks' financial performance in Ethiopia. Through an analysis of data collected from a selection of private banks that have embraced fin-tech solutions, this study endeavors to shed light on the extent to which fin-tech adoption shapes various facets of financial performance. The outcomes of this investigation are poised to enrich the existing body of knowledge on fin-tech and banking, offering valuable insights for banks seeking to bolster their competitive standing in an increasingly digitized financial environment.

This research aims to investigate the relationship between fin-tech adoption and some aspects of banks financial performance to understand how technological advancements in the financial sectors are influencing traditional banking operations and outcomes.

1.4 RESEARCH QUESTIONS

The following questions were the possible research questions that the study will attempt to answer:

1. How adoptions of fin-tech affected the Total Deposit of private banks?
2. How adoptions of fin-tech affected the Total Loan of private banks?
3. How adoptions of fin-tech affected the customer base of private banks?

1.5 OBJECTIVES OF THE STUDY

The main objective of this study was to assess the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia.

The specific objective of the study is:

- To identify the current level of financial technology in some private banks in Ethiopia.
- To describe the current level of bank performance in some private banks in Ethiopia
- To analyse the To analyse the effects of influence of financial technology adoption on banks financial performance in some private banks in Ethiopia

1.6 SIGNIFICANCE OF THE STUDY

The drive of this study is mainly to analyse the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia. The results lay concrete on way of improving adoption of fin-tech that lead to the good performance of organizations operating in the same line of business.

Additionally the study is to provide readers with a better knowledge of the influence of financial technology adoption on banks financial performance and to serve as a guide for organizations aiming to improve financial performances.

It serves as a secondary source of data for those who want to conduct further investigation in this area and adds to the existing literature and may serve as an additional source of reference

1.7 SCOPE OF THE STUDY

The study is conducted at Dashen Bank, Awash Bank and Bank of Abyssinia. Even though the study could have been important to study all private banks in Ethiopia, due to time and cost (as it will be finished in one semester), the study was limited to the three banks. Accordingly, this might affect the representativeness of the study across all banks of Ethiopian private banks. There are many bank performance which can be affected by the adoption of fin tech such as opening of new Branches. However, the influence of fin tech on all types of bank performance cannot be addressed in this study. Therefore, the research mainly focused on total deposit, customer base and total loan bank performances. Methodologically this study used cross-sectional survey. A cross-sectional study is a type of research design in which you collect data from many different individuals at a single point in time.At last, the concept of fin-techs new particularly to Ethiopia and as this study is found on recent fin-tech literatures, it is essential for researchers who want to undertake further studies related to fin-tech.

1.8 Organization of the paper

This study will attempt to analyze the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia. Accordingly, it will be organized in five chapters. The first chapter will introduce the Introduction of the study, statement of the problem, basic research questions, objectives, significance, and delimitation, definition of terms and organization of Chapters.

The second chapter will address the detail review of theoretical and empirical literatures on concept of training and development and its effect on employee performance.

The third chapter presents the methodology which will be used in the study.

CHAPTER TWO

REVIEW OF RELATED LITRATURE

2. INTRODUCTION

This chapter's aim is to review the literature on fin tech implementation, with a particular emphasis on the use of financial technology. A framework for the study can be established by this review of the literature.

This study will incorporate the fin-tech variable into the bank performance model to analyse the impact of fin-tech on bank performance. As a result, this section is divided into three main parts. The first part discusses development of fin-tech and Ethiopian fin-tech concept, The second one is the relevant articles on the determinants of bank performance while the third part explores the relationship between fin-tech and bank performance.

2.1 Theoretical Review

According to Grant and Osanloo (2014), a theoretical framework is an essential foundation for any research project. It acts as a roadmap or blueprint that outlines the established theories in a particular field of study, which form the basis for the research hypotheses. Theoretical frameworks consist of theoretical principles, concepts, structures, and principles that provide a structure for researchers to define their research in terms of philosophy, analysis, epistemology, and methodology.

The purpose of a theoretical framework is to provide a clear understanding of how a researcher perceives the relationships between different variables in a study, based on theoretical perspectives. It helps to guide the research process by organizing and explaining the concepts, theories, and principles that underpin the study. By establishing a theoretical framework, researchers can articulate their understanding of the topic and develop hypotheses or research questions that align with existing theories and concepts in the field. This framework serves as a foundation for data collection, analysis, and interpretation, allowing researchers to make meaningful connections and contribute to the existing body of knowledge.

2.1.1 Financial Technology (Fin-Tech)

- **Fin-Tech Concept**

Financial technology is a group of innovative services braced by progressions of information and communication technologies and systems (Barbu et al. 2021). While AbadSegura et al. (2020) defined Fin-Tech as containing pioneering entities that extend financial services, based primarily

on technology. Financial technology encompasses computer software and technologies that enable banking services, toward the invention of numerous banking transactions, such as online payment, credit cards, wiring money, e-money, ATM, etc. (Nurlaela et al. 2020). It also denotes the adoption of the Internet and computerized expansions within the financial sector services (Zaghol et al. 2021). Thus, Fin-Tech reflects the adoption of technology by the financial sector services (Gai et al. 2018).

Advanced technology, such as AI, mobile wallets, IoT, NFC, and block chain, is essential to Fin-Tech (Lim et al. 2019). The use of these know-hows in Fin-Tech services has been considered (Suseendran et al. 2019). Barbu et al. (2021) noted that the Fin-Tech impact rests on technology innovation and the incorporation of innovative procedures, resulting in 24/7 financial services with customized creation and delivery, enhancing consumers' experience. Fin-Tech is related to service innovation and innovation among financial business models (Nangin et al. 2020).

Fin-Tech companies are oriented further towards technology rather than the traditional ones, providing financial services faster, more conveniently, and at lower costs through the help of information technology. Romanova and Kudinska (2016) concluded that both pioneering IT companies and traditional banking sector are tracking financial technology, using technology to improve their services. Fin-Tech offers an online platform to connectborrowers and lenders, evading the use of traditional bank systems and procedures.

The banking sector probable will grow rapidly and continuously in an innovative and dynamic way, utilizing Pcs and other digital know-hows related to financial services. Zaghol et al. (2021) and Puschmann (2017) stated that Fin-Tech can manifest broadly through digitalization within the financial services sector by considering possible financial solutions via information technology (IT).

- **Fin-Tech and Banks**

The use of technology in the banking sector is to produce banking services and products that meet customer needs and desires (Mbama 2018). Friedline et al. (2018) proclaim that FinTech enabled all society segments to obtain better financial inclusion and FinTech improvement inside a country can be accredited to its affirmative impact on banking institutions and the public. FinTech displays a major function in decreasing the number of credit facilities that bear high interest rates. Petralia et al. (2019) also added that the FinTech introduction and its progress have substantial effects on conventional banking business models. Likewise, FinTech now is

prevailing in diverse financial fields, such as lending, deposit, investment, account settlement and raising capital (Nguyen et al. 2021).

Arslanian and Fischer (2019) added that there is a rivalry between conventional banking services and Fin-Tech, which adversely impacts conventional banking services in relation to their risk-taking, performance and innovation. Buchak et al. (2018) were pioneering in analyzing the integration of regulatory facets when inspecting the impact of Fin-Tech to render credit service on bank's financial performance.

2.1.2 Development of Fin-tech.

The development of fin-tech can be traced back to the late 20th century when the internet started to revolutionize communication and business practices. Technological advancements, shifts in consumer behaviour, and regulatory changes have all played a role in the rapid growth and transformation of the fin-tech industry. Here are some significant milestones in the evolution of fin-tech:

- The emergence of online banking in the 1990s enabled customers to manage their accounts, transfer funds, and settle bills conveniently from their homes, initiating the digital transformation of traditional banking services.
- The advent of payment processors such as PayPal in the early 2000s simplified online money transactions for businesses and consumers, laying the groundwork for the expansion of e-commerce and mobile payment solutions.
- Peer-to-peer lending platforms like Lending Club and Prosper surfaced in the mid-2000s as alternatives to conventional banks for borrowing and lending money, connecting borrowers directly with individual investors without the need for traditional financial institutions.
- The widespread use of smartphones and mobile applications has revolutionized financial management practices. Mobile banking apps enable users to monitor account balances, transfer funds, and even deposit checks using their mobile devices, enhancing the convenience and accessibility of banking services.
- The rise of crypto currencies like Bitcoin and block chain technology has disrupted traditional financial systems by offering secure and decentralized transaction and value

storage methods. Block chain technology is also being explored for applications beyond crypto currencies, including smart contracts and supply chain management.

- Robo-advisors leverage algorithms and artificial intelligence to provide automated investment advice and portfolio management services. These platforms offer cost-effective investment opportunities and personalized recommendations based on an individual's financial objectives and risk tolerance.
- As regulatory demands grow more intricate, FIN Tech companies are developing Reg-Tech solutions to assist financial institutions in automating compliance processes, monitoring risks, and ensuring adherence to regulations.

FinTech Dimensions

- **Financial Inclusion**

Financial inclusion refers to the situation where business entities and individuals have access to a variety of financial services and products, such as money transfers, insurance, payments, savings and credit that are cost-effective and suitable for their needs, ultimately leading to an improvement in their standard of living. Its primary objective is to serve the entire society, including organizations and people, by providing them with access to financial services, especially those who are poor or have limited income, in order to improve their financial status and condition (Alnabulsi and Salameh 2022).

Furthermore, Erfan et al. (2021) note that financial inclusion is beneficial for citizens as it enables them to fully understand and recognize basic financial terms and offers them protection as financial customers. Alnabulsi and Salameh (2022) add that financial inclusion helps increase citizens' opportunities to use the services of small and micro-businesses, as well as digital payments.

Additionally, Kartawinata et al. (2021)state that financial inclusion is valuable element in preserving the interests and rights of relevant parties, while also increasing their level of awareness. Ultimately, Alnabulsi and Salameh (2022) conclude that financial inclusion is essential for adopting an inclusive strategy regarding sustainable development, leading to a positive significant influence on meeting the growth and stability objectives across different sectors, including social and economic sectors.

- **Alternative Payment Methods (APMs)**

In recent years, the payment industry has gained new insights that have led to the improvement of payment methods for individuals in various circumstances, regions and environments. These insights have included advancements in credit and debit cards, wallets and mobile wallets, online banking e-payments, direct debit, invoice and pay later solutions, cash payments and cryptocurrencies, as outlined in the Payment Methods Report of 2019.

- **Automation**

According to Sobczak (2022), institutions are increasingly turning to IT solutions, including software robots, to automate procedures and drive digital transformation. Additionally, Swan (2017) noted that an automated economy, which focuses on the operations of the economy, is applicable in situations where robotic technology complements or replaces human labor.

2.1.3 Ethiopian Fin-tech concept.

The modern banking system was introduced in Ethiopia through an agreement made in 1905 between Emperor 'Minilik II' of Ethiopia and Mrs. Gillivray, the representative of the British-owned National Bank of Egypt. The bank, known as Abyssinia Bank, served as both a central bank and a commercial bank. Additionally, the first privately owned commercial bank, Addis Ababa Bank Share Company, was established in 1964 with a capital of 2 million in collaboration with the National and Grindlay Bank of London, which held a 40 percent share. In the same year, the state bank of Ethiopia was divided into two entities: the National Bank of Ethiopia and the Commercial Bank of Ethiopia. However, in 1974, all commercial banks were nationalized by the central bank and merged under the name Addis Ababa Bank. It was later renamed the Commercial Bank of Ethiopia in 1980 following new directives. (Alemayehu, 2006)

During the Derg period, the National Bank of Ethiopia implemented measures to promote state-led development by directing credit allocation and foreign exchange towards the state sector. This resulted in a significant shift, with credit to the private sector decreasing from nearly 100 percent of total bank credit during the monarchy to only 40 percent under the Derg regime (Di Antonio, 1998). To cover losses incurred by state-owned enterprises (SOEs) that lacked collateral for loans, the government provided subsidies. This led to inefficiencies in the state financial system, with no private banks operating at that time. (TesfayeDiriba, 2014.)

Following the banking sector reform in 1992, there was notable progress in the sector, particularly in terms of resource mobilization. This progress is evident in various indicators, such as the increase in deposits and liquidity from 5.02 billion in 1992 to 187.29 billion in 2012. Additionally, total loans and advances saw a substantial rise from 4 billion in 1992 to 81.57 billion by June 2012 within the banking sector.(TesfayeDiriba, 2014.)

Current banking sector performance in Ethiopia

Fin-tech is a rapidly growing industry driven by the government's efforts to expand financial inclusion and the country's increased digitalization efforts. Ethiopian fin-tech initiatives and concepts include:

- **Mobile money:** Mobile money services have gained popularity in Ethiopia, with platforms such as M-BIRR and Hello Cash offering mobile-based payment solutions to the unbanked. Through these services, users are able to transfer funds, pay bills, and access financial services through their mobile phones.
- **Digital payments:** The Ethiopian government is promoting digital payment solutions to reduce cash transactions and to enhance financial inclusion. A number of initiatives, such as the Ethiopian Electronic Payment System (E-EPS), aim to improve the efficiency and security of the country's payment system.
- **Microfinance and lending:** Ethiopian Fin-tech startups are bringing microfinance and lending services to underserved communities that leverage their technology.Platforms like Dubeale and Apollo offer digital lending solutions to small businesses and individuals, helping them access credit and financial resources.
- **Financial Inclusion:** Fin-tech companies in Ethiopia are working towards increasing financial inclusion by providing digital financial services to rural and underserved populations. Initiatives like agent banking, mobile banking, and digital wallets aim to bridge the gap between traditional banking services and remote communities.
- **Regulatory Environment:** The Ethiopian government has been taking steps to create a conducive regulatory environment for fin-tech innovation. The National Bank of Ethiopia has introduced regulations to govern mobile money services, digital payments, and other fin-tech activities to ensure consumer protection and financial stability.

Overall, the fin-tech landscape in Ethiopia is evolving rapidly, driven by technological advancements, changing consumer behavior, and government support. With the increasing adoption of digital financial services and innovative fin-tech solutions, Ethiopia is poised to experience significant growth and transformation in its financial sector.

2.1.4 Determinants of Bank performance.

Examining the correlation between capital and earnings of banks in the United States during the 1980s, Berger (1995) delved into the beneficial impact of capital on earnings. The author elucidated that higher capital levels lead to increased bank profits by reducing interest expenses, with a capital increase serving as a positive indicator of bank performance. Drawing on data from 44 Islamic banks in Asia and Africa in 2013, Chowdhury and Rasid (2015) asserted that augmenting capital can bolster bank performance by safeguarding depositors during macroeconomic turmoil. Conversely, Osborne et al. (2012) highlighted in a survey of the U.S. banking sector spanning from 1976 to 2010 that the cost of capital exceeding that of debt results in a negative influence of the capital factor on bank performance. Nevertheless, the prevailing consensus among scholars, including Al-Matari (2021) and Batten and Vo (2019), is that the capital factor positively impacts bank performance. Therefore, this study anticipates the estimation outcomes aligning with the majority of existing research findings.

Al-Matari (2021) identified a negative association between bank size and bank performance in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates during the period from 2000 to 2008. The author attributed this phenomenon to the heightened management expenses and bureaucratic complexities inherent in larger banks compared to smaller ones. This observation mirrors the conclusions drawn by Batten and VO (2019) and Menicucci and Paolucci (2016). Conversely, larger banks may exhibit greater economic sophistication through product diversification and expanded branch networks. The positive impact of bank size on bank performance was corroborated by Pham et al. (2021) in Vietnam and Pakistan between 2011 and 2019, as well as by Phan et al. (2020) in Indonesia. Additionally, Ali and Puah (2019) highlighted that the robust brand reputation and market dominance enjoyed by larger banks are key factors contributing to their enhanced performance in Pakistan. Given the selection of Vietnam as the focus country for this study, akin to Indonesia and Pakistan as developing

nations, it is anticipated that a positive relationship between bank size and bank performance will be observed.

The primary functions of commercial banks involve receiving deposits from customers and providing loans to borrowers, particularly in developing countries. These functions are crucial determinants of a bank's performance, notably its profitability. Based on data spanning from June 1990 to March 2011 in Colombia, Amador et al. (2013) found a positive correlation between bank risk and loan growth, which can elevate non-performing loans and diminish solvency. Hence, it is posited that loan growth negatively impacts bank performance, particularly profitability. However, Niu (2016) observed a different trend in the USA from the second quarter of 2002 to the fourth quarter of 2013, linking rapid loan expansion to enhanced bank performance.

In a study by Dang (2019) focusing on the relationship between loan growth and the performance of 31 commercial banks in Vietnam from 2006 to 2017, it was discovered that both short-term and long-term loan growth positively influenced bank profitability. This study contends that the main revenue source for commercial banks stems from credit products, indicating that loan growth results in increased bank income. Conversely, while issuing credit is a key aspect of banking operations, banks must consider the interest costs associated with raising capital. As such, an increase in deposits leads to heightened bank expenses and reduced profitability.

Consequently, it is anticipated that loan growth will have a positive impact on bank performance, while deposit growth will have a negative effect.

2.1.5 Relationship between banks and fin-tech

The relationship between banks and fintech is evident in both explicit and implicit quantitative and qualitative studies. Qualitative research, as highlighted by Vives (2017, 2019), suggests that fintech plays a significant role in reshaping the structure and improving the efficiency of the banking sector. Another study by Ozili (2018) identified three ways in which fintech impacts banks: positively, negatively, and through a two-way causality. Fintech enables banks to expand their range of banking products, particularly those linked to technological platforms. However, fintech also emerges as a new competitor for banks, potentially reducing their market share in the

financial market and thereby impacting bank profitability negatively. Additionally, Ozili (2018) noted that the relationship between fintech and banks may be influenced by various factors such as macroeconomics, bank characteristics, and time series.

Furthermore, aligning with the perspectives of Alt et al. (2018), Lee and Shin (2018), and Zakor (2020), it is suggested that the growth of fintech appears to offer more advantages than disadvantages for banks.

In a study conducted by Phan et al. (2020) using quantitative data from the Fintech Indonesia Association and Global Financial Database, the researchers examined the impact of fintech on bank performance in Indonesia by analyzing the number of fintech companies, macroeconomic factors, and internal bank characteristics. The results of their analysis indicated a negative influence of fintech on bank performance. Additionally, the study found that small-sized banks demonstrated greater adaptability to the emergence of fintech compared to large-sized banks. Conversely, Asmarani and Wijaya (2020) analyzed monthly data from January 2016 to October 2018 and did not find a significant effect of fintech on the performance of Indonesian banks.

On a different note, Sheng (2021) highlighted that fintech has facilitated increased credit availability for small and medium enterprises (SMEs) in China between 2011 and 2018. Furthermore, Li et al. (2017) observed a positive correlation between fintech and bank stock returns in the United States. It is argued that enhancing credit provision and achieving favorable stock market performance are crucial for boosting bank profits, particularly in developing nations like Vietnam.

2.2 Empirical Review

Fintech advances financial inclusion, particularly in developing nations. According to a study conducted by Karthika et al. (2022), the implementation of fin-tech enhances access to financial services, allowing banks to attract new clients, increase customer deposits, and facilitate transactions such as payments and loans. Through fintech innovations, banks can reach out to customers through mobile devices, enabling them to expand their customer base without the high costs associated with traditional recruitment methods. Huparikar and Shinde (2022) corroborate these findings by highlighting the challenges of acquiring new banking customers through conventional means. Fintech simplifies the process of remotely attracting new customers by

assisting banks in advertising, offering online registration forms, and efficiently processing new customer registrations without the need for face-to-face interactions.

Acquiring and retaining satisfied customers is a key strategy employed by banks to enhance their performance. Research conducted by Murinde et al. (2022), Safiullah and Paramati (2022), and Vives (2017) suggests that fintech advancements enable banks to attract new customers, offer enhanced and convenient banking services, and cultivate a loyal customer base. These technological innovations foster positive relationships between bank staff and customers through online platforms, facilitating information sharing and communication that strengthen the bond between clients and the bank. Fintech solutions empower banks to appeal to upscale clientele, with the characteristics of bank customers playing a pivotal role in influencing bank performance. By attracting tech-savvy customers with diverse banking needs, fintech enables banks to expand their banking activities, thereby boosting overall performance. Banks leverage technological innovations to ensure customer satisfaction and loyalty by exceeding customer expectations and prioritizing customer protection in the delivery of banking services.

Drasch et al. (2018) examined the impact of digital transformation on the financial sector and the collaboration between banks and financial companies. The study utilized a sample comprising literature, 136 real-world cases, and insights from 12 experts, including bank executives and financial technology industry experts. The research identified 13 parameters for structuring and defining bank-fintech partnerships. Additionally, the empirical investigation revealed common cooperative practices. It is essential to carefully consider the implications of cooperation between banks and financial companies, as it could potentially pose security risks for banks. The study offered recommendations, such as developing a classification system to evaluate joint initiatives in the interaction between banks and companies.

Wang et al. (2021) conducted a study to examine the potential impact of FinTech on the banking industry. The research focused on a sample of 113 Chinese banks, including 18 national banks (six state-owned big banks and twelve joint-stock banks), 72 urban commercial banks, and 72 rural commercial banks. The study utilized Total Factor Productivity (TFP) as a measure of bank competitiveness and employed the DEA Malmquist technique to calculate TFP. To enhance the results, SYS-GMM and DFF-GMM techniques were also utilized. The findings indicated that the development of FinTech has a positive influence on earnings, financial innovation, and risk

management. Therefore, the implementation of financial technology can contribute to improving the performance of commercial banks.

Siek and Sutanto (2019) explored the impact of financial technology on the traditional banking sector in Indonesia, highlighting FinTech as a significant competitor to banks, particularly in payment gateways and peer-to-peer (P2P) services, which have a direct impact on traditional financial operations. The study aimed to identify key value propositions that influence the adoption of FinTech or banking products, focusing on criteria such as customer satisfaction, net promotion score, ease of use, and promotion. The findings suggest that banks have faced disruption from payment FinTech since the emergence of FinTech companies around 2015. Additionally, FinTech startups have implemented digital strategies to foster a customer-centric approach and deliver products that drive high customer satisfaction. However, P2P FinTech currently does not pose a major threat to banks as clients prioritize security over other factors.Pu et al. (2021) examined the dynamic relationship between the banking industry and FinTech in Lithuania by analyzing annual reports from Lithuanian banks spanning from 2003 to 2019. They conducted a comprehensive analysis of the FinTech sector using SWOT and PESTEL frameworks. The regression analysis findings indicate that FinTech firms play a crucial role in enhancing the efficiency of banks, particularly in payment services, while also boosting customer satisfaction. Moreover, the study highlights that FinTech's impact on economic growth is manifested through increased financial inclusion.

In their 2017 study, Yang et al. investigated the impact of Fintech adoption on the productivity of the banking industry in Taiwan. The researchers analyzed data from 25 selected banks between 2010 and 2015 using the Cost Malmquist Index as their preferred evaluation method. The empirical findings suggest that during the observed period, there was significant evidencesupporting the notion that Fintech adoption contributed to the expansion of competitiveness in the Taiwan banking industry

Ntwiga (2020) examined the impact of FinTech on inter-bank cooperation by evaluating technical efficiency in the banking industry of Kenya. The study included a sample of five banks over the period from 2009 to 2018. The findings revealed a favorable correlation between financial technology and the efficiency of banks, with financial technology significantly

enhancing overall technical efficiency. Prior to the adoption of technology, the results indicated a deficiency in efficiency and productivity.

Consequently, in this study, the hypothesis is: “There is a positive influence of fin-tech adoption on banks performance”

2.3 Conceptual Framework

Moskal and Leydens (2000) states that conceptual framework is a written or optical presentation that clarifies either graphically or in description form. Therefore conceptual framework is a symbol of the relationship you imagine to see between your variables, or the characteristics or properties that you want to study. Conceptual frameworks can be written or visual and are generally developed based on a literature review of existing studies about your topic.The researcher observed the type of fin-tech that some private banks currently used to increase bank performance.

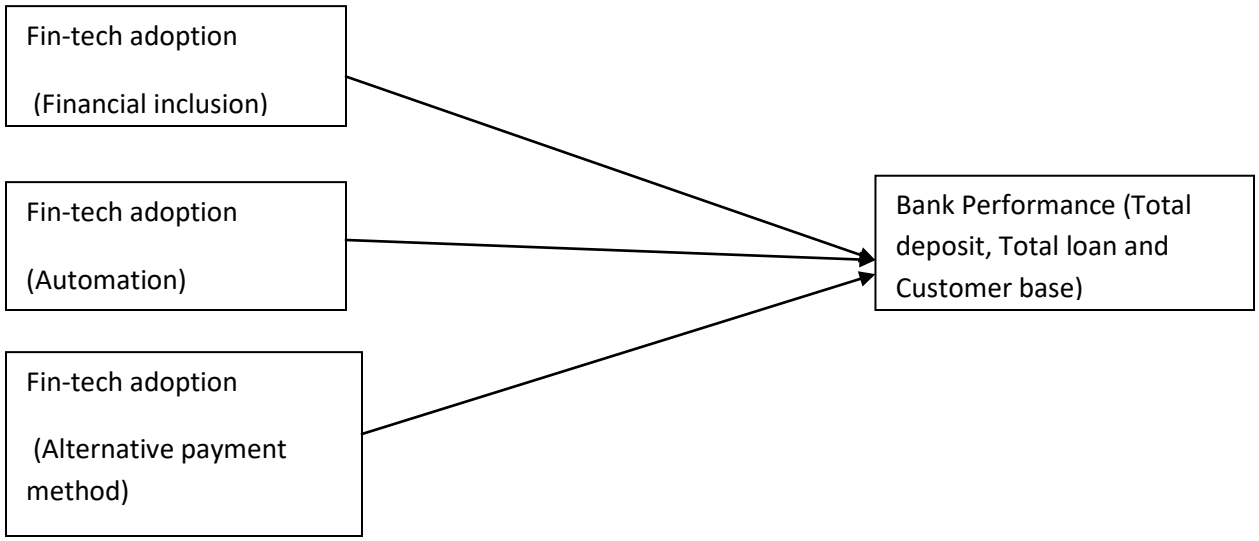

Fig 2.1 conceptual framework

Hypotheses Results

The study seeks to investigate the impact of Fin-tech (Inclusion, Automation and Alternative payment) on Banks Performance (Total deposit, Total loan, Customer base).

H1:-There is a significant impact of financial inclusion on Total deposit

H2:- There is a significant impact of Automation on Total deposit

H3:- there is a significant impact of alternative payment method on Total deposit.

H4:- There is a significant impact of financial inclusion on Total loan.

H5:- There is a significant impact of Automation on Total loan.

H6:-There is a significant impact of alternative payment method on Total loan.

H7:- There is a significant impact of financial inclusion on Customer base

H8:- There is a significant impact of Automation on customer base.

H9:- there is a significant impact of alternative payment method on customer base.

CHAPTER THREE

RESEARCH METHODOLOGIES

This chapter presents a description of the methodology that is employed in the study. The research approach, the research type, sample and sampling techniques, source of data collection, data collection instruments, reliability & validity of the study and the method of data analysis will be discussed.

3.1 Research Approach

Research is defined as the cautious attention of study concerning a specific problem using scientific methods. Based on approach research can be classified in to qualitative and quantitative. Qualitative research is defined as a research method that focuses on obtaining data through open-ended and conversational communication.

Although the researcher uses both qualitative and quantitative methods to study the influence of financial technology adoption on banks financial performance in some private banks in Ethiopiathe study takes in account is quantitative method. By collecting data from some private Bank staffs. Adoption of Financial technology is the independent variable whereas bank performance in total deposit, total loan, and customer base is the dependent variable.

3.2 Research Design

A research design is an approach for answering your research question using empirical data. Creating a research design means making decisions about your overall research objectives and approach. According to Creswell &Clark (2007).Research design forms the blue-print or maps that details how the researcher collect data that is relevant to address the research questions. It includes the outline of what the research did, from writing the hypothesis and its operational application to final analysis of data. The researcher will collect data on the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia. The researcher will use explanatory.

Explanatory research is a research method that explores why something occurs when limited information is available. It can help you increase your understanding of a given topic, ascertain how or why a particular phenomenon is occurring, and predict future occurrences. The

researcher will analyze the casual relations between the dependent variable and the independent variables characteristics using correlation and regression.

3.3 Data types and Data sources

Data can be gathered from two source; primary and secondary sources. The information collected from internal sources is called primary data while the information gathered from outside references is called secondary data. So the researcher intended to use primary data for the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia. Primary data will be collected through the use of well-structured questionnaire.

3.4 Population of the study

The target population of the study will be employees of Dashen Bank, Awash Bank and Bank of Abyssinia located at Addis Ababa city areas who are working at head office level. The target population is selected because of the easy access to data, cost effectiveness and easy manageability of the study.

3.5 Sampling procedure

Sampling technique is the process of studying the population by gathering information and analyzing that data. Probability sampling method utilizes some form of random selection. In this method, all the eligible individuals have a chance of selecting the sample from the whole sample space. The benefit of using probability sampling is that it guarantees the sample that should be the representative of the population.

For this study will be used. Stratified sampling is total population is divided into smaller groups to complete the sampling process. The small group is formed based on a few characteristics in the population. After separating the population into a smaller group, the statisticians randomly select the sample In Dashen bank,Awash Bank and Bank of Abyssinia. The estimated numbers of clerical staffs are identified from each stratum. Then from each stratum respondents were selected through random sampling method.

3.5.1 Sample Size

The researcher will uses the sample determination table to determine the representative sample size which was developed by Carvalho (1984), referred from marketing research book written by NareshMalhotra (2007). Thus, the formula to calculate the sampling size is as

$n = N/1+N\ (e)^2)$

Where N= Total population

n= sample from the population

e= is the error term which is 5% (i.e, at 95% confidence interval).

Using the above formula, the sampling size of the study is determiner as

$n= 240/(1+240(0.05)^2)$

n= 150

3.6 Data Collection Instrument

In order to determine the influence of financial technology adoption on banks financial performance in some private banks in Ethiopia data will be gathered from both primarily and secondary sources to meet the objective of the study. Primary data will be gathered thorough adapted questionnaire from different studies and also from self-designed questionnaire as a research implement. Closed ended questions will be used because it is easier to generate statistical analysis on a larger number of participants. Secondary data will also be collected from existing company documents like published materials, manuals, memorandums, websites and brushers.

3.7 Data Analysis

It will be necessary to employ statistical techniques such as Descriptive statistics to analyze the data due to the quantitative nature of the study. Data will be inserted in to SPSS. The inserted data will be cleaned for errors and in consistencies and finally analyzed. Data obtained from the study will be presented in text, tables and figures.

3.8 Reliability

Nunnaly (1978) defines reliability as the precision of a measurement, survey, observation, or other measuring tool, indicating how accurately the variables are measured. Cronbach's alpha is a measure of consistency related to the proportion of variance explained in the true score of the underlying construct, applicable to variables with multiple assessment items. While a value of 0.5 is acceptable, a value of 0.8 is considered more appropriate. Therefore, the reliability of the questionnaire was evaluated using Cronbach's alpha statistics.

Reliability Statistics

Cronbach's Alpha	N of Items
.814	6

Table 1Reliability Statistics

3.9 Ethical Consideration

The study will accompany by considering ethical responsibility. This includes providing information to the respondents the purpose of the study and the use of the information as well. Information obtained was held in strict confidentiality by the researcher. Respondents' privacy will be kept so that participants would feel free and safe to express their ideas.

CHAPTER FOUR

RESULT AND DISCUSSION

Chapter 4 presents data analysis and interpretation of the findings. The data is presented in table and chart formats. The first part of the analysis is demographic section. The next section is focusing on the main part of the study. A total of 150 questionnaires are collected from Dashen Bank, Awash Bank and Bank of Abyssinia Head office employees. The results are presented in respect of the impact of Fin-tech adoption on banks performance, in the form of solving problems, efficiency and effectiveness, commitment, neatness and responsibility. SPSS is statistical software tool used for analysis and presentation of data. the impact of Fin-tech adoption on banks performance has both descriptive and inferential analysis

4.1 Descriptive analysis

4.1.1 Demographic characteristics of the respondents

Table 4.1 Gender

	Frequency	Percent
Male	85	56.7
Female	65	43.3
Total	150	100

Table 2Gender

Source survey, 2024

The investigator needed to know the overall gender dispersal of the respondents to categorize the Dashen Bank, Awash Bank and Bank of Abyssinia employees. Table (4.1) represents gender group of respondents. Accordingly 56.7% are male and 43.3% are female employee. Therefore the conclusion from the data is the male respondents are greater than female.

Table 4.2 Age of the respondent

	Frequency	Percent
20-25	71	47.3
26-33	58	38.7
34-41	21	14
Total	150	100

Table 3Age of the respondent

In table 4.2 the researcher identified the frequency age of the employee from the data. From 20 up to 25 is 47.3%, from 26-33 is 38.7% from 34 up to 41 is 14%.

Table 4.3 Academicals Qualification

	Frequency	percent
Diploma	17	11.34
BA Degree	86	57.33
MA and above	47	31.33
Total	150	100

Table 4Academicals Qualification

Source survey, 2024

Dashen Bank, Awash Bank and Bank of Abyssinia employees categorized in to professional and nonprofessionals. Professional employees are those who are permanently employed whereas nonprofessionals are not permanent. This study focus only on permanent employees those who are currently work in Dashen Bank, Awash Bank and Bank of Abyssinia. The overall dispersion of the academicals qualification frequency of the data is presented in table 4.3

Table 4.4 experience of the employee

	Frequency	Percent
1-5	111	74
6-10	20	13.3
10-16	10	6.7
17 and above	9	6
Total	150	100

Table 5experience of the employee

Source survey, 2024

Table 4.4 explains the generally frequency of the experience of the data. 74% of the employees in the data are less than 5 year experience

4.1.2 Fin-tech and Bank performance

In part two, Fin-tech related questions were enclosed such as the impact ofFin tech Inclusion, automation and alternative payment on banks performance on Awash, Dashn and Bank of Abyssinia. Thus, the respondents were directed the following Likert scale approach listed from the table below:- Strongly Disagree (SDA)=1, Disagree(DA)=2, Neutral(N)=3,Agree(A) = 4 and Strongly Agree (SA) =5.

Table 4.6 Frequency of Fin-tech Adoption (Inclusion)

Item		Frequency	Percentage	Mean	SD
1. The bank provides financial services that are useful to different segments of society.	D	11	7.3	4.04	.834
	N	16	10.7		
	A	79	52.7		
	SA	44	29.3		
	Total	150	100		
2. The use of fin-tech has an impact on the bank's performance effectiveness	D	4	2.7	4.11	.725
	N	20	13.3		
	A	82	54.7		

	SA	44	29.3		
	Total	150	100		
3. The clients have good opportunities to benefit from payment services, including digital payments.	N	13	8.7	4.59	.646
	A	35	23.3		
	SA	102	68		
	Total	150	100		
4. The adoption of fin-tech provides the bank with the attention of other new clients such as individuals and institutions.	N	28	18.7	4.12	.694
	A	76	50.7		
	SA	46	30.7		
	Total	150	100		
5. The bank shift to fin-tech use for the purpose of improving service quality	D	12	8	3.97	.893
	N	26	17.3		
	A	67	44.7		
	SA	45	30		
	Total	150	100		

Table 6Frequency of Fin-tech Adoption (Inclusion)

Source survey, 2024

Table 4.6 demonstrates descriptive analysis outcomes to questions pertaining to financial inclusion. The lowest ranked question was question 5, which infers the bank shifting to fin-tech use for the purpose of improving service quality. On the other hand the highest ranked questions in terms of mean value is (4.59) is question no 3 which suggest that clients have good opportunities to benefit from payment services including digital payment. The level of application for all paragraphs related to Fin-tech inclusion variable was high. Thus we can conclude that financial inclusion possesses a significant and important impact.

Table 4.7Frequency of Fin-tech Adoption (automation)

Item		Frequency	Percentage	Mean	SD
1. The bank implements automation workflow systems.	SD	4	2.7	3.93	.883
	D	5	3.3		
	N	25	16.7		
	A	80	53.3		
	SA	36	24		
	Total	150	100		
2. The automation systems are upgraded as per clients' needs	D	34	22.7	3.43	.985
	N	38	25.3		
	A	58	38.7		
	SA	20	13.3		
	Total	150	100		
3. The automation systems are adaptable due to changes in The bank's workflow	D	13	8.7	3.78	.842
	N	34	22.7		
	A	76	50.7		
	SA	27	18		
	Total	150	100		
4. Automation led to a reduction in the cost related to human Resources.	N	21	14	4.23	.687
	A	70	46.7		
	SA	59	39.3		
	Total	150	100		
5. There is a gap in the potential competencies of employees in the bank.	SD	4	2.7	3.83	.833
	D	3	2		
	N	34	22.7		
	A	83	55.3		
	SA	26	17.3		
	Total	150	100		

Table 7Frequency of Fin-tech Adoption (automation)

Source survey, 2024

Table 4.7 presents descriptive analysis results related to financial automation based on the answers to the questions. The lowest ranking questions, with an average mean of 3.43 relate to question no 2 which enquires that the automation systems are upgraded as per clients' needs. Conversely, the question with the highest mean of 4.25, discusses that automation led to a reduction in the cost related to human resources. Based on the overall results we can conclude that implementing automation in Ethiopian private banks will be of great importance in connection performance.

Table 4.8 Frequency of Fin-tech Adoption (Alternative payment method)

Item		Frequency	Percentage	Mean	SD
1. The bank shift to APM use for the purpose of improving service quality.	N	48	32	4.09	.851
	A	41	27.3		
	SA	61	40.7		
	Total	150	100		
2. The adoption of APMs provide the bank with the attention of other new clients such as individuals and institutions	D	4	2.7	4.14	.695
	N	15	10		
	A	87	58		
	SA	44	29.3		
	Total	150	100		
3. The use of APMs have an impact on the bank's performance effectiveness	N	10	6.7	4.24	.564
	A	94	62.7		
	SA	46	30.7		
	Total	150	100		
4. The use of APMs increases the number of clients.	N	21	14	4.17	.653
	A	82	54.7		
	Sa	47	31.3		
	Total	150	100		
5. The use of APMs positively impacted the bank's financial Performance.	N	28	18.7	4.09	.675
	A	81	54		
	SA	41	27.3		
	Total	150	100		

Table 8Frequency of Fin-tech Adoption (Alternative payment method

Source survey, 2024

Table 4.7 presents descriptive analysis results related to financial Alternative Payment Method (APM) based on the answers to the questions. The lowest ranking questions, with an average mean of 4.09 relate to question no 1 and 5, which enquires that the bank shifted to APM use for the purpose f improving service quality and the use of APMs positively impacted the banks financial performance. Conversely, the question with the highest mean of 4.24, discusses that the use of APM have an impact on the banks performance effectiveness. Based on the overall results we can conclude that implementing APM in Ethiopian private banks will be of great importance in connection performance.

Table 4.9 Fin-tech Adoption descriptive analysis

Descriptive Statistics

	N	Mean	Std. Deviation
FI	150	4.1653	.51800
FA	150	3.8427	.49349
FAP	150	4.1453	.52884
Valid N (listwise)	150		

Table 9Fin-tech Adoption descriptive analysis

The above table demonstrates an average results summary of Fin-tech adoption different dimensions (Financial inclusion, alternative payment methods and automation). Based on the descriptive analysis it can be observed that there is a high level of application for all Fin-tech dimensions in private banks in Ethiopia. With the highest value of financial inclusion with 4.16 mean.

Table 4.10 Bank performance (Total Deposit)

Item (Total Deposit)		Frequency	Percentage	Mean	SD
1. Fin-tech have introduced digital banking platforms that allow customers to make a deposit easily	SD	3	2	3.89	0.837
	D	3	2		
	N	34	34		
	A	77	22.7		
	SA	33	51.3		
	Total	150	100		

2. Fin-tech has introduced innovative deposit products. Such as goal based saving accounts.	D	7	4.7	3.92	0.773
	N	30	20		
	A	81	54		
	SA	32	21.3		
	Total	150	100		
3. Clients favor utilizing fin-tech for depositing funds.	SD	4	2.7	3.72	0.883
	D	7	4.7		
	N	40	26.7		
	A	75	50		
	SA	24	16		
	Total	150	100		
4. The annual amount of deposits has risen following the implementation of fin-tech solutions	D	12	8	3.75	0.884
	N	46	30.7		
	A	60	40		
	SA	32	21.3		
	Total	150	100		
5. As the adoption of fin-tech has grown, customers are increasingly turning to banks to deposit their savings.	D	10	6.7	3.91	0.835
	N	29	19.3		
	A	75	50		
	SA	36	24		
	Total	150	100		
6. The rapid adoption of fin-tech has led to a significant increase in the total deposits held by banks.	N	28	18.7	4.23	0.743
	A	60	40		
	SA	62	41.3		
	Total	150	100		

Table 10Bank performance (Total Deposit)

Source survey, 2024

Table 4.10 presents descriptive analysis results related to Total deposit, Which is a dependent variable based on the answers to the questions. The lowest ranking questions, with an average mean of 3.72 relate to question no 3, which enquires Clients favor utilizing fin-tech for depositing funds.. Conversely, the question with the highest mean of 4.23, discusses that The rapid adoption of fin-tech has led to a significant increase in the total deposits held by banks.

Table 4.11Bank performance (Total Loan)

Item (Total Loan)		Frequency	Percentage	Mean	SD
1. Providing loans through fin-tech services is more streamlined compared to traditional methods	D	10	6.7	4.11	0.856
	N	17	11.3		
	A	69	46		
	SA	54	36		
	Total	150	100		
2. Customers have shown increased interest in loans following the integration of fin-tech.	D	6	4	4.09	0.794
	N	23	15.3		
	A	73	48.7		
	SA	48	32		
	Total	150	100		
3. The adoption of fin-tech has enabled the inclusion of various segments of society in loan processes.	D	10	6.7	3.83	0.915
	N	47	31.3		
	A	51	34		
	SA	42	28		
	Total	150	100		
4. The rapid increase in the bank's total loan is attributed to the adoption of fin-tech.	D	7	4.7	3.79	0.745
	N	39	26		
	A	82	54.7		
	SA	22	14.7		
	Total	150	100		
5. Fin-tech platforms have made it easier for individuals and businesses to access loans	N	59	39.3	3.88	0.810
	A	50	33.3		
	SA	41	27.3		
	Total	150	100		

Table 11Bank performance (Total Loan)

Source survey, 2024

Table 4.11 presents descriptive analysis results related to Total loan, Which is also a dependent variable based on the answers to the questions. The lowest ranking questions, with an average mean of 3.79 relate to question no 4, which enquires The rapid increase in the bank's total loan is attributed to the adoption of fin-tech. Conversely, the question with the highest mean of 4.11, discusses that Providing loans through fin-tech services is more streamlined compared to traditional methods.

Table 4.11Bank performance (Customer Base)

Item (Customer Base)		Frequency	Percentage	Mean	SD
1. Fin-tech services are often more accessible to underserved populations who may have limited access to traditional banking services	SD	4	2.7	3.88	0.933
	D	7	4.7		
	N	30	20		
	A	71	47.3		
	SA	38	25.3		
	Total	150	100		
2. Fin-tech has made the banking service offer a seamless onboarding process, making it quick and easy for customers to sign up and start using their services	D	7	4.7	3.97	0.789
	N	28	18.7		
	A	78	52		
	SA	37	24.7		
	Total	150	100		
3. Fin-tech services offer convenience to customers by providing easy access to banks products and services through digital platforms.	D	4	2.7	4.17	0.801
	N	25	16.7		
	A	62	41.3		
	SA	59	39.3		
	Total	150	100		
4. Fin-tech adoption has made banks often provide services at lower costs compared to traditional financial institutions.	D	6	6	3.97	0.763
	N	19	12.7		
	A	90	60		
	SA	32	21.3		
	Total	150	100		
5. Customers have shown increased interest in banks following the	D	5	3.3	4.01	0.714
	N	22	14.7		
	A	89	59.3		
	SA	34	22.7		

integration of fin-tech.	Total	150	100		
6. The increasing customer base for banks fin-tech services can be attributed to the convenience	SD	4	2.7	3.95	0.947
	D	5	3.3		
	N	32	21.3		
	A	63	42		
	SA	46	30.7		
	Total	150	100		

Table 12Bank performance (Customer Base)

Source survey, 2024

Table 4.12 presents descriptive analysis results related to customer base, which is also a dependent variable. based on the answers to the questions, The lowest ranking questions, with an average mean of 3.88 relate to question no 1, which enquires Fin-tech services are often more accessible to underserved populations who may have limited access to traditional banking services. Conversely, the question with the highest mean of 4.17, discusses that Fin-tech services offer convenience to customers by providing easy access to banks products and services through digital platforms.

4.2 Inferential Statistics

4.2.1Correlation

The research is established to define the impact of fin-tech on bank performance on some private bank in Ethiopia. Pearson correlation was used to associate the independent variables (Fin-tech adoption by Inclusion, automation and alternative payment) and dependent variable (Total deposit, total loan and Customer base). A correlation coefficient expresses quantitatively the magnitude and direction of the linear relationship between variables ,Pearson correlation coefficient reveal magnitude and direction of and the strength of the relationship (-1 to +1) . In this section a correlation analysis were done to establish whether relationship do exist between variables conceptualized in the framework .The result would enable the researcher used to determine the regression on the dependent variable .The researcher used one of the most commonly used types of correlation coefficient which is Pearson correlation coefficient methods because of the statistical accuracy that usually results from this methods.

Table 4.13 the correlation analysis of Fin-tech adoption (inclusion, automation and alternative payment) and Banks performance (Total deposit, total loan and customer base)

		FI	FA	FAP
TD	Pearson correlation	.380	.544	.269
	N	150	150	150
TL	Pearson correlation	.523	.5633	.306
	N	150	150	150
CB	Pearson correlation	.312	.407	.728
	N	150	150	150

Table 13The correlation analysis

**. Correlation is significant at the 0.01 level (2-tailed).

Source survey data 2024

Total deposit is positively correlated with Fin-tech adoption with all three(Inclusion, automation and alternative payment) r=0.380, r=0.544, r=0.269 respectively. P<0.01.

Total loan is also positively correlated with Fin-tech adoption with all three. (Inclusion, automation and alternative payment) r=0.523, r=0.5633, r=0.306 respectively. P<0.01.

Customer base is also positively correlated with Fin-tech adoption with all three. (Inclusion, automation and alternative payment) r=0.312, r=0.407, r=0.728 respectively. P<0.01.

4.2.2 Regression analysis

Regression is a measure of relationship between two quantitative variables. The following table below shows the regression analysis ofFin-tech adoption (inclusion, automation and alternative payment) and Banks performance (Total deposit, total loan and customer base).

Table 4.14Analysis model summary of R and R2 *(Total deposit)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587[a]	.345	.331	.48081

a. Predictors: (Constant), FAP, FI, FA

b.

Table 14Analysis model summary of R and R2 *(Total deposit)

Table 4.15 (ANOVA)Impact of Fin-tech adoption on Total Deposit

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.763	3	5.921	25.612	.000[b]
	Residual	33.752	146	.231		
	Total	51.515	149			

a. Dependent Variable: TD

c. Predictors: (Constant), FAP, FI, FA.

Table 15Impact of Fin-tech adoption on Total Deposit

Table 4.16 Coefficient (Td)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.829	.398		2.082	.039
	FI	.286	.087	.252	3.300	.001
	FA	.599	.092	.503	6.502	.000
	FAP	-.102	.091	-.091	-1.112	.268

a. Dependent Variable: TD

Table 16Coefficient (Td)

The beta value is a measure of how strongly predictor variable influences the criterion variable. So that the beta value of the first hypothesis as indicated in table 4.16, which indicates that a change of one standard deviation in the predictor variable that is financial inclusion resulted in a change of 28.6% standard deviations in the criterion variable that total deposit. Thus, there is influence of financial inclusion on total deposit. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The beta value in the second hypothesis as indicated in table 4.16, which indicates that a change of one standard deviationin automation resulted in a change of 59% standard deviations in the criterion variable that is total deposit. Thus there is influence of Automation on total deposit. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The beta value in the third hypothesis as indicated in table 4.16, Which indicates that a change of one standard deviations in predictor variable that is alternative payment method resulted in a change of -10.2% standard deviations in the criterion variable that is total deposit. Thus there is negative influence of Alternative payment method on total deposit. Since the lower the beta value the lower the impact of the predictor variable on the criterion variable.

Table 4.17Analysis model summary of R and R2 *(Total loan)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.672[a]	.451	.440	.45373

a. Predictors: (Constant), FAP, FI, FA

Table 17Analysis model summary of R and R2 *(Total loan)

Table 4.18 (ANOVA) Impact of Fin-tech adoption on Total loan

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.707	3	8.236	40.003	.000[b]
	Residual	30.057	146	.206		
	Total	54.764	149			

a. Dependent Variable: TL

b. Predictors: (Constant), FAP, FI, FA

Table 18Impact of Fin-tech adoption on Total loan

Table 4.19 Coefficient (TL)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.214	.376		.570	.570
	FI	.486	.082	.416	5.943	.000
	FA	.590	.087	.480	6.781	.000
	FAP	-.136	.086	-.119	-1.583	.116

a. Dependent Variable: TL

Table 19Coefficient (TL)

The beta value is a measure of how strongly predictor variable influences the criterion variable. So that the beta value of the forth hypothesis as indicated in table 4.19, which indicates that a change of one standard deviation in the predictor variable that is financial inclusion resulted in a change of 48.6% standard deviations in the criterion variable that total loan. Thus, there is influence of financial inclusion on total deposit. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The beta value in the fifth hypothesis as indicated in table 4.19, which indicates that a change of one standard deviation in predictor variable that is automation resulted in a change of 59% standard deviations in the criterion variable that is total deposit. Thus there is influence of Automation on total loan. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The beta value in the sixth hypothesis as indicated in table 4.19, which indicates that a change of one standard deviation in predictor variable that is alternative payment method resulted in a change of -13.6% standard deviations in the criterion variable that is total loan. Thus there is negative influence of Alternative payment method on total loan. Since the lower the beta value the lower the impact of the predictor variable on the criterion variable.

Table 4.20Analysis model summary of R and R2 *(Customer base)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732[a]	.535	.526	.32891

a. Predictors: (Constant), FAP, FI, FA

Table 20Analysis model summary of R and R2 *(Customer base)

Table 4.21 Coefficient (CB)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.209	.272		4.437	.000
	FI	-.041	.059	-.044	-.685	.494
	FA	.076	.063	.079	1.206	.230
	FAP	.642	.062	.710	10.266	.000

a. Dependent Variable: CB

Table 21Coefficient (CB)

The beta value is a measure of how strongly predictor variable influences the criterion variable. So that the beta value of the seventh hypothesis as indicated in table 4.21, which indicates that a change of one standard deviation in the predictor variable that is financial inclusion resulted in a change of -4.1% standard deviations in the criterion variable that Customer base. Thus, there is influence of financial inclusion on Customer base since the lower the beta value the lower the impact of the predictor variable on the criterion variable.

The beta value in the eighth hypothesis as indicated in table 4.21, which indicates that a change of one standard deviation in predictor variable that is automation resulted in a change of 7.6% standard deviations in the criterion variable that is customer base. Thus there is influence of Automation on customer base. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable.

As can be seen in table 4.21, the beta value for the ninth hypothesis indicates that a change of one standard deviation in the predictor variable (alternative payment method) causes a 64.2% change in the criterion variable (client base). This suggests that the consumer base is impacted by alternative payment methods. Greater influence of the predictor variable on the criterion variable is indicated by a larger beta value.

CHAPTER FIVE

5 . CONCLUSION AND RECOMMENDATIONS

5.1 Summery

The main objective of this research was to determine the influence of financial technology adoption on bank performance at some private banks in Ethiopia. From the study, the following particular findings were observed.

The respondents' observation towards the adoption of financial technology was positive. Most of the respondents decided agree. Such as the bank provides financial services that are useful to different segments of society, the bank implements automation workflow systems, the use of APMs have an impact on the bank's performance effectiveness. With overall mean score of 4.05 and SD 0.513.

The mean and standard deviation of Total deposit, Total loan and Customer base are M= 3.9033 and SD= 0.58800, M=3.9413 and SD= 0.60625 and M= 3.9911 and SD= 0.47761 respectively, the majority of the respondents direct that adoption of fin-tech has encouraging impact on total deposit, total loan and customer base.

Total deposit was positively and highly correlated with fin-tech adoption. The correlation of total deposit with financial inclusion is R=.380, $p<0.001$ in addition the correlation of total deposit with automation is R=.544, $p<0.001$ at last the correlation of total deposit with alternative payment method is R=.269.Total loan was positively and highly correlated with fin-tech adoption. The correlation of total deposit with financial inclusion is R=.523, $p<0.001$ in addition the correlation of total loan with automation is R=.563, $p<0.001$ at last the correlation of total loan with alternative payment method is R=.306.Customer base was also positively and highly correlated with fin-tech adoption. The correlation of customer base with financial inclusion is R=.312, $p<0.001$ in addition the correlation of customer base with automation is R=.407, $p<0.001$ at last the correlation of customer base with alternative payment method is R=.728. Therefore Adoption of financial technology has positive impact on bank performance.

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5.2 Conclusions

The main objective of the study is to analyze the influence of financial technology adoption on banks performance in the case of some private banks in Ethiopia. The study raised simple research problem and lectured the specific objectives. Accordingly, based on descriptive and inferential statistics result and summary of major findings, the following conclusions were drawn.

Financial inclusion in private banks in Ethiopia has positive and significant impact on total deposit, with the coefficient of 0.286 and P<0.01. Thus a change in financial inclusion in one percent leads to 28.6% increase in total deposit. H1:-There is a significant impact of financial inclusion on Total deposit. Automation in private banks in Ethiopia has positive and significant impact on total deposit, with the coefficient of 0.599 and P<0.01. Thus a change in automation in one percent leads to 59.9% increase in total deposit. H2:- There is a significant impact of Automation on Total deposit. Alterative payment method in private banks in Ethiopia has insignificant impact on total deposit p=0.268.Therefor the previous hypothesis H3:- there is a significant impact of alternative payment method on Total deposit is rejected.

Financial inclusion in private banks in Ethiopia has positive and significant impact on total loan, with the coefficient of 0.486 and P<0.01. Thus a change in financial inclusion in one percent leads to 48.6% increase in total loan. H4:- There is a significant impact of financial inclusion on Total loan. Automation in private banks in Ethiopia has positive and significant impact on total loan, with the coefficient of 0.590 and P<0.01. Thus a change in automation in one percent leads to 59% increase in total loan. H5:- There is a significant impact of Automation on Total loan.
Alterative payment method in private banks in Ethiopia has insignificant impact on total loan p=0.116. Therefore the previous hypothesis H6:-There is a significant impact of alternative payment method on Total loan is rejected.

Alterative payment method in private banks in Ethiopia has positive and significant impact on Customer base, with the coefficient of 0.642 and P<0.01. Thus a change in Alterative payment method in one percent leads to 64.2% increase in customer base. H9:- there is a significant impact of alternative payment method on customer base. Financial inclusion and automation

method in private banks in Ethiopia has insignificant impact on customer base p=494 and p=0.116 respectively. Therefore the previous hypothesis H7:- There is a significant impact of financial inclusion on Customer base and H8:- There is significant impacts of Automation on customer base are rejected.

5.3 Recommendation

As per my studies I recommend that private banks should adopt more of financial inclusion and automation in order to increase their total deposit and total loan. And increase automation for a significant return in customer base.

Embracing digital banking platforms: private banks in Ethiopia can adopt digital banking platforms that offer a user friendly interface, allowing customers to access banking services easily from their mobile device or computers. This can increase financial inclusion by reaching customers who may not have access to traditional banks.

Utilize automated customer service tools: private banks can implement virtual assistants to provide instant customer support. This automation can enhance customer experience, reduce wait times and increase efficiency in handling customer inquiries.

Offer peer to peer lending platforms: private banks can leverage fintech solutions to create p2p lending platforms that connect borrows with individual investors. This can provide alternative financing options for customers who may not qualifyfor traditional loans and promote financial inclusion by offering access to credit to a wider range of individuals.

All in all by adopting these fin-tech solutions, private banks can enhance their performance by increasing financial inclusion, automation and alternative payment method that cater to the evolving needs if customers.

5.4 Suggestion for Future Research

The objective of the research was to find out the influence of financial technology on Ethiopian private banks performance. The study concluded visible relationship between adoption of financial technology and banks performance. It did not include all the possible financial technologies; thus, there is a scope for other researchers to study the other types of financial technology and their effects on bank performance on the same or different sectors. Finally, the study also recommended to further comprehensive study, the researchers should further investigate. More research can also be carried out to identify other factors that may affect bank performance which are not studied before.

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Appendix

This questionnaire is prepared to collect information on the impact of financial technology adoption on banks financial performance in the case of some private banks in Ethiopia. The purpose of the study is to enquire information for purely academic purposes. Since your input is very important to the researcher you are kindly requested to fill this questionnaire to attain the main objective of the study. Your response will be kept highly confidential and used only for this research and no need of writing your name.

I am very thankful in advance for your participating in this survey and providing your thoughtful feedback.

Part I General information

1. Sex: - Male ☐ Female ☐

2. Age group: - 20-25 ☐ 26-33 ☐ 34-41 ☐ 42-49 ☐ above 50 ☐

3. Academic qualification: Diploma ☐ BA Degree ☐ Master Degree and above ☐

4. Work Experience at Private Bank: 1 - 5 years ☐ 6- 10 years ☐ 10-16 years ☐
17 and above ☐

Part II Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Fin-tech adoption (Inclusion)	5	4	3	2	1
1. The bank provides financial services that are useful to different segments of society.					
2. The use of fin-tech has an impact on the bank's performance effectiveness					
3. The clients have good opportunities to benefit from payment services, including digital payments.					
4. The adoption of fin-tech provides the bank with the attention of other new clients such as individuals and institutions.					
5. The bank shift to fin-tech use for the purpose of improving service quality.					

Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Fin-tech adoption (Automation)	5	4	3	2	1
1. The bank implements automation workflow systems.					
2. The automation systems are upgraded as per clients' needs					
3. The automation systems are adaptable due to					

changes in The bank's workflow					
4. Automation led to a reduction in the cost related to humanResources.					
5. There is a gap in the potential competencies of employees in the bank.					

Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Fin-tech adoption (Alternative payments)	5	4	3	2	1
1. The bank shift to APM use for the purpose of improving service quality.					
2. The adoption of APMs provide the bank with the attention of other new clients such as individuals and institutions					
3. The use of APMs have an impact on the bank's performanceeffectiveness					
4. The use of APMs increases the number of clients.					
5. The use of APMs positively impacted the bank's financialPerformance.					

Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Total Deposit	5	4	3	2	1
1. Fin-tech have introduced digital banking platforms that allow customers to make a deposit easily					
2. Fin-tech has introduced innovative deposit products. Such as goal based saving accounts.					
3. Clients favor utilizing fin-tech for depositing funds.					
4. The annual amount of deposits has risen following the implementation of fin-tech solutions					
5. As the adoption of fin-tech has grown, customers are increasingly turning to banks to deposit their savings.					
6. The rapid adoption of fin-tech has led to a significant increase in the total deposits held by banks.					

Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Total Loan	5	4	3	2	1
1. Providing loans through fin-tech services is more streamlined compared to traditional methods.					
2. Customers have shown increased interest in loans following the integration of fin-tech.					
3. The adoption of fin-tech has enabled the inclusion of various segments of society in loan processes.					

4. The rapid increase in the bank's total loan is attributed to the adoption of fin-tech.					
5. Fin-tech platforms have made it easier for individuals and businesses to access loans					

Keys: Strongly Agree (SA=5), Agree (A=4), Neutral (N= 3), Disagree (DA=2), Strongly Disagree (SDA=1).

Customer Base	5	4	3	2	1
1. Fin-tech services are often more accessible to underserved populations who may have limited access to traditional banking services					
2. Fin-tech has made the banking service offer a seamless onboarding process, making it quick and easy for customers to sign up and start using their services					
3. Fin-tech services offer convenience to customers by providing easy access to banks products and services through digital platforms.					
4. Fin-tech adoption has made banks often provide services at lower costs compared to traditional financial institutions					
5. Customers have shown increased interest in banks following the integration of fin-tech.					
6. The increasing customer base for banks fin-tech services can be attributed to the convenience					

Thanks for your time to complete this survey.