THE EFFECT OF ELECTRONIC BANKING SYSTEM ON THE FINANCIAL PERFORMANCE OF BANKS IN SOMALIA (PREMIER BANK)

THESIS

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THE STATE ISLAMIC UNIVERSITY OF
MAULANA MALIK IBRAHIM
MALANG
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Presented to:
Universitas Islam Negeri (UIN)Maulana Malik Ibrahim Malang in Partial Fulfillment of requirements for Degree of Sarjana Accounting (S.Ak)

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The content of this thesis does not integrate to any materials previously written or published by another people except those indicated in quotation and bibliography.

Since then, I am the only person responsible for the thesis, if there is any objection or claim from others.

Malang, 5, November 2022

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MOTTO

بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ

وَإِذْ تَأَذَّنَ رَبُّكُمْ لَئِن شَكَرْتُمْ لَأَزِيدَنَّكُمْ ۖ وَلَئِن كَفَرْتُمْ إِنَّ عَذَابِى لَشَدِيدٌ

English : And ˹remember˺ when your Lord proclaimed, ‘If you are grateful, I will certainly give you more. But if you are ungrateful, surely My punishment is severe.’” Quran 14:7

Indonesia : Dan (ingatlah juga), tatkala Tuhanmu memaklumkan; "Sesungguhnya jika kamu bersyukur, pasti Kami akan menambah (nikmat) kepadamu, dan jika kamu mengingkari (nikmat-Ku), maka sesungguhnya azab-Ku sangat pedih". Quran 14:7

PREFACE

Alhamdulillah, I thank God for His mercies, blessings, and guidance. Prayer and greetings may always be with the Messenger of Allah, Prophet Muhammad PBUH.

I am grateful for completing the final assignment of this thesis with the title

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The Author,

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ABSTRACT

Hussein, Omar Abdirahim. 2022. THESIS Title : "**The Effect of Electronic Banking System On The Financial Performance Of Banks In Somalia (PREMIER BANK)"**

Supervisor : Hj. Meldona., SE., MM., Ak., CA.

Keywords : Financial Performance, Mobile banking, Online Banking, Automated Teller Machine (ATM).

The progress of electronic banking depends on the efforts of each bank in deploying the infrastructure and support systems necessary to enable e-banking. As technology continues to accelerate transformation in the banking sector, the role of e-banking is becoming increasingly crucial to the benefits of banking. The purpose of this study is to investigate and provide empirical evidence on the effect of ATMs, mobile and online banking on financial performance.

This study used a survey method with 295 respondents. The respondent is a Premier bank in Somalia. The data obtained in this study were processed using the IBM SPSS Statistics analysis tool. Quantitative methods of data collection were used in this study, with questionnaires.

The results of this research can provide more knowledge, especially for Islamic banks when considering policies to improve e-banking in an effort to improve financial performance, that bank financial performance is very important for its growth and development, so the use of ATMs, mobile banking, and online banking, is an important component to support bank growth and performance. The study found that when analyzing financial and non-financial factors, the chosen model and the amount of uncertainty (risk) increase the risk of financial loss. As a result, when it comes to ATM distribution, banks can oversee factors such as business size, industry, and multi-nationality. They can also investigate security techniques to combat threats such as hacking, machine crashes, and fraud that compromise user privacy, as the study reveals significant findings on this topic with respect to the bank's financial performance. However, this study has limitations where the sample coverage is small and these limitations may be covered by other researchers in the future.

ABSTRAK

Hussein, Omar Abdirahim. 2022. Judul SKRIPSI : "**The Effect of Electronic Banking System On The Financial Performance Of Banks In Somalia (PREMIER BANK)"**

Pembimbing : Hj. Meldona., SE., MM., Ak., CA.

Kata Kunci : Kinerja Keuangan, Mobile banking, Online Banking, Anjungan Tunai Mandiri (ATM).

Kemajuan perbankan elektronik tergantung pada upaya masing-masing bank dalam menyebarkan infrastruktur dan sistem pendukung yang diperlukan untuk memungkinkan e-banking. Seiring dengan teknologi yang terus mempercepat transformasi di sektor perbankan, peran e-banking menjadi semakin krusial bagi manfaat perbankan. Tujuan dari penelitian ini adalah untuk menyelidiki dan memberikan bukti empiris tentang pengaruh ATM, mobile dan online banking terhadap kinerja keuangan.

Penelitian ini menggunakan metode survei dengan 295 responden. Responden adalah bank Premier di Somalia. Data yang diperoleh dalam penelitian ini diolah menggunakan alat analisis IBM SPSS Statistics. Metode kuantitatif pengumpulan data digunakan dalam penelitian ini, dengan kuesioner.

Hasil dari penelitian ini dapat memberikan pengetahuan yang lebih, khususnya bagi bank syariah ketika mempertimbangkan kebijakan untuk memperbaiki e-banking dalam upaya meningkatkan kinerja keuangan, bahwa kinerja keuangan bank sangat penting untuk pertumbuhan dan perkembangannya, sehingga penggunaan ATM, mobile banking, dan perbankan online, merupakan komponen penting untuk mendukung pertumbuhan dan kinerja bank. Penelitian ini menemukan bahwa ketika menganalisis faktor keuangan dan non-keuangan, model yang dipilih dan jumlah ketidakpastian (risiko) meningkatkan risiko kerugian finansial. Akibatnya, dalam hal distribusi ATM, bank dapat mengawasi faktor-faktor seperti ukuran bisnis, industri, dan multi-kebangsaan. Mereka juga dapat menyelidiki teknik keamanan untuk memerangi ancaman seperti peretasan, kerusakan mesin, dan penipuan yang membahayakan privasi pengguna, karena penelitian ini mengungkapkan temuan signifikan tentang topik ini sehubungan dengan kinerja keuangan bank. Namun, penelitian ini memiliki keterbatasan di mana cakupan sampel kecil dan keterbatasan ini dapat dicakup oleh peneliti lain di masa depan.

تجريدي

حسين، عمر عبد الرحيم. ٢٢. ٢بحث جامعي : **"تأثير النظام المصرفي الإلكتروني على الأداء المالي للبنوك في الصوما (PREMIER BANK)"**

المشرفة : الحاج ميلدونا ،

الكلمات الاساسيه : الأداء المالي, الخدمات المصرفية عبر الهاتف المتحرك, الخدمات المصرفية عبر الإنترنت, الصراف الآلي .آلة (أجهزة الصراف الآلي)

يعتمد تقدم الخدمات المصرفية الإلكترونية على جهود كل بنك في نشر البنية التحتية وأنظمة الدعم اللازمة لتمكين الخدمات المصرفية الإلكترونية. مع استمرار التكنولوجيا في تسريع التحول في القطاع المصرفي، أصبح دور الخدمات المصرفية الإلكترونية حاسما بشكل متزايد لفوائد الخدمات المصرفية. الغرض من هذه الدراسة هو التحقيق وتقديم أدلة تجريبية حول تأثير أجهزة الصراف الآلي والخدمات المصرفية عبر الهاتف المحمول والإنترنت على الأداء المالي.

استخدمت هذه الدراسة طريقة مسح مع 295 مشاركا. والمدعى عليه مصرف رئيسي في الصومال. تمت معالجة البيانات التي تم الحصول عليها في هذه الدراسة باستخدام أداة تحليل إحصائيات .IBM SPSS تم استخدام الأساليب الكمية لجمع البيانات في هذه الدراسة ، مع الاستبيانات.

ويمكن لنتائج هذا البحث أن توفر المزيد من المعرفة، خاصة بالنسبة للمصارف الإسلامية عند النظر في سياسات تحسين الخدمات المصرفية الإلكترونية في محاولة لتحسين الأداء المالي، وأن الأداء المالي للبنوك مهم جدا لنموها وتطورها، وبالتالي فإن استخدام أجهزة الصراف الآلي، والخدمات المصرفية عبر الهاتف المحمول، والخدمات المصرفية عبر الإنترنت، يعد عنصرا مهما لدعم نمو البنوك وأدائها. ووجدت الدراسة أنه عند تحليل العوامل المالية وغير المالية، فإن النموذج المختار ومقدار عدم اليقين (المخاطر) يزيدان من مخاطر الخسارة المالية. ونتيجة لذلك، عندما يتعلق الأمر بتوزيع أجهزة الصراف الآلي، يمكن للبنوك الإشراف على عوامل مثل حجم الأعمال والصناعة وتعدد الجنسيات. كما يمكنهم التحقيق في التقنيات الأمنية لمكافحة التهديدات مثل القرصنة وتعطل الآلات والاحتيال الذي يعرض خصوصية المستخدم للخطر، حيث تكشف الدراسة عن نتائج مهمة حول هذا الموضوع فيما يتعلق بالأداء المالي للبنك. ومع ذلك ، فإن هذه الدراسة لها قيود حيث تكون تغطية العينة صغيرة وقد يتم تغطية هذه القيود من قبل باحثين آخرين في المستقبل.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Instead of traditional over-the-counter encounters, digital platforms are used to deliver the whole banking experience and services. Customers can access their accounts, transfer funds across versions, settle necessary payments and responsibilities, and even request for loans through e-Channels using modern e-banking services. E-banking also refers to the systems or infrastructures that enable banking institution customers, whether individuals, companies, or organisations, to access their accounts, conduct personal and business transactions, or receive information on a variety of financial product offerings and services via a public or private network. As a result of digital platforms, or e-Channels, clients now have greater freedom to handle their banking and financial needs. Individual customers can access e-banking services via a laptop, a smartphone, an automated teller machine (ATM), or a kiosk, among other devices (Geetha & Malarvizhi, 2012).

Researchers from all around the globe have been captivated by the tremendous advancements in technological advances and the adoption of these technologies by enterprises (Halawani et al., 2020; Mahmoud, 2019; George, 2018; Egland et al., 1998; Perry, 1988). The banking industry has accepted and used electronic methods to execute their banking activities, similar to the trend of technology use in other organisational contexts. Consequently, e-impact banking's on the financial performance of banks has been extensively studied (Siddik et al. 2016; Akhisar et al. 2015) from various national contexts for example, (Yang et al., 2018-China; Siddik et al., 2016-Somalia; Al-Smadi & Al-Wabel, 2011-Jordan; Hernando & Nieto, 2007-Spain). There is a wide range of possible results based on empirical data from diverse viewpoints and nation circumstances, however. In various nations, researchers found that e-banking has a favourable, negative, or mixed effect on a bank's financial performance.(Hossain, 2021)

The growth of financial service delivery standards has been aided significantly by technological advancements. At its most basic level, smart internet banking technology such as ATMs now allows customers to conduct financial transactions outside of regular business hours. Individuals can manage their funds through internet banking. They can, for example, inquire about their current or savings account balances, pay their utility bills, or transfer money to family and friends without having to deal with a bank teller during normal business

hours. Customers may access their banking accounts, print their bank statements, move money across different accounts, and even manage their assets with a few simple clicks using the relevant portals. Our culture is gradually becoming a "cashless society," in which consumers are no longer forced to pay for all of their purchases with cash or real money. Furthermore, bank clients can buy securities for investments or other large-value transactions by transferring funds directly from their accounts, or they can use credit transfers to pay for a variety of products and services, such as booking vacations or paying for plane tickets, by simply providing their credit card information to the travel agents (Aduda & Kingoo, 2012).

As banking expands into a global sector, banks use e-banking as one of their strategic tools toattract customers to open accounts at their banks and continue using a wide range of banking services that they offer. From the bankers' point of view, banks that provide an extensive range of services electronically will attract a more active customer who utilizes the services more frequently (Sharma, 2011). From the customers' point of view, e-banking ensures quick paymentand settlement, which can be critical for the growth of the global and local clientele base, especially for businesses. E-banking also provides additional security to individuals and companies wishing to transfer large sums of money outside of office hours and without havingto handle physical cash (Boateng et al., 2019).

The financial profits of banks can be increased through the implementation and adoption of e-banking services. E-banking allows for online fund transfers, reducing the cost of storing large quantities of currency notes and coins (Sharma, 2011). It gives banks a competitive advantage by operating on a network with no geographical and physical boundaries. This means banks can afford to minimize overhead costs by setting up physical branches to reach customers in new geographical markets (Hosein, 2009). Thus, also allowing them to conduct business with less paper money and more plastic money. Hosein (2009) shared that one of the justifications for the banks to materialize e-banking is the reward from additional transaction revenues on top of their offline banking services. Additionally, banks also utilize e-banking as a platform for them to expand their customer base, which could widen the bank's sources of revenue.(Rahman, 2016)

Since Somalia's central government disintegrated in 1991, the country has been embroiled in an unrelenting civil conflict that has not only destroyed most of the country's social life but also caused the financial sector to completely collapse. Due to the conflict and political chaos, Somalia hasn't had a functioning banking system for nearly 25 years. Due to these factors, Somalia was unable to create a functional financial system. The only financial

system that survived the country's institutions collapsing were Xawaalads, or money transfer businesses, most of which were started by Somalis who had emigrated to other countries due to the insecurity in their home country.

Mobile money or mobile banking, which was offered by the nation's major telecommunications carriers, was another type of unregulated financial business that developed during the conflict. The biggest money transfer companies transformed into complete banking institutions after the establishment of Somalia's federal government in 2012 and the restoration of a semblance of normalcy. They then applied for a license from the central bank to operate as full-fledged Islamic financial banks (Musse et al).

From earlier, we know there are various rationales and advantages to e-banking for both the banks and their clients. Although banks may be motivated to implement e-banking services given the cost-saving element and growth potential in market share, their success may or may not be as the banks expected. This is due to the numerous factors at play or parties involved which could influence the success of electronic banking. These factors can be customers' satisfaction since they use the bank's service efficiently without going to the branch, and the bank gains efficiency for the sake of electronic banking. The advancement of electronic banking depends on the individual bank's efforts in deploying the necessary infrastructure and support systems to enable e-banking. Pikkarainen et al. (2004) stated that customer acceptance and the government's help in establishing favourable and relevant policies on e-banking are also critical. In this case, the banks may invest their capital in the implementation and expansion of e- banking. However, it could also imply that there is no guarantee that e-banking will be implemented successfully or that it will positively affect bank's profit and loss (PL), especially given that there are other parties involved in (Boateng et al., 2019).

As technology continues to accelerate the transformation within the banking sector, the role of e-banking becomes more crucial for the benefits of banks. Hence, the need for further study in this particular area. Previous research on internet banking (Hosein, 2009) and information communication and technology (Boateng et al., 2019) has discussed its adoption by banks as well as the factors influencing the acceptance of customers in the USA, and its effect on the performance of financial institutions in Ghana, respectively. Therefore, research on this area for Somalia is scarce.

According to Georank (2021), the USA ranked first in the world for the size of its economy, with over $20.5 trillion in gross domestic product (GDP), while Ghana ranked 73rd with over $65.6 billion in GDP. Compared with Somalia, the latter only produced over $4.7 billion (ranked 159th in the world) of GDP. The difference in the size of the economies is only one of the factors that show evidence that the countries are different from each other. Furthermore, it is unreasonable to expect the adoption of e-banking in the United States and Somalia to be the same, particularly given that the former ended the American Civil War in 1865 and the latter is arguably still on going, implying that the degree of financial development would be different. As such, a study on the effect of e-banking on the financial performance of banks in Somalia may produce a more distinct conclusion as opposed to a generalized one.

Banks in Somalia have begun to implement new technologies to improve their efficiency and profitability. Although the E-Banking System has many advantages, Somali banks may face personal problems and challenges. Internet banking hackers may still compromise an individual's account and the bank's system. Occasionally, the bank's systems may fail to work correctly. These challenges may negatively affect the efficiency and performance of banks in Somalia. In other words, it is important to acknowledge the differences, as cited by Rana (2015), highlighted that isolated studies often provide alternate findings.

Although the E-Banking System has many advantages, Somalia banks may face personal problems and challenges. Internet banking hackers may still compromise an individual's account and the bank's system. Occasionally, the bank's systems may fail to work correctly. These challenges may negatively affect the efficiency and performance of banks in Somalia. In other words, it is important to acknowledge the differences, especially as cited by Rana (2015), highlighted those isolated studies often provide alternate findings.

1.2 Research Questions

Research Questions are as follows:

1. What is the effects of automated teller machines (ATMs) on the financial Performance ofbanks?
2. What is the effects of mobile banking on financial performance of banks?
3. What is the effects of online banking on the financial performance of banks?

1.3 Objectives

Research Objectives are as follows:

1. To identify the effects of automated teller machines (ATMs) on the financial Performanceof banks.
2. To identify the effects of mobile banking on the financial performance of Banks.
3. To identify the effects of online banking on financial performance of banks.

1.4 Significance of Study

This study aims to identify characteristics that influence electronic banking's impact on bank financial performance in Somalia, with a particular focus on the impact of e-banking on ATMs, mobile banking, and online banking. Because there are few studies on the financial performance of banks in Somalia, the study;

1. Will provide a forum for academics to dispute the impact of electronic banking on banks' financial performance in Somalia over time.
2. May help policymakers especially the central bank, which is responsible for overseeing private banks to identify bank vulnerabilities and weak points that must be quite far controlled and improved.
3. May provide insights to the relevant authorities to improve their monitoring and enforcement, according to practitioners.
4. Aid in understanding Somalia's level of financial performance. The study may also help in understanding the level of financial performance in Somalia. Furthermore, this study will benefit banks and other financial institutions because it raises awareness of the problems and the need for a solution.

CHAPTER 2

LITERATURE REVIEW

2.1 Previous studies

The following will be attached to the research conducted by previous researchers, which are shown in the table below;

Table 1 Previous researchers

	Name, Year, Title	**Variable**	**Method/Data Analysis**	**Results**
1	Aduda, J., & Kingoo, N. (2012) entitled *The Relationship between Electronic Banking and Financial Performance among Commercial Banks in Kenya.*	Independent Variable; *Electronic banking* Dependent Variable; *Financial Performance*	The study used both descriptive and inferential statistics	1. From the research data, returns on assets of commercial banks declined from 2006 to 2007 before increasing steadily from 2007 to 2010. 2. The findings show that Number of ATMS has been increasing steadily since 2005, and hence contributing to development of the banking industry as it improve financial liquidity to the population
2	*Abubakar Gedow (2017) entitled Factors influencing Adoption of E-banking Service in Somalia*	Independent Variables; *E-Banking Investment, Transaction cost, Bank's Perceived Risk and government* regulation Dependent Variable; *Adoption of E-*	The research used descriptive analysis and inferential statistics	1. E-banking investment is considered to be a major factor for promoting adoption of E-Banking in Somalia 2. Offering high quality services to satisfy consumers‟ needs, at lower cost and fees, major sources of pleasure” 3. The study revealed that

		banking		lack of legal frame work is one of the challenges for E-banking system. 4. The results reveal that Ebanking investment, transaction cost, government regulation is significant in predicting determinant of Adoption of Electronic Banking services in Somalia. While bank's perceived risk has insignificant effects on Adoption of Electronic Banking services in Somalia.
3	Hossain, M. I. (2021). Effects of E-banking adoption on the financial performance of state-owned commercial banks in Bangladesh.	Independent Variable; *Electronic banking* Dependent Variable; *Profitability Measures* Control variable; *Macroeconomics*	The research used descriptive analysis and inferential statistics	1. State-owned commercial banks of Bangladesh fail to capitalize on the benefits of innovations. 2. This study notes a negative relationship between bank size and profitability 3. The macroeconomic control variables (GDP and INF) also show a significant impact on banks' profitability
4	Lasmini, R. S., et all (2020); The Relationship Between E-Banking and Financial Performance of Go Public Bank in Indonesia	Independent Variable; mobile banking, internet banking, size, risk, liquidity, business cycle Dependent Variable; financial performance	The research used descriptive analysis and inferential statistics	1. The application of internet banking has a positive and significant correlation with the financial performance of banks going public in Indonesia. 2. The application of mobile banking is positively and insignificantly

				correlated with the financial performance of banks going public in Indonesia.
5	D. J., & Omagwa, J. (2017); Effects of Internet Banking on Financial Performance of Listed Commercial Banks in Kenya	Independent Variable; *Electronic banking* Dependent Variable; *Financial Performance*	The research used descriptive analysis and inferential statistics	1. Internet banking is a key driver of cost management in banks. 2. Internet banking had positive influence on customer deposits especially mobilization.
6	Ndinda, M. F. (2017); Effect of Internet Banking on Financial Performance of Commercial Banks in Kenya	Independent Variable; customer deposit, bank transaction, fees and commission, internet banking expenditure	The research used descriptive analysis and inferential statistics	1. The study revealed that ROA in banks went up due to internet banking. 2. The study established that online bank transaction to total Asset ratio increased in an upwards trend over the specified study period. 3. ROA of bank was significantly predicted by online customer Deposits (OCD) and increase in online customer Deposits would lead to significant increase in ROA in commercial banks in Kenya. 4. Online banking transaction significantly and positively predicted ROA and that an increase online banking transactions led to increase in ROA. 5. The Fees and Commissions on

				internet banking predicted a negatively and significant influence on ROA 6. Internet banking expenditure predicted significant and negative effect on ROA

2.2 Literature Review

Financial performance measures a company's capital sufficiency, liquidity, solvency, efficiency, leverage, and profitability over a specific period. The company's ability to manage and control its resources. Corporate managers might base decisions on cash flow, balance sheet, profit-loss, and capital change. (Fatihudin et al., 2018).

Automated Teller Machine (ATM) is a technology invention that enhances speedy service delivery and diverse financial services such as cash deposits, withdrawals, funds transfer, utility and credit card bill payments, cheque book queries, and other financial inquiries (Odusina & Olumide, 2014).

When banking services are made available on mobile devices like smartphones and tablets, this is known as "mobile banking." It's the next logical step for online banking, and it offers superior digital conveniences. When applied to banking, this is a major step forward. Banking services are available whenever and wherever they are needed (Sadiku et al., 2011).

Whether you know it as internet banking, e-banking, or virtual banking, and online banking is an electronic payment system that allows customers of a bank or other financial institution to execute a variety of financial transactions via the bank or organization's website. The online banking system, in contrast to the conventional branch banking from which customers formerly received banking services, will typically connect to or be an integral element of the core banking system operated by a bank (BSHBS1, n.d.).

2.3 Financial Performance

A stream of studies undertaken on financial performance, (Halawani et al., 2020; Mahmoud, 2019; George, 2018;; Antoun et al., 2018; Fatihudin et al., 2018 and Gangi et al., 2018) were to explore the degree of financial performance and its many contributing

variables. This research analyses factors including banks' technology efficiency and knowledge, size, and position level to observe what and how these elements impact banks` financial performance.

A company's financial performance is measured by capital adequacy, liquidity, solvency, efficiency, leverage, and profitability over a given time period. This includes the collection and allocation of financial resources. Financial management and control of the company's own resources Cash. A company's cash flow, balance sheet, profit-and-loss statement, and changes in capital decision-makers in the business world Understanding the fundamentals is essential. analytical and technical analysis need an understanding of financial markets through economics, financial management, and accounting (Fatihudin et al., 2018).

Banking and finance in established and emerging nations have vastly different characteristics, operating procedures, and performance. Financial markets and banking systems in industrialized nations, for example, are robust and solid, while those in emerging ones are small and inefficient (Siddik et al., 2016).

According to most financial organizations, efficiency and productivity are the primary goals of financial innovation, which has led to the development of new goods and services. Automated teller machines and deposit machines, in combination with electronic banking, have made it possible for users to conduct financial operations without physically visiting a bank. As a result, a cashless society is promoted, in which clients pay for their transactions electronically rather than with actual currency on their person (Musiega, 2016).

The usage of electronic banking, according to Maiyo (2013), minimized expenses by reducing the number of bank employees and enhanced profitability. Instead of the conventional channels characterized by human help, teller, or corporate administration, banks today function on a self-service basis. A reduction in the amount of paper and postage used in delivering client bank statements and other documents has occurred from the use of electronic payment methods, which also reduces the amount of data that must be entered (Allan Kamau, 2019).

Financial inclusion aims to guarantee that people have access to helpful financial services and products that are well suited to their requirements (Kariuki, Kimundi & Makambi, 2018). Instead of conducting business in physical banking rooms, the use of electronic banking enables clients to access and use financial services and products from financial institutions more readily and conveniently.

Mago and Chitokwindo (2014), who conducted a study in Zimbabwe to examine mobile banking and financial performance, are among the global studies that are currently available. They found that e-banking is a major predictor of financial performance among financial institutions. In order to connect e-banking and financial services, Asare and Sakoe (2015) concentrated on Ghana, where a substantial connection was found. Ene, Abba, and Fatokun (2019) investigated how e-banking impacts financial performance in Nigeria, where ATMs were not found to be important. Examining technical advancements and their relationship to financial performance, Wanjiku (2020) found that agency, internet, and electronic banking channels all helped to advance financial performance.

2.4 Automatic Teller Machines (ATM)

According to Rose (1999) the first well-known devices to provide consumers with electronic access were automated teller machines (ATMs). An ATM can perform most of the important functions or services offered by banks. Banks can serve customers from virtually anywhere as the ATMs do not need to be placed inside the banking hall. Nevertheless, the ATM is still regulated and requires customers to present a unique identification in the form of a plastic card for them to be able to have access to the banks' services directly from the ATM. Plastic cards have replaced checks, customer-teller interactions, limited banking hours, and paper-based verification. ATMs also make hard cash accessible almost 24 hours a day in all parts of the world. By using a unique ATM card issued by the banks, the customer can perform various banking activities, such as checking their bank balances, withdrawing cash from their current and savings accounts, and sending money between accounts (Indiamart, 2019). Customers may deposit funds into their bank accounts, withdraw credit card cash advances, and even buy prepaid cell phone credit through an ATM. Customers may withdraw money directly from their point of access, which promotes accessibility. This improves productivity and lowers transaction costs, resulting in improved financial results. This is in line with a study from the Fannie Mae Foundation, which stated that ATMs in the banking sector process approximately 420 million transactions per year, generating $3.3 billion in gross annual revenue (Monyoncho, 2015).

Chemical Bank in Rockville Center, New York, introduced the first public cash dispenser in 1969 to allow customers to withdraw money. It revolutionized the banking industry by removing the need for simple financial transactions at a branch. In the 1980s, the machines handled many banking transactions and were generally accepted and even shared

among customers. Deposits, withdrawals, transfers, account balance inquiries, requests for cheque books, account statements, and other resources become available 24 hours a day, seven days a week using an ATM. Necessities the use of an ATM card as well as a personal identification number (PIN) (Shannak,2013).

According to Rose (1999), an ATM is a device that combines the functions of a bank teller and a vault by allowing account holders to access the bank's bookkeeping and withdraw money through a digital interface that requires customer- access verification. In recent years, technology has accelerated the spread of banking networks and the variety of services they provide. All banking services, including electronic payments, borrowing, savings, and stocks, have become increasingly reliant on information and telecommunications technology. This is the primary reason banks are the largest consumers of contemporary technology. (Boateng & Forson 2019),

Due to the complexity of financial services, banks use any opportunity to enhance their efficiency or increase their accessibility to customers. Banking industry management via the use of ATMs to improve banking industry performance is a collection of techniques from which each banking institution must choose those that are appropriate for it. Each year, automated teller machines execute around 420 million transactions, producing a total of $3.3 billion in gross annual revenue for the banking sector (Jegede, 2014).

Today, investing in ATM technology is critical as banks continue investing in better, more modern ATM technologies to boost their ability to offer an efficient banking experience. Banks' objective is to stay competitive and profitable by providing consistent services and maintaining a growing base of delighted customers. Banks' investment efforts to strengthen and extend their delivery methods, product and service availability, and customer contact demonstrate this (Mwatsika, 2016).

2.5 Mobile Banking

According to Vaidya (2011), mobile banking is a technology that has grown in popularity throughout time, influencing a broad range of financial institutions and other areas of theeconomy. Mobile banking has developed from introductory text messaging to a kind of spoof internet banking in the twenty-first century, where consumers could not only track their accounts and set up various alerts, but they could also execute transactions such as fund

transfers, redeem reward coupons, deposit checks, and instruct payroll-related transactions via their smartphones (Okiro & Ndungu, 2013).

Using a smartphone or tablet, customers may conduct a variety of financial activities using mobile banking, which is a term used by financial institutions. Using a mobile device to make a purchase in a physical store or online is different from using a mobile device to start an electronic funds transfer at point of sale (EFTPOS) transaction, which is what mobile payments are all about. The first mobile financial service was SMS banking. In 1999, with the debut of WAP-enabled telephones, the first European banks began offering mobile banking to their clients. (Rashed & Noori, 2016).

Mobile banking offers a wide range of benefits for both banks as well as their clients. Customers no longer have to be limited by their location when using mobile banking, making it more convenient. Banking can be done at any time and in any place because there is no time limit. Mobile banking also allows for effective cash management and cash protection (Rachael W. Mutua, (2010).

According to Rana (2015), banks in developing markets constantly implement new technologies across the value chain to minimize operational and administrative expenses. Similarly, Somalia banks are investing heavily in mobile systems to gain a competitive edge and various business benefits, ranging from enhanced productivity and cost savings to improved operations and customer support. The global increase in the availability and capacity of digital cellular networks has aided this advancement. The number of different types of sophisticated smartphones and the functionality facilitated by telco providers and software makers has been steadily rising. The falling cost of data transmission has driven the spread of mobile technology. As a result of high market participation from suppliers, the falling prices of smart devices have boosted the global mobile market's growth (Shah & Clarke, 2010).

The phones are utilized for voice data, web-based tracking (GPS), and financial transaction alerts through a short messaging service. Not only does the mobile telephone provide an inexpensive method of contact, but it also serves as a lifeline for many Somaliai living in Somalia. A large portion of phone usage is for financial transactions, which involve cash transfers from cities to rural regions. Mobile money is currently the primary mode of local money transfer for the Somaliai people, regardless of whether they live in. The United Nations and other international organizations, such as CARE-Somalia, also undertake

financial transactions via this channel while maintaining bank accounts with banks and additional money receiving institutions. Indeed, the mobile phone has made it possible for hithertounbanked people to participate in the financial sector. (World Bank, 2018).

One of Somalia's most booming industries is the telecommunications industry, which privateenterprises created. These private firms provide inexpensive fixed-line, mobile phone, and internet services in all major cities around Somalia, with the lower international calling prices and the high possible quality. Because of the accessibility and rapid growth of telecommunications systems, allowing customers to use their mobile phones to transfer cash, make payments, and purchase products or services (Sayid & Echchabi, 2013).

According to Bahl (2012), in terms of the influence of e-banking, the research concludes that it contributes to the improvement of the connection between bankers and consumers in the long run. According to the bankers, such bonds will result in an improvement in the overall performance of banks. When it comes to the various promotional techniques' banks use to promote e-banking, the survey reveals that most of them rely on print media, followed by the internet, SMS on mobile phones, outdoor commercials, and television. According to research conducted by Olwande and Ngaba (2019), mobile banking has a major impact on the performance of Kenya's commercial banks.

2.6 Online Banking

As the internet industrialized in the early 1990s, traditional "bricks and mortar" banks began looking for methods to reduce operating expenses via the provision of limited online services. Numerous banks increased their online presence in reaction to the success of these early attempts by developing enhanced websites that enabled customers to download documents, open new accounts, and process loan applications. Following that, internet-only banks arose, providing online banking and a variety of other financial services and products without relying on a branch network. In the early 1980s, both the UK and the US saw the development of online banking. No matter how well known it is today, it first gained notoriety in the late 1980s with an altogether different connotation (Sharma, 2016).

The phrase "online banking" refers to the practice of accessing one's bank account via the use of a landline telephone, a keyboard, a terminal, and a computer display or television. In 1981, New York City became the first city in the United States to experiment with this novel method of conducting business (four central banks participated: Chase Manhattan, Citibank, Chemical, and Manufacturers Hanover), but it initially failed due to customer

acclimatization and resurfaced in the mid-1990s. Customers were hesitant to use e-banking dueto their lack of confidence in the security measures and unfamiliarity with the procedure. In the 1990s, banks used the web to expand their businesses without engaging with their customers (Sharma, 2016).

Their websites include uncomplicated information, such as photographs of their branch orbuilding maps and ATM locations, a phone number for more information, and a short description of their goods. In 1995, Wells Fargo became the first bank to provide interactive banking tools through the internet. Following that, "Presidential" was the first bank in the nation to provide online banking. (Sharma, 2016).

According to Shannak (2013), in the 1990s, online use grew as more individuals acquired computers and linked them to the dial-up home internet. Stanford Federal Credit Union was the first bank to provide complete internet banking in 1994. Due to technological advancements and the widespread use of thehome internet, clients now have access to 24-hour e-Banking services. On the other hand, many clients in the 1990s had sufficient faith in conducting significant monetary transactions and did not believe online banking was secure enough. This prompted a concerted effort and expenditureon providing banks to enhance the security of their online banking services and promote them.

Globalization and increased competition in all industries throughout the globe have forced many businesses to adapt their methods to reach their clients more quickly and cheaply. Nevertheless, the fast rise of systems based on electronic technology, particularly those involving the internet and personal computers, has resulted in a substantial shift in the way goods and services are exchanged. Numerous service firms have embraced contemporary technology to decrease expenses, improve the quality and reliability of client service, andsimplify key service offerings. Additionally, many non-banking businesses have decided to enterthe banking industry by providing products and financial services, providing customers with numerous choices for conducting banking transactions. Because of the complexity of the financial sector's business procedures, banks must build a new technology channel to attract and retain consumers. Due to the increasing spread of technology, the internet is the optimal method for providing banking services to consumers regardless of time or location constraints. That is why banks see the internet as a critical component of their strategic objectives (Jalal et al.,2011).

Internet banking, online banking, virtual banking, and other terminology are all used to describe online banking. It allows for quick access to accounts, business transactions, and accessing timely updates on financial products and services, including on mobile phones. Modern banking has transcended all geographical boundaries, in addition to being timeless. Utilizing technology in the banking industry has revolutionized the global banking landscape (Chavan, 2013).

When banking institutions began implementing e-banking services in the mid-1990s, many customers expressed reservations about doing financial transactions via the internet. It required broad acceptance of electronic commerce, facilitated by pioneering businesses such as America Online, Amazon.com, and eBay, to popularize the concept of online shopping. By 2000, e- banking was available at 80% of US banks. Client use increased gradually. Bank of America has become the first bank to reach 3 million online banking clients in just 200, accounting for more than 20% of its total client base. By contrast, significant American banks, such as Citigroup, claimed to have 2.2 million online connections worldwide, while J.P. Morgan Chase said it had more than 750,000 online banking users (Keivani et al., 2012).

Using a computer to conduct financial transactions is nothing new, but the advent of online banking is. Payments for goods and services such as money transfers, bills, checking and savings accounts, mortgage payments, and the purchase of financial instruments and certificates of deposit may all be made via an internet-based system known as online banking. When aconsumer utilizes Internet banking, they may see their account balances on the bank's World Wide Web server, not on their own computer, by using a browser. An Internet bank, as described by Net-Banker, is one that offers consumers online account balances and transactional capabilities. Virtual, cyber, net, interactive, and online banks are all terms used to describe bankson the internet (Keivani et al., 2012).

Due to the widespread availability of computers and mobile phones, internet banking is becoming increasingly popular. It has enabled clients to access services by allowing them to perform tasks such as moving funds, balance inquiries, electricity and phone payments, settingup or cancelling recurring payments, applying for loans, as well as mortgage or credit card repayments. Banks initially faced lower profitability due to increased costs that grew due to introducing the new technology, and there was a trade-off between the benefits of internet banking and the costs that would be incurred (Ndinda, 2017). In addition, Sharma & Gaherwal (2017), as cited by Datta et al. (2020), shared that since digital privacy and security are on high alert, banks with mobile or online banking have recently experienced immensely

complex onlineservices. As a result, banks must provide more stable and safe online banking services. This implies further expenditure by the banks to ensure customers are confident in the safety and use of online banking and e-banking as a whole.

According to Hasan et al. (2010), online banking has had a favorable influence on banks' profitability in Somalia, despite the fact that several of them are adopting automated electronic services to maximize their profits. As a result, it significantly contributes to the improvement of the bank's performance.

The advancement of technology has impacted almost every element of society, including the financial industry. Electronic banking transformed and reshaped how banks operated, as technology is now often regarded as the primary factor in an organization's progress and essential skills. As a result, local and international banks are spending more on delivering new technologies to their consumers through e-banking. Banks provide personal computer banking, mobile banking, ATM services, electronic money transfers, account-to-account transfers, online bill payment, online statement viewing, and credit cards. Additionally, an often-unique featureof internet banking is the ability to integrate data into personal accounting software. Consumers may check all their accounts in one spot, regardless of whether they are with their main bank or other financial institutions. Internet banking is seen as a complement to, rather than a substitute for, traditional brick-and-mortar financial institutions. (Sumra et al., 2011).

Despite the country's decades-long developments, the financial sector has evolved out of necessity, shifting to hawala, or money transfer services, a mechanism that most banks do not accept. However, the financial industry has seen rapid growth in recent years. Rana (2015) also mentioned that with the implementation of the internet or online banking, the bank gets more profits through cost savings and additional revenue generation. Wage costs would become lower, and other charges would be reduced as processes became more competitive and efficient (Humphreys, 2000 as cited by Rana, 2015), thus raising the financial productivity of the bank. The improvement of customer service online, as a result of online banking, also provides a broader customer base, which means more sources of revenue for the banks.

Customers can access electronic services through ATMs, telephones, PCs, the internet, and, more recently, cell phones. Many IT services are now available online, and many consumers have access to them. Both banks and their customers profit from the

internet. Customers can perform their banking tasks at any time and from any location using this technology, and banks benefit from cost savings and improved efficiency (Ghalandari, 2012). Technology has progressed dramatically, and it has played a significant role in raising service quality standards in the financial institution market. Customers no longer have to wait in physical queues at counters during regular business hours to pay their energy bills, school fees, or other financial transactions that previously required over-the-counter payments at dedicated locations and times.

Unlike in the past, they can now perform their banking needs at their convenience using an ATMor the internet from the comfort of their own homes. In addition, following the exponential expansion of the smartphone industry and the sophistication of its operating systems such as iOSand Android, most financial institutions have ventured into a previously untapped market by partnering with telecommunication network operators (telco) to provide banking services to theircustomers (Okiro & Ndungu, 2013).

Nevertheless, banks use technological advancements in information and communication to enhance the efficiency and efficacy of their customer service, streamline business processes, and improve business decision-making. This allows them to retain a competitive advantage in a rapidly growing and evolving banking sector, primarily through customer retention and the maintenance of a broad client base. After all, customers have been deemed the most critical and essential factor in a market where competition is high in securing and retaining customers, such as in the banking sector (Luka & Frank, 2012).

The operating efficiency of e-banking has a favorable influence on the financial results of banks as they gain a competitive advantage by not having to establish physical branches (Hosein, 2009). This would also imply that bank employees would be less required to interact with customers in person, as most interactions could be replaced by E-banking. As a result, this provides an avenue for the banks to rationalize their overhead costs. As banks provide complete E-banking services, according to Dubois et al. and Brush et al., bank operating costs will decrease, and bank profits will increase (Lasmini, Budiarti, Tasman, & Susant, 2020).

Without a doubt, commercial banks play a critical role in any country's economic growth. The importance of productivity and effectiveness in the operation of banks as prominent members of the nation's financial services provider cohort cannot be overstated. Recent technological advancements, which gave rise to the advent of ICT, have resulted in a

significant transformation in the way companies are operated today (Aregbeshola & Binuyo, 2014). Today, information and communication technology (ICT), as an excellent technology prospect, plays a critical role in SACCO efficiency, resulting in profitability through components such as cost reduction, cheaper delivery networks, and shorter supply times, vital customer service, technological innovation, expansion into new markets, and increased market share. One of the advantages of electronic banking products and services delivery for banks is that it improves the quality and efficacy of their activities, allowing for more transactions to be processed quicker and more efficiently, which would undoubtedly have a direct impact on the banks' overall profitability (Morris, 2014).

In Somalia, there are dozens of banks that provide online banking services. Despite the country's development, Somalia banks have suffered greatly. The lack of a role for the central bank and the government's position toward safeguarding banks have also challenged Somalia banks to move forward. Most Somalia banks have started to implement electronic servicesinthe last ten years. Thousands of customers are using their online services. However, the banks are making a tremendous amount of profit from its online services. This means that the financial performance of the bank has significantly increased due to the online bank.

2.7 Technology Acceptance Model

People's acceptance or rejection of information systems is the subject of several research that have used various models to understand, forecast and throw light on this phenomenon. Davis et al (1999) technology`s acceptance model (TAM) is a key model in this sector. The primary goal of TAM is to give an explanation of elements that contribute to the adoption of technology. In addition, the model helps scholars and practitioners alike to understand why a certain system is unpopular.

Furthermore, the perceived simplicity of use influences both attitude and perceived usefulness. TAM believes that the more favourable the opinion about a system is based on its perceived utility and simplicity of use, the better. As a result, a more favourable mental attitude about using the system has a good impact on actual system utilization. According to TAM, the perceived usefulness of technology is determined by its perceived ease of use since technology's usefulness grows as it is simpler to use (shbiel & ahmad, 2016).

TAM and other studies have shown that whether or not a customer utilises a service is determined by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). As a result of this, some have even compared the TAM to Internet banking. When it comes to Internet and

mobile banking adoption, the TAM was shown to be an effective tool, and customers were more inclined to utilise a service if it was simple to use. The TAM believes that sentiments about utilising the service are also a factor in how often the service is used. More than only the customer's perception of the service's ease might influence their attitude toward it. The findings of a question on trust were intriguing. Many people said that they felt safe while utilising the service, but those who didn't aren't to be overlooked. People who felt unsafe did not seem to have a specific demography. The things that made people feel uncomfortable followed a pattern. When asked whether they felt insecure due of the service's online nature, 77% said yes, and 70% said they were concerned about hackers or cyber assaults. (Josefsson, 2017)

Customers' sense of security is critical to the banks providing the services. Using the new TAM, banks should be able to see just how important it is to address consumer privacy concerns and whether or not doing so would lead to an increase in customers. Customers may be more loyal to banks if they feel comfortable and less concerned about their privacy as a consequence (Josefsson, 2017).

The primary goal of TAM is to give an explanation of elements that contribute to the adoption of technology. In addition, the model helps scholars and practitioners alike to understand why a certain system is unpopular. This model fits in the study to enhance banks desire in adoption and use of Information Technology (IT) which is the dominant technology of the contemporary society to predict and explain IT acceptance.

2.8 Conceptual Framework

This study suggests that electronic banking is very lucrative for Somali banks and plays a critical role in their financial performance. The following is the structure of the conceptual framework illustrated in Figure 3.1, in which this research considers that independent variables contribute significantly to the improvement in financial performance of Somalia banks.

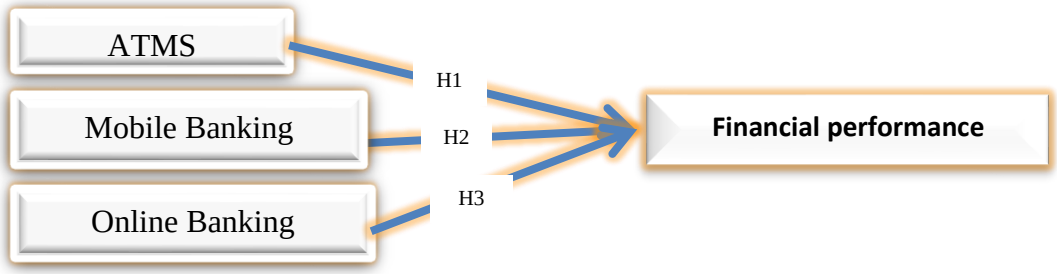


Figure 3.1**:** Conceptual Framework.

2.9 Hypothesis development

The following section discusses on the development of research hypotheses.

2.9.1 Automatic Teller Machine (ATM) and Financial Performance of banks.

The Bank of Kigali Board reports that the use of ATMs having a good impact on commission fee revenue is about the use of ATMs having a good impact on interest revenue is about the use of ATMs generating new income and lowering operational expenses. (Harelimana, 2018) found that there is a positive correlation between the use of ATM cards and an increase in commission fees earned by Bank of Kigali employees, a positive correlation between the use of ATM cards and an increase in interest income earned by customers, and a positive correlation between the use of ATM cards and an increase 0.748 in interest income earned by customers as long as the correlation between the variables is greater than or equal to 0.5, the hypothesis that there is a substantial link between Automate and the independent factors is accepted.

The findings from (Mwai et al., 2018) show that ATM banking is essential for banks in their efforts to increase market financial depth. ATMs allow customers to access their bank accounts at any time and from any location. As a result of these features, customers may save money by depositing and withdrawing money, checking balances, and managing their PINs. As a result, a bank is able to charge fees to consumers who use ATM banking and therefore expand the scope of their business.

Customers who don't normally conduct their banking business at a physical location will be encouraged to switch to ATM banking in order to take advantage of its convenience and speed. The statistics also show that ATM banking helps clients create trust and loyalty to the bank, which in turn helps the bank's segments deepen. Hence, the following hypothesis was developed.

H1: There is a positive relationship between automatic teller machine (ATM) and financialperformance of banks.

2.9.2 Mobile Banking and Financial Performance of Banks.

Findings from Kathuo (2015) discovered that their banks' mobile banking products, such as Fund Transfer between Accounts/E-funds Transfer, Bill Payment, and command for cheques issued and bank statements, have an impact on the financial performance of commercial banks. In the previous five years, these M-banking offerings have significantly enhanced the bank's income. Findings from Karjaluoto (2002) and, state that the banking system benefits from the addition of new services including prepaid cards, ATMs, voice mail/landline interfaces, smart cards, and point of sale networks and resources on the internet.

The mobile platform provides an easy way to manage money without having to deal with cash. In turn, this has led to a better financial performance for the banks as a result. Commercial banks' bottom lines benefit significantly from mobile banking, according to the (Benjamin, 2019) results. Mobile banking is projected to continue to rise as more people utilise all sorts of mobile services. Customers benefit from mobile banking by being able to do activities "on the fly." Any current barriers and problems that can prevent users from using mobile banking should be eliminated. A commercial bank's financial performance will improve if it broadens its mobile banking coverage, raises consumer knowledge of its apps, and reduces the hazards and risks associated with mobile banking, thereby attracting more clients to its banking platforms. Therefore, based on prior literature, the following hypothesis was proposed.

H2: There is a significant relationship between mobile banking and financial performance of banks.

2.9.3 Online Banking and Financial Performance of Banks.

There is a favourable association between online banking and financial success according to the correlation table. Internet banking use will have a positive effect on the financial performance of banks that go public if the control variable is constant. Mobile banking, in theory, is a continuation of online banking. Internet banking may now be done on a computer, laptop, or even a mobile phone thanks to recent technological advancements. It's possible for banks to save time and money by allowing clients to do financial transactions online or through mobile device. Banks' financial performance will improve as a result of increased efficiency. Even while mobile banking has improved bank performance, it hasn't been substantial. (Lasmini et al., 2020). Consequently, the following hypothesis was proposed.

H3: There is a significant relationship between online banking and financial performance of banks.

CHAPTER 3

METHODOLOGY

3.1 Research Design

According to J. Ellis and Levy (2012), the research design is a comprehensive plan outlining the procedures and methods for collecting, analyzing, and interpreting the relevant information for the study. The significance of research design requires a clear strategy that specifies sources and types of information and data used to answer the problem statement (Rozieana, 2009). A well-structured questionnaire will be designed in this study to collect the data from the target respondents. Quantitative research can gather numerical data that can elaborate on a phenomenon and analyse the data utilizing mathematical methods. Moreover, to test the hypothesis of this study, using quantitative data will be more efficient and prudent. Furthermore, the study design is a replica of other studies which are adopted.

Islamic banking in Somalia have existed for over a decade, and they are still seeking to use e- banking to increase their profitability and attract more customers. The study will be conducted in Mogadishu, Somalia, among senior managers and head departments of Premier bank in Mogadishu using electronic banking services. This is an appropriate population to target, as the usage of banking services in Mogadishu is higher than in other regions of Somalia.

3.2 Research Location

The study will be carried out in Mogadishu Somalia, at Premier Bank.

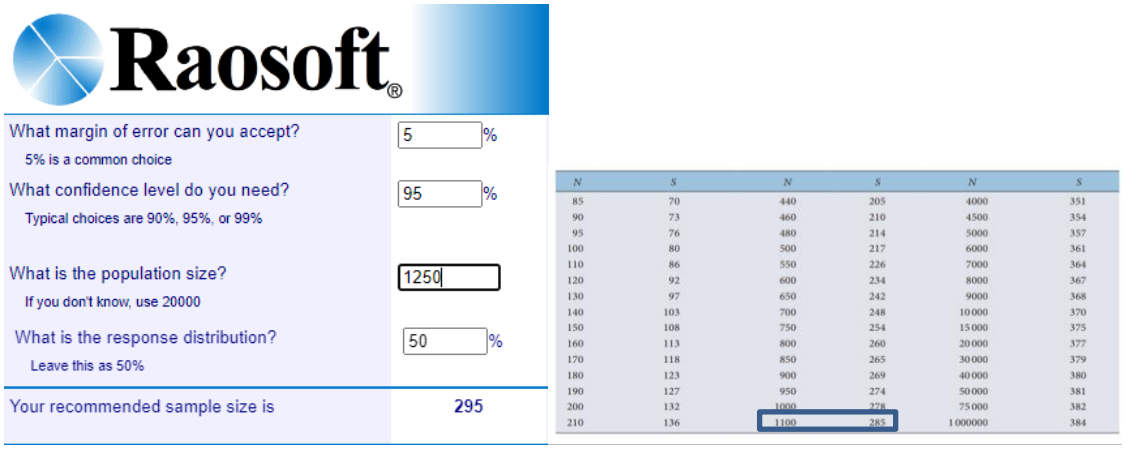
3.2.1 Population and Sample Size

When a population is sampled, a sufficient number of samples must be collected in order for the populations characteristics to be adapted (Space, 2014). The researcher will use innovative methods of research to select the sample size, which will be premier bank from Somalia. The reason for the premier bank is the one that is fully using e-banking with required qualifications of the study. Online sample size number calculator featuring Uma Sekaran and Roger Bougie is illustrated in the form of screenshots from the book.

3.3 Population of the Study

Senior managers and all employees of Premier bank in Somalia were targeted during the data collection procedure, because only top bank executives can answer whether electronic banking can help banks improve their financial performance (Space, 2014). The study's population will be 1250 respondents from Premier bank.

Figure 2: Sample Size of the Study



N	S	N	S	N	S
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10 000	370
150	108	750	254	15 000	375
160	113	800	260	20 000	377
170	118	850	265	30 000	379
180	123	900	269	40 000	380
190	127	950	274	50 000	381
200	132	1000	278	75 000	382
210	136	1100	285	1 000000	384

3.4 Sampling Procedure

To pick study participants from the target population, non-probability sampling will be used. In this method of sample, the researcher determines who will and will not participate in the survey. The target group will not have a fair opportunity to enrol in the analysis using this strategy.

3.5 Data Collection

Data collection refers to how the information is accumulated. Sources of data are classified into two main types, which are primary and secondary data. The technique of the investigation unit is used to collect data for the analysis. To aid in data collection, surveys with a five-point Likert Scale rating scale ranging from (strongly agree) 5 to (strongly disagree) 1 are distributed to Somalia's Premier bank. Questionnaires, whether formal or informal, serve as tools for collecting questions which respondents must answer (Space, 2014).

The Primary data sources are used in the investigation. Online able to gain more knowledge using forms, particularly Google forms, are used for data collection even though they reach a larger number of people and allow for faster responses. Prior research indicates that a questionnaire is widely used for data collection techniques for ATMs, online banking, and mobile banking.

3.6 Theoretical Model

As discussed in the preceding sub-chapter, this research utilizes several independent variables to determine the significance of the dependent variable. Meanwhile, three independent variables will be examined to establish their effect on the financial performance Somalia's banks: ATMs, mobile banking, and internet banking. The results of data collection will be continued with data processing using SPSS analytic software, which will be used to analyse primary data acquired via the distribution of questionnaires to respondents. Meanwhile, this isthe model created by preparing each variable; this model will be used to decide and visualize the analysis findings.

$$\mathbf{Y = a + b_1X_1 + b2X2 + b3X3 + e}$$

Interpretation:

Y = Financial performance of banks = Constant Coefficient

b_1, b2, b3 = Constants of Regression

X_1 = ATM

X2 = Mobile banking

X3 = Online banking

E = Error

3.7 Research Instruments

A closed questionnaire will be used in order to collect research data from the target population. Respondents will be brief about the study and its objectives. The respondents will

explain the content of the questionnaire and will use the Likert scale, i.e., strongly disagree, disagree, agree,strongly agree and neutral.

Table 2 Research Instruments

Variable	Measurement	Reference
Financial performance	Increase in return on assets due to electronic technology.	(Olindo, 2018)
	The bank has experienced increase in return on assets.	
	The bank has experienced increase market share.	
	The volume of the banks sales has increased since the bank adopted the various forms self-service technology.	
	The bank has improved on its cost to income ratio after business process reengineering.	
	The bank has increased of new accounts openings.	
ATMs	The number of ATM cards issued have increased significantly.	(Mwai et al., 2018)
	Our bank has increased number of ATMs significantly.	
	Our banks profitability is attributed on the ATM banking.	
	Total customer transactions have increased as a result of ATM banking in our bank.	
	Retail banking transactions in our bank have reduced significantly as a result of ATM banking.	
	Our banks total income is attributed to investment to ATM banking in our bank.	
Mobile banking	Mobile banking has enabled 24/7 accessibility to financial services significantly.	(Benjamin, 2019)
	Time spent in mobile banking is low compared to the traditional banking.	
	Clients can easily interact with bank; express themselves without visiting	

	their branches.	
	There is great potential of using this for tapping into the unbanked community.	
	Use of credit scoring systems has increased the revenue generated from mobile loans.	
	When transferring money through mobile banking the users afraid that they will lose money due to careless and mistakes.	
Online banking	Our bank has invested heavily in online banking.	(Mateka et al., 2017)
	Online banking has improved the image of our bank among its customers.	
	Our bank always ensures security of data and information that is operated on the online banking platform.	
	Customers fear online banking due to fear of hacking of their accounts by web hackers.	
	Charges on online banking are friendly and the bank has generated a lot of revenue from the same.	

3.8 Research Quality

3.8.1 Validity

Validity refers to the degree to which a data collection technique, i.e., concept, properly measures what was meant to be measured in the context of quantitative research (Heale & Twycross, 2015). In general, the validity of each question or collection of questions is assessed separately from the questionnaire's overall validity. The researcher will use the material validity index to maximize the validity of the questions in this study. The researcher will create the questions as clearly as possible, testing only one item at a time. The fact that the study will be conducted in English may affect the relevance of the questions. However, a careful effort will be made to minimize the mistake.

3.8.2 Reliability

The term "reliability" refers to the consistency with which the same result is obtained when the measurement is repeated. (Heale and Twycross, 2015) Pre-testing, modification, and further testing may improve the reliability of the questionnaire. To test the reliability of each construct, this study will use Cronbach's alpha. According to Cronbach's Alpha coefficient, it cannot be less than 0.70. However, great care will be exercised to reduce the error. Reliability refers to the degree to which measures are free from error.

3.8.3 Normality Test

The normality test is a statistical procedure used to determine the data's standard normal distribution score (Field, 2013; Sekaran & Bougie, 2003). The skewness and kurtosis values of the study are calculated to determine whether the distribution of scores is close to normal. Skewness, which measures data symmetry, is concerned with distribution data (Sekaran & Bougie, 2003). The greater the skewness number, the more likely the distribution has an excessive number of low scores. Negative values indicate that the distribution of scores is skewed. When compared to a normal distribution, the kurtosis value is high if the data are heavy-tailed or light-tailed (Sekaran & Bougie, 2003). For example, a positive Kurtosis value indicates that the distribution has a lot of points and heavy tails.

3.9 Data Analysis

The data was examined using SPSS V25.0 after it has been obtained from respondents. The research will be both descriptive and inferential. Popular descriptive analyses include the mean, standard deviations, frequencies, and histograms. Inferential analysis is a statistical method for drawing conclusions about the relationships between variables. The link between a dependent variable and its independent factors will be determined using multiple regression analysis in this study.

3.10 Data Screening

Data screening is a necessary step before any analysis can be performed. This step entails detecting missing values and determining the normality of the variables involved. SPSS will be used to evaluate both cases. The most parametric test requires the assumption of normality to be met in order to conduct statistical analysis.

This assertion requires that the data be normally distributed, or that it be bell-shaped with a mean of 0 and a standard deviation of 1. If the assumption is met, any parametric test can be performed. Skewness and kurtosis will be observed in order to test the normality assumption in this manner. The data is considered normally distributed if the skewness range is less than one and the kurtosis range is less than three.

3.11 Descriptive Analysis

Descriptive analysis is a type of data analysis in which shapes appear to satisfy each situation of the data. It aids in the explanation and understanding of the properties of a specific data set because it presents summaries of the data set and measurements. This method is used to describe, among other things, the statistic means, median, maximum, minimum, skewness, and kurtosis values for obtained data. It demonstrates the characteristics of the research sample in relation to aspects contributing to financial performance using hypothesis testing at the 5% statistically significant level.

3.12 Pearson Correlation

The coefficient correlation value is used to interpret the results (r). The significant-p value is used to determine whether to reject or accept a null hypothesis. The value of R is used to interpret the results. The dependent and independent variables in this study are explained in terms of their relationship to one another. The correlation between elements that affect electronic banking financial performance in Somalia was discovered to be significant enough to warrant testing the hypothesis. This method is used to calculate whether one variable has changed as a result of a change in another.

Table 3Interpretation of the Correlation Coefficient

Range of Positive	**Type of Relationship**	**Range of Negative**
Coefficient	Very High (+ve/-ve) correlation	Coefficient
.90 to .1.00	High (+ve/-ve) correlation	-.90 to .1.00
.70 to .90	Moderate (+ve/-ve) correlation	-.70 to .90
.50 to .70	Low (+ve/-ve) correlation	-.50 to .70
.30 to .50	Very low (+ve/-ve) correlation	-.30 to .50
.00 to .30	Little, if any correlation	.00 to .30

(Hinkle, Wiersma, and Jurs, 1998, p. 105)

3.13 Multiple Regression

Multiple regression analysis can be used by researchers to assess the strength of the relationship between an outcome (the dependent variable) and several predictor variables, as well as the relative importance of each predictor variable in that relationship. Researchers can also use multiple regression analysis to examine the contribution of each predictor to the relationship between the result and the dependent variable by excluding the effects of other predictors.

The regression coefficient, according to Sekaran and Bougie (2016), informs us how significant each independent variable is in predicting the outcome. Furthermore, according to (Field, 2013), multiple linear regression is an improved form of basic linear regression that predicts the linear relationship between two or more independent variables. The researcher must use multiple linear regression to understand the impact of each independent and dependent variable.

Mathematical correlations between two or more independent variables and the dependent variable must be on an interval scale when using multiple linear regression. As a result, this statistical method can be used to create a predictive model.

Model of the study

$Y=\beta_0+\beta_1 X_1+\beta_2 X_2+\cdots+ \beta_k X_k+\varepsilon$

Where,

Y is a dependent variable that may be anticipated and explained, often known as an outcome variable.

ATM, MB, OB… X_k are explanatory variables or independent variables.

β_0 is a constant parameter that specifies the point on the Y-axis where the linear trend line intersects.

β_1,β_(2,)…,β_kare the coefficients that indicate the rate of change in the dependent variable as a function of the independent variables.

ε is the error term, which is supposed to be distributed identically, independently, and normally, with a mean of 0 and variance of $E(\varepsilon^2)=\sigma_\varepsilon^2$.

Meanwhile, the computed regression model is represented by the equation below.

$\hat{y}=b_0+b_1 X_1+b_2 X_2+\cdots+ b_k X_k$ (4.2)

where $\hat{y}$ is predicted variable and b_0,b_1,…,b_kare estimated parameter.

There are various assumptions that must be met prior to using multiple linear regression analysis. The assumptions are as follows:

The dependent variable and the independent variables are considered to have a linear relationship. There is no multicollinearity among the independent variables, implying that they are not overly correlated.

The error terms are assumed identically, independently and normally distributed with mean $E(\varepsilon)=0$ and variance $E(\varepsilon^2)=\sigma_\varepsilon^2$.

The variance of error term, $E(\varepsilon^2)=\sigma_\varepsilon^2$ is assumed to be constant; in other words, the homoscedasticity assumption holds.

Since there is no covariance, the error terms are unrelated to one another. In a nutshell, it is claimed that no serial correlation exists.

CHAPTER 4

RESULT AND DISCUSSION

4.1 General Description

Incorporated in Somalia in 2013 and granted a license by the Central Bank of Somalia in 2014, Premier Bank is a privately held, Sharia-compliant commercial bank. A new Somalia holds promise, and it's believe in. The reconstruction of Somalia involves all of us. They can change things work together. This ideology serves as the foundation for banks efforts to support the community and economic development of Somalia and to reconstruct the country (in a small but meaningful way).

By introducing contemporary banking techniques to Somalia, Premier bank is able to meet and service the needs of the country's thriving economy thanks to their extensive knowledge of local finance requirements. Premier bank provides comprehensive one-stop financial solutions to all clients in Somalia, including corporate and SME firms, government agencies, and ordinary citizens. Retail banking, business and corporate banking, mobile and internet banking, ATM banking, SWIFT transfers, international money transfers, and much more are all part of offering of financial solutions.

Premier Bank · KM4, Waberi District, P.O.BOX 626 Mogadishu, Somalia.

The empirical results in this chapter are taken as the final samples from Somalia's Premier bank. The findings are presented in the sections below parts, which include a full description of the findings as well as their implications.

Although the E-Banking System has many advantages, Somalia banks may face personal problems and challenges. Internet banking hackers may still compromise an individual's account and the bank's system. Occasionally, the bank's systems may fail to work correctly. These challenges may negatively affect the efficiency and performance of banks in Somalia. In other words, it is important to acknowledge the differences, especially as cited by Rana (2015), highlighted those isolated studies often provide alternate findings

In addition, the results based on the study goals are also discussed in this chapter. The information gathered via the use of questionnaires is the most important part of this investigation. The information acquired via structured surveys is analysed using the Statistical Package for Social Science (SPSS). To convert raw data into usable information, various types of data analysis are performed. Each study question result is also examined. The findings of this investigation are summarised in the last section of this chapter.

4.2 Data Screening

Data screening is a step in the statistical analysis process that ensures the data is clean and ready to be used. Based on the data gathered, no missing values exist. To test the normality of quantitative data, the skewness and kurtosis range values are used. The variables in the study include financial performance, ATM usage, mobile banking, and online banking.

Table 4 Skewness and Kurtosis for Quantitative Variables

Variables	Skewness	Kurtosis
Financial Performance	-0.579	0.121
Automated Teller Machines (ATMs)	-0.649	0.256
Mobile Banking	-0.496	0.178
Online Banking	-0.502	0.377

The skewness and kurtosis values for each quantitative variable in this investigation are summarized in Table 4. When the skewness value range is 1 and the kurtosis value is between ±1 and ±3, the data is said to be regularly distributed. Table 4 shows that the data is normally distributed because the skewness value is between ±1 and ±3 and the kurtosis value is also between ±1 and ±3. As a result, more research can be done.

4.3 Descriptive Analysis in Demographic Profile

4.3.1 Gender

The descriptive data for the respondent's gender are shown in Table 5. The results show that 214 respondents (72.5%) are male and 81 respondents (27.5%) are female out of a total of 295 respondents. This result implies a discrepancy in gender percentages of more than half.

Table 5 Demographic Profile on Gender

Demographic Profile	Details	Frequency	Percentage (%)
Gender	Male	214	72.5
	Female	81	27.5
	Total	295	100.00

4.3.2 Age

The descriptive statistics for the respondent's age are shown in Table 6. The results show that out of 295 respondents, 117 (39.7%) are between the ages of 36 and 40, followed by 63 (21.4%) between the ages of 31 and 35. There were 62 responses (21%) between the ages of 26 and 30. Only 33 (11.2%) of respondents were beyond the age of 41, while 20 (6.8%) were between the ages of 21 and 25. This result suggests that the difference in age percentage is over half.

Table 6 Age

Demographic Profile	Details	Frequency	Percentage (%)
Age	21-25	20	6.8

	26-30	62	21
	31-35	63	21.3
	36-40	117	39.7
	41 and above	33	11.2
	Total	295	100.00

4.3.3 Educational Level

The descriptive statistics of the respondent's academic qualifications are presented in Table 7. According to the results, 131 respondents (44.4%) have a Professional Qualification. Following that are 75 respondents (25.4%) with a master's degree and 63 respondents (21.4%) with a bachelor's degree. Only 26 people (8.8%) have a master's degree. This means that the majority of the respondents are well-educated and, as a result, should be able to comprehend and reply appropriately to the surveys.

Table 7 Demographic Profile on Academic Qualification

Demographic Profile	**Details**	**Frequency**	**Percentage (%)**
Academic Qualification	Bachelor Degree	63	21.4
	Master	75	25.4
	PHD	26	8.8
	Professional Qualification	131	44.4
	Total	295	100.00

4.3.4 Experience Level

The respondents' working experience at their current jobs is described in Table 8. According to the findings, 209 of the 295 respondents (70.8%) have worked as a employee for more than 5 years. Then there are the 86 responders (29.2%) who have between one and five years of experience.

Table 8 Demographic Profile on Length of Experience

Demographic Profile	Details	Frequency	Percentage (%)
Length of Experience	Less than 5 years	86	29.2
	More than 5 years	209	70.8
	Total	295	100.00

4.4 Normality Test

The value of skewness and kurtosis for Financial Performance is shown in Table 9. A total of 295 people were questioned about their normality. The value of skewness is 0.306, and the value of kurtosis is 0.972, according to the results. The presence of a positive skewness score implies that the distribution is slightly skewed to the higher side of the tendency. A positive kurtosis (platykurtic) distribution denotes a flat and light-tailed distribution. Mallery (2010) claims that data is regularly distributed when the Skewness and Kurtosis values are in the -2 to +2 range. Furthermore, the variables' minimum and maximum scores are 1.000 and 5.000, respectively. The range is defined as the difference between the lowest and highest scores (5-1=4.000). In general, this study passed the normality test and is suitable for further analysis.

Table 9 Normality Test on Dependent Variable

Variable	Details		Statistics
Financial Performance	Mean		3.7632
	95% Confidence Interval for Mean	Lower Bound	3.6839
		Upper Bound	3.8424
	5% Trimmed Mean		3.7919
	Median		4.000
	Variance		0.601
	Std. Deviation		0.65290

Minimum	1.000
Maximum	5.000
Range	3.000
Interquartile Range	1.130
Skewness	0.306
Kurtosis	0.972

4.5 Reliability Test

The study's conclusions are made up of four components: financial performance, ATMs, mobile banking, and online banking. The findings of the reliability test can be interpreted in a variety of ways, and it is used to determine whether or not statements are trustworthy. Table 4.8 summarises the findings of this inquiry.

Table 10 Reliability Test

No	Component	No. of Statements	Cronbach's Alpha
1	Financial Performance	8	0.803
2	ATMs	6	0.790
3	Mobile Banking	7	0.759
4	Online Banking	10	0.755

Table 10 displays the Cronbach's alpha values for each construct. 0.803 for Financial Performance, 0.790 for ATMs, 0.759 for Mobile Banking, and 0.755 for Online Banking. According to the findings, Cronbach's Alpha is greater than 0.6. This demonstrates that the statements used to assess respondents' perceptions of the study's components were correct.

4.5.1 Descriptive statistics

This study uses descriptive statistical analysis to describe the data for each indicator used to quantify latent variables. Financial Performance, ATMs, Mobile banking and online banking: a descriptive statistical analysis.

Table 11 shows the results of the six indicators that were utilised to evaluate the ATMs. According to the data, 74% of respondents agree or strongly agree with Q1, whereas 15% of respondents do not agree or strongly disagree. 11% of those polled disagree or strongly disagree with the statement. In Q2, 75% of respondents strongly agree or agree, with the remaining 17% neither agree nor disagree and the remaining 8% disagree or strongly disagree.

In Q3, 73% of respondents said they agreed or strongly agreed. This is followed by 20% of respondents who are neither agree nor disagree, and 7% who are neither disagree nor strongly disagree with the indicator. In Q4, 77 % strongly agreed or agreed with the indicator, with 14 % neither agree nor disagree and another 9 % strongly disagree or disagree.

In Q5, 73 percent of respondents agree or strongly agree with the indicator. Following that are 20% of respondents who are neither agree nor disagree, and another 7% who are either disagree or severely disagree. For Q6, 70% of respondents strongly agree or agree, with 20% of respondents neither agree nor disagree and 10% of respondents strongly disagree or disagree.

Table 11 Frequency Distribution of the Scores of the Indicators of ATMs

Table 4.9	Frequency distribution of the scores of the indicators of ATMs					
Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	The number of ATM cards issued have increased significantly	119	100	43	9	24
Q2	Our bank has increased the number of ATMs significantly	100	122	50	7	16
Q3	Our banks profitability is attributed on the ATM banking	110	107	59	11	8
Q4	Total customers transactions have increased as a result of ATM banking in our bank.	100	129	42	9	15
Q5	Retail banking transaction in our bank have reduced	113	103	58	8	13

	significantly as a result of ATM banking.					
Q6	Our banks total income is attributed to investment to ATM banking in our bank.	100	123	54	6	12

Table 12 shows the results of the six indicators used to evaluate mobile banking. According to the data, 70% of respondents agree or strongly agree with Q1, whereas 20% of respondents do not agree or strongly disagree. 10% of those polled disagree or strongly disagree with the statement. For Q2, 68 percent of respondents strongly agree or agree, with another 23% neither agree nor disagree and 9% disagree or strongly disagree.

In Q3, 74% of respondents said they strongly agreed or agreed. This is followed by 18% of respondents who are neither agree nor disagree, and 8% who are neither disagree nor strongly disagree with the indicator. 75 percent of respondents strongly agree or agree with the indicator in Q4, followed by 18 percent who neither agree nor disagree and another 7% who strongly disagree or disagree with the indicator.

In Q5, 76 percent of respondents agree or strongly agree with the indicator. Following that are 18% of respondents who are neither agree nor disagree, and another 6% who are either disagree or severely disagree. For Q6, 70% of respondents strongly agree or agree, with 20% of respondents neither agree nor disagree and 10% of respondents strongly disagree or disagree.

Table 12 Frequency Distribution of the Scores of the Indicators Mobile Banking

Table 4.10	Frequency distribution of the scores of the indicators of Mobile Banking					
Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	Mobile banking has enabled 24/7 accessibility to financial services significantly.	103	104	61	8	19
Q2	Time spent in mobile banking is low compared to the traditional banking.	80	122	68	9	16

Q3	Clients can easily interact with bank; express themselves without visiting their branches.	97	122	55	9	12
Q4	There is great potential of using this for tapping into the unbanked community.	96	126	54	8	11
Q5	Use of credit scoring systems has increased the revenue generated from mobile loans.	111	107	54	7	16
Q6	When transferring money through mobile banking the users afraid that they will lose money due to careless and mistakes.	104	122	53	8	8

Table 13 shows the results of the five factors used to evaluate online banking. According to the data, 70% of respondents agree or strongly agree with Q1, whereas 20% of respondents do not agree or strongly disagree. 10% of those polled disagree or strongly disagree with the statement. For Q2, 68 percent of respondents strongly agree or agree, with another 23% neither agree nor disagree and 9% disagree or strongly disagree.

In Q3, 74% of respondents indicated that they strongly agree or agree with the statement. The indicator is followed by 18% of respondents who are neither agree nor disagree, and 8% who are neither disagree nor strongly disagree. In Q4, 75% of respondents strongly agree or agree with the indicator, followed by 18% who neither agree nor disagree, and 7% who strongly disagree or disagree.

In Q5, 76 percent of respondents agree or strongly agree with the indicator. Following that are 18% of respondents who are neither agree nor disagree, and another 6% who are either disagree or strongly disagree.

Table 13 Frequency Distribution of the Scores of the Indicators of Online Banking

Table 4.11	Frequency distribution of the scores of the indicators of Online Banking					
Indicators	Statements	S	C	O	R	E
		5	4	3	2	1

Q1	Our bank has invested heavily in online banking.	104	122	53	8	8
Q2	Online banking has improved the image of our bank among its customers.	73	130	67	11	14
Q3	Our bank always ensures security of data and information that is operated on the online banking platform.	107	109	60	8	11
Q4	Customers fear online banking due to fear of hacking of their accounts by web hackers.	97	126	50	8	14
Q5	Charges on online banking are friendly and the bank has generated a lot of revenue from the same.	98	121	51	12	13

Table 14 shows the results of the six indicators used to evaluate financial performance. According to the data, 72% of respondents agree or strongly agree with Q1, whereas 19% of respondents do not agree or strongly disagree. 9% of those polled disagree or strongly disagree with the statement. In Q2, 70% of respondents strongly agree or agree, with the remaining 21% neither agree nor disagree and the remaining 9% disagree or strongly disagree.

For Q3, 75% of respondents said they strongly agreed or agreed. This is followed by 18% of respondents who are neither agree nor disagree, and 7% who are neither disagree nor strongly disagree with the indicator. In Q4, 74% of respondents highly agree or agree, followed by 18% who neither agree nor disagree, and 8% who strongly disagree or disagree with the indication.

74% of respondents agree or strongly agree with the indicator in question 5. This is followed by 19% of respondents who are neither agree nor disagree, and 7% who are disagree or strongly disagree. For Q6, 70% of respondents strongly agree or agree, with 20% of respondents neither agree nor disagree and 10% of respondents strongly disagree or disagree.

Table 14 Frequency distribution of the scores of the indicators of Financial Performance

Table 4.12	Frequency Distribution of the Scores of the Indicators of Financial Performance

Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	Increase in return on assets due to electronic technology.	117	95	57	10	16
Q2	The bank has experienced increase in return on assets.	80	127	63	10	15
Q3	The bank has experienced increase market share.	105	118	53	9	10
Q4	The volume of the banks sales has increased since the bank adopt the various forms self-service technology.	87	133	53	10	12
Q5	The bank has improved on its cost to income ratio after business process reengineering.	103	115	57	10	12
Q6	The bank has increased of new accounts openings.	118	112	41	8	16

4.6 Interferential and Statistical Analysis

Only one statistical analysis is used based on the study's objectives. Multiple Linear Regression was used in the statistical analysis (MLR). This method will be discussed in the following subsection, along with the study's findings.

4.6.1 Multiple Linear Regression (MLR)

To achieve the study's goals, multiple linear regression was used. All responses from respondents are based on their responses in Sections B1 (ATMs), B2 (Mobile Banking), B3 (Online Banking), and B4 (Financial Institutions) (Financial Performance). Several linear regressions are used because there is only one dependent variable, Financial Performance, and multiple independent variables. MLR can be used to forecast whether ATMs, mobile banking, and online banking will have an impact on Islamic banks' financial performance.

Several assumptions must be met before using multiple linear regression analysis. The first assumption to be met is the assumption of linearity between the independent and dependent variables. This will be accomplished through the use of a graph and the correlation value between the variables.

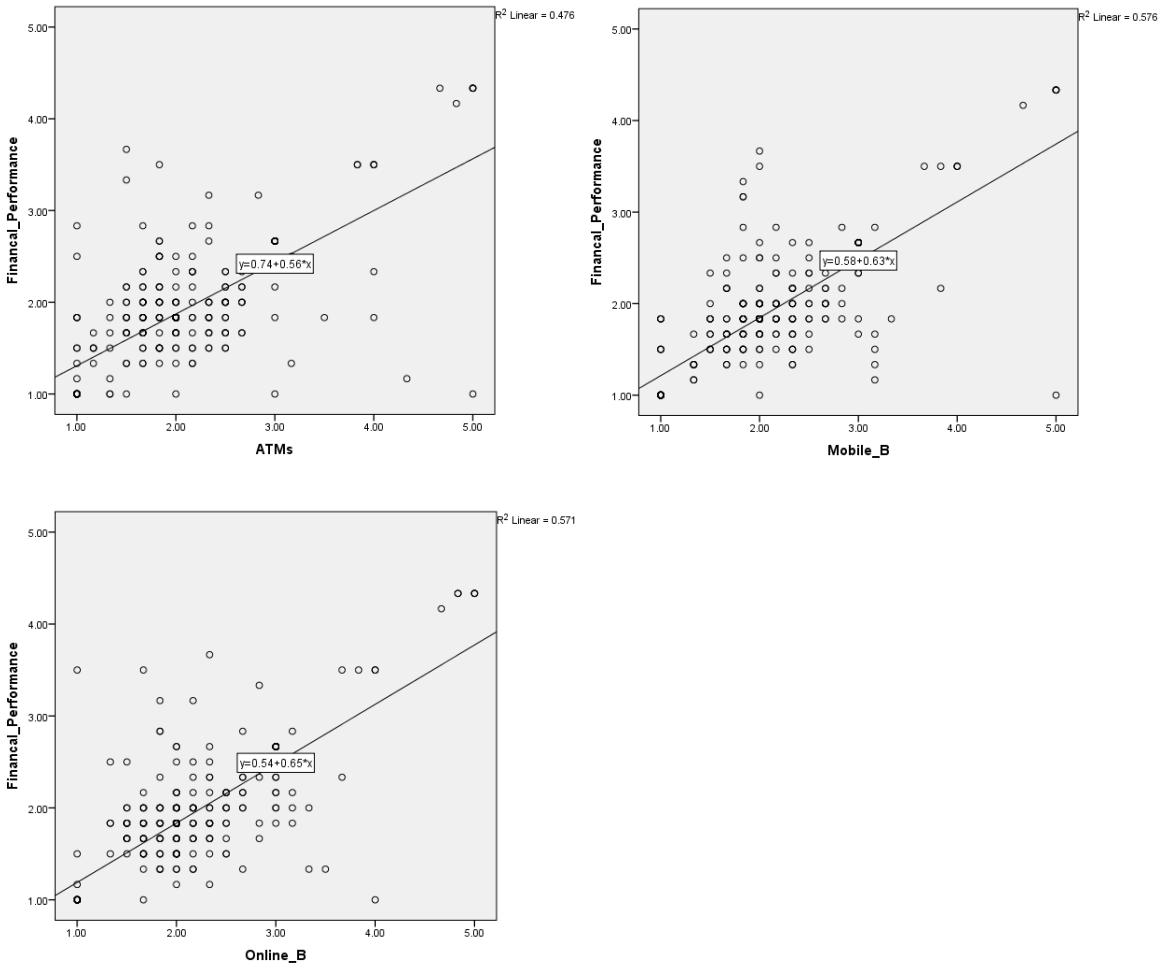


Figure 3 Scatter Plot of Dependent Variable Vs Independent Variables

Table 15 Correlation Value Between Dependent and Independent Variables

		Financial Performance
ATMs	Pearson Correlation, r	0.571
	p-value	0.001
Mobile Banking	Pearson Correlation, r	0.662
	p-value	0.001
Online Banking	Pearson Correlation, r	0.651
	p-value	0.001

Based on Figure 3, the plot does show a positive linear relationship between Financial Performance and ATMs. The similar conclusion is reached when looking at the association between Mobile Banking and Financial Performance, which reveals a positive linear

relationship on the scatter plot. Similarly, there is a positive linear association between Mobile Banking and Financial Performance. However, this is because the p-value in Table 15 indicates that ATMs, mobile banking, and online banking are significantly correlated with financial performance, the independent variables are kept in the study. As a result, the first assumption is met.

Next, the second assumption which is the requirement for the independent variables to be not highly correlated to each other needs to be fulfilled. This is also known as no multicollinearity existing in the model. The value of the Variance Inflation Factor (VIF) is used to test this assumption. A VIF value of less than 10 suggests that the model has no multicollinearity. The result for the VIF value is shown in Table 4.14.

Table 4.14 Variance Inflation Factor Value for Independent Variables

Variable	**Variance Inflation Factor**
ATMs	4.274
Mobile Banking	5.319
Online Banking	2.455

Table 4.14 shows that the independent variables are not highly correlated with one another because the VIF value is less than 10. As a result, the second assumption can be concluded to be true.

For the third assumption, which is to make sure that the error term which is also known as residuals is normally distributed, the normality plot of residuals and P-P plot is used. Both plots are shown below.

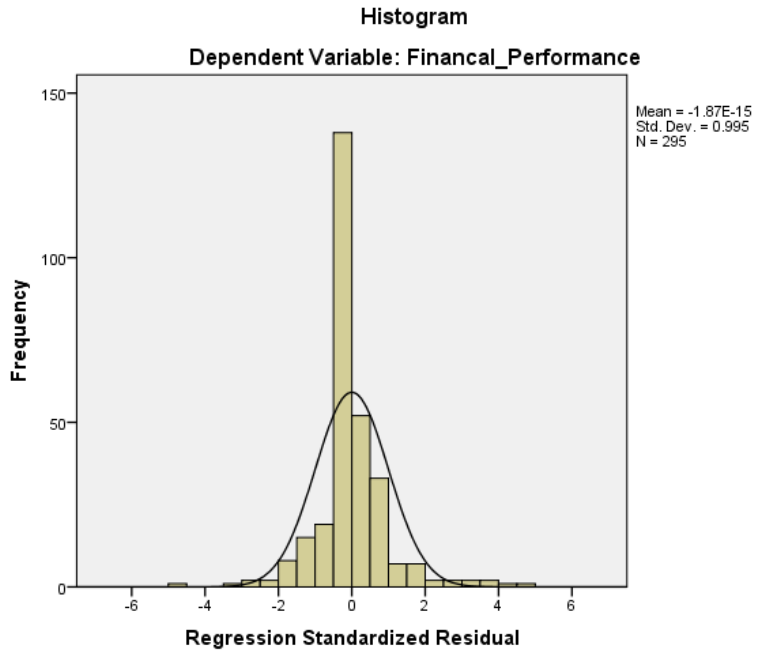


Figure 4 Normality Plot of Residuals

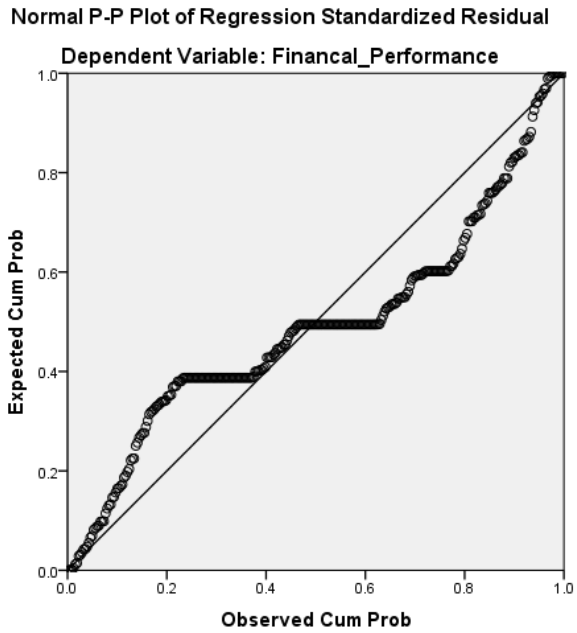


Figure 5 P-P Plot of Residuals

This is because, a bell-shaped curve is visible in Figure 4.2, the residuals are regularly distributed. The result in Figure 4.3 corresponds to the result in the P-P plot. The residuals in the P-P plot are all centered on the straight line, indicating that they are normally distributed. As a result, the normality assumption of the residual is satisfied.

Next, the error term is supposed to be constant, which is the fourth assumption that must be met. A scatter plot of residuals versus predicted values is used to evaluate this assumption. A plot with no representing data that the homoscedasticity requirement has been met.

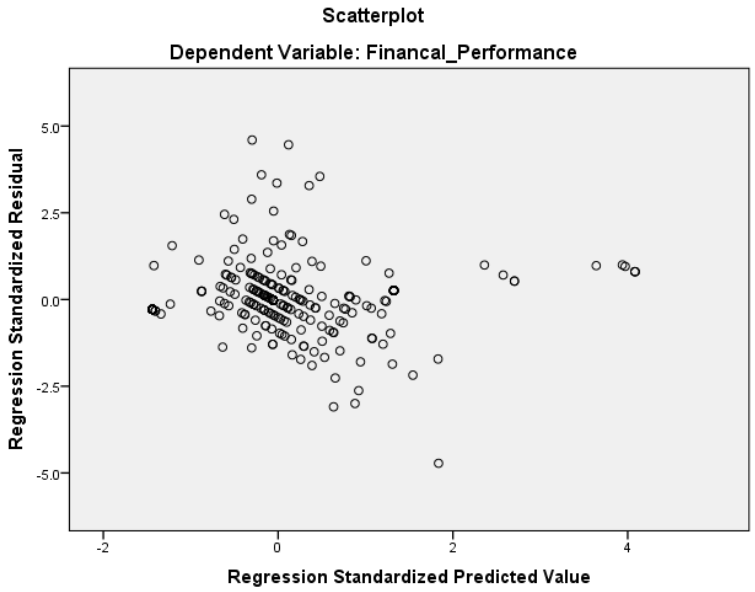


Figure 6 Scatter Plot of Residuals versus Predicted Value

The Figure 4.4 Scatter plot reveals that no pattern exists. This finding implies that the constant error term assumption is satisfied.

The Durbin Watson test is used to ensure that the residuals are not correlated in the final assumption. A value between 1.5 and 2.5 indicates that the model has no autocorrelation issues. The result for this study is presented in Table 18.

Table 16 Durbin Watson Statistics

	Value
Durbin Watson	2.228

Based on the results in Table 16, it is possible to conclude that this model does not have an autocorrelation problem. This is demonstrated by the Durbin Watson value of 2.228, which is between 1.5 and 2.5. Because all of the assumptions are met, multiple linear regression analysis can be performed. Multiple linear regression is used to achieve the first and second objectives. The hypothesis for each objective in this study is described below.

The ANOVA table is shown in Table 17. The p-value (0.001) is less than alpha (0.05) in this table, indicating that the alternative hypothesis is supported by strong evidence. This means that at least one of the independent variables, such as ATM, mobile banking, or online banking, has a statistically significant link with financial performance.

Table 17 ANOVA Table

	Sum of Squares	**Degree of freedom**	**Mean Square**	**F**	**P-value**
Regression	81.685	3	27.228	5.344	0.001
Residual	44.025	291	0.151		
Total	125.710	294			

The regression analysis is summarised in Table 18. The squared multiple correlations, R2, is 0.650, showing that ATMs, Mobile Banking, and Online Banking account for 65 percent of the variance in Financial Performance. Other variables not included in this study account for the remaining 35% of the explanation. As a result, adding additional independent variables is recommended for a better result.

Table 18 Model Summary

R	**R^2**	**Adjusted R^2**
0.826	0.650	0.646

Table 19 shows that the variables used have a significant impact on Financial Performance because the p-values are less than 0.05. Because the value of the coefficient in Table 4.18 is positive, the result likewise demonstrated a positive link between the independent variables and Financial Performance. Because the p-value is less than the alpha value (0.05), all of the factors are statistically significant in terms of Financial Performance. As a result, ATMs, Mobile Banking, and Online Banking all have a substantial impact on financial performance.

Table 19 Result of the Significance of Independent Variables Towards Financial Performance

Variable	Coefficient	t	P-value	Decision
ATMs	0.351	3.871	0.001	Accepted
Mobile Banking	0.321	4.816	0.008	Accepted
Online Banking	0.326	7.652	0.001	Accepted

4.7 Summary of Hypotheses Testing

This study focuses on 3 factors that affect financial performance. Multiple Linear Regression is used to predict the effect of multiple factors on financial performance: ATMs, Mobile Banking, and Online Banking. Table 20 presents the conclusions from the statistical analysis testing to answer the study's questions. Generally, all the variables are statistically significant towards Financial Performance. Further discussion is carried out in below the table.

Table 20 Hypothesis Testing

No	Hypothesis	Result
H_1	There is a significant effect on ATMs towards Financial Performance.	Supported
H_2	There is a significant effect on Mobile Banking towards Financial Performance.	Supported
H_3	There is a significant effect on Online Banking towards Financial Performance.	Supported

The financial performance of a bank is critical to its growth and development. ATMs, mobile banking, and online banking, as a result, are critical components in ensuring a consistent influx and outflow of funds to support a bank's growth. This research shows the role of ATMs that have a strong effect on the financial performance of banks, which is shown by a significant increase in the number of ATM cards.

Internet banking is a fully automatic service for traditionally banking customers products based on information technology platforms. Internet banking services provide customer access to accounts, the ability to move their money between different accounts or making payments via e-channels. This research shows that Internet banking has a strong effect on the financial performance of banks, which is shown by easy access and familiarity with the software.

Mobile banking relies heavily on information and communication technology (ICT) to achieve its promise for 24 hours availability, low error rates and quicker delivery of financial services. The range of services has increased thanks to the technological advances, the spread of mobile banking has coincided with the spread of high-speed broad and connections and the increasing maturation of the internet user population. One important factor in mobile banking growth is that banks have discovered the benefits of mobile banking and have become keener to offer it as an option to costumers. This research shows that mobile banking has a strong effect on the financial performance of banks, which is shown by easy way to manage money without having to deal with cash.

This research looks at the impact of electronic banking on financial performance using ATMs, mobile banking, and online banking. According to this study, ATMs, Mobile Banking, and Online Banking have an impact on financial performance. This study utilized one theory, the Technology Acceptance Model (TAM). According to the theory, the more positive the opinion about a system is based on its perceived utility and ease of use, the better. As a result, having a more positive mental attitude toward using the system has a positive impact on actual system utilisation. As a result, some people have compared the TAM to Internet banking. The TAM was shown to be an effective tool for Internet and mobile banking adoption, and customers were more likely to use a service if it was simple to use.

The findings of this study support previous research by Aduda, J., & Kingoo, N. (2012), Lasmini, R. S., et all (2020), D. J., & Omagwa, J. (2017), Ndinda, M. F (2017) which looked at the significant positive influence of e-banking and internet banking on financial performance, in particular related to the increase in new account openings, return on assets due to electronic technology, and also an increase in market share.

Chapter 5

Conclusion and Recommendation

4.8 Conclusion

The most important findings are summarised in this section. According to the findings, all of the study's objectives were met. The study's limitations, as well as future research directions, are also discussed. Despite its limitations, this research adds value to the field of study.

This study investigates the impact of ATMs, mobile banking, and online banking on financial performance. The financial performance of a bank is critical to its growth and development. ATMs, mobile banking, and online banking, as a result, are critical components in ensuring a consistent influx and outflow of funds to support a bank's growth. This study discovered that when analysing financial and non-financial factors, the model selected and the number of uncertainties (risks) increase the risk of financial loss. As a result, when it comes to ATM distribution, banks can keep an eye on factors such as business size, industry, and multi-nationality. They can also investigate security techniques to combat threats such as hacking, machine breakage, and scams that compromise user privacy, as this study revealed significant findings on these topics in relation to bank financial performance.

4.9 Recommendation and Contributions

The findings of this study offer as well as provide empirical information that may assist managers in Somalia in making financial decisions regarding ATMs, mobile and online banking. This is backed up by (Mwai et al., 2018) who discovered that ATM banking in Kenya has a significant impact on the growth of the country's commercial banks The distribution criteria across the country and the number of ATM cards issued have the greatest influence. Similarly, (Sifunjo E. Kisaka, 2015) was discovered that the number of mobile banking users and the total amount of money transferred via mobile banking will have an impact on financial performance.(Aduda & Kingoo, 2012), was encountered that online banking has increased the efficiency and productivity of the financial system, and thus financial performance.

To date, empirical financial research has been conducted. (Aduda & Kingoo, 2012), focused on the impact of ICT, the financial system, and bank investors on performance (Mwai et al., 2018), (Hossain, 2021) related to their research on commercial banks This study adds to the existing body of knowledge by looking into the effect of ATMs, mobile and online banking on financial performance. Previous research concentrated on commercial banks, whereas this study concentrates on Islamic banks.

The study also helps to improve the variable measurement for the dependent variable, Financial Performance. Internet continues to be an important factor in online transactions. In developed countries, e-banking research and adoption have received considerable recognition and are well-grounded. On the other hand, in developing countries where e-banking is just beginning to emerge, there is a lack of research.

The findings of this study give relevant implications for stakeholders in e-banking in developing countries, with a particular focus on Somalia and other countries with cultural environments comparable to Somalia's. It educates those responsible for the development of technologies used in e-banking on the significance of ATMs, mobile and online banking on the ways in which it influences the adoption behaviour of customers.

4.10 Future Research Avenues

It is strongly recommended that more research be conducted on this topic. According to the findings of this study, other researchers should modify the model by adding new constructions or removing the suggested construct. Including additional independent factors, such as e-banking, ecommerce, and others. Furthermore, additional research on all Islamic banks that deal with currency exchange should be conducted. This will allow for a comparison of the banks' financial performance.

In addition, future studies should have a larger sample size. This study makes use of online questionnaires. According to the study's findings, respondents did not have much time to complete the questionnaire and may have been unable to do so due to the importance and urgency of their jobs. Future research may consider using online and email surveys to collect data to address this issue. As a result, people can finish their inquiry on their phone or anywhere else. Responding to inquiries online or via email is more convenient for a manager and bank employees.

Furthermore, a longer time frame should be provided in order to cover a broader range of responses. A larger budget is sometimes required in addition. Future researchers will be able to devote more time to directly administering surveys. Future researchers may also distribute online or email surveys to gather additional responses. It implies that the researchers may provide alternative surveys, such as those conducted in person, over the internet, or via email and the internet.

4.11 Limitations of The Study

This investigation has some drawbacks. To begin, this study's sample consists of Premier bank which operates Islamically in Somalia. As demonstrated by the findings, the findings cannot be applied to managers in general or to other Somali states. Including more bank employees from different banks and areas in future studies will allow researchers to better understand Financial Performance based on ATMs, Mobile, and Online Banking.

Aside from that, the sample size is thought to be small. Because of the limited number of questions submitted to the company, more than 120 questionnaires must be distributed in order to obtain additional evidence about financial performance. If there is more evidence, it is preferable to obtain data as quickly as possible.

Furthermore, the researcher has only one (1) month to complete the data collection for this study, resulting in a constrained time frame for data collection. Due to time constraints, it was not possible to visit and send questionnaires to the Premier bank employees for this investigation.

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APPENDIX

Table 4.9 Frequency Distribution of the Scores of the Indicators of ATMs

Table 4.9	Frequency distribution of the scores of the indicators of ATMs					
Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	The number of ATM cards issued have increased significantly					
Q2	Our bank has increased the number of ATMs significantly					
Q3	Our banks profitability is attributed on the ATM banking					
Q4	Total customers transactions have increased as a result of ATM banking in our bank.					
Q5	Retail banking transaction in our bank have reduced significantly as a result of ATM banking.					
Q6	Our banks total income is attributed to investment to ATM banking in our bank.					

Table 4.10 Frequency Distribution of the Scores of the Indicators Mobile Banking

Table 4.10	Frequency distribution of the scores of the indicators of Mobile Banking					
Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	Mobile banking has enabled 24/7 accessibility to financial services significantly.					

Q2	Time spent in mobile banking is low compared to the traditional banking.					
Q3	Clients can easily interact with bank; express themselves without visiting their branches.					
Q4	There is great potential of using this for tapping into the unbanked community.					
Q5	Use of credit scoring systems has increased the revenue generated from mobile loans.					
Q6	When transferring money through mobile banking the users afraid that they will lose money due to careless and mistakes.					

Table 4.11 Frequency Distribution of the Scores of the Indicators of Online Banking

Table 4.11	Frequency distribution of the scores of the indicators of Online Banking					
Indicators	Statements	S	C	O	R	E
		5	4	3	2	1
Q1	Our bank has invested heavily in online banking.					
Q2	Online banking has improved the image of our bank among its customers.					
Q3	Our bank always ensures security of data and information that is operated on the online banking platform.					
Q4	Customers fear online banking due to fear of hacking of their accounts by web hackers.					
Q5	Charges on online banking are friendly and the bank has generated a lot of revenue from the same.					

Table 4.12 Frequency distribution of the scores of the indicators of Financial Performance

Table 4.12	Frequency Distribution of the Scores of the Indicators of Financial Performance					
Indicators	Statements	S 5	C 4	O 3	R 2	E 1
Q1	Increase in return on assets due to electronic technology.					
Q2	The bank has experienced increase in return on assets.					
Q3	The bank has experienced increase market share.					
Q4	The volume of the banks sales has increased since the bank adopt the various forms self-service technology.					
Q5	The bank has improved on its cost to income ratio after business process reengineering.					
Q6	The bank has increased of new accounts openings.					