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ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

**OPERATIONS OF ETHIOPIAN COMMERCIAL BANKS DURING
COVID-19 PANDEMIC: RESPONSES AND LESSONS FROM
INTERNATIONAL EXPERIENCES**

BY
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APRIL, 2021
ADDIS ABABA, ETHIOPIA

Declaration

I, undersigned here by declared that this thesis entitled “Operations of Ethiopian commercial banks during COVID-19 pandemic: Responses and lessons from international experiences” submitted in partial fulfillment of the requirements for the award of degree of Masters of Science in Accounting and Finance in Addis Ababa University is my original work and has not been presented in any other university and that all sources used for the thesis has been duly acknowledged.

Declared by:

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Certification

This is to certify that Mesay Alemayehu has carried out his thesis on the topic entitled “Operations of Ethiopian commercial banks during COVID-19 pandemic: Responses and lessons from international experiences”. The work is original in nature and is suitable for the submission for the reward of MSc Degree in Accounting and Finance.

Advisor: Wollela Abehodie (PhD): _____

Place and submission date: Addis Ababa University, April, 2021

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Abstract

The study attempts to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia. Specifically, the thesis examines the influence and challenges of the pandemic and key measures taken by commercial banks in response to COVID-19 outbreak. The study adopts mixed research approach combining documentary analysis, in-depth interview and survey. Purposive sampling technique was used to select banks as well as survey participants. The results of the study revealed that COVID-19 pandemic affects the main commercial banking operations including loan collection and disbursement, deposit mobilization, foreign currency generation, international trade services, interest and other incomes of banking services. To absorb the problem commercial banks have taken different operational measures including loan re-scheduling, providing working capital loan, waiving service charges, lowering interest rate for customers of highly affected sectors. Finally, the study recommended possible operational measures to be taken. Commercial banks should lower import-export related charges, introduce efficient e-banking service, increase saving interest rate to encourage saving, give advisory services for customers who are struggling to recover from the impacts of the pandemic, should focus on generation of foreign currency by promoting export-oriented platforms and encouraging remittances and so on in response to the pandemic.

Key words: *Challenges, Commercial Banks, COVID-19, Influence, Measures, Operations, Pandemic*

Acknowledgement

First and foremost, I want to express my gratitude to God Almighty for providing me with good health, patience, wisdom, and the ability to work on this thesis and maintain and finish it. This accomplishment would not have been possible without his blessings.

I would like to express my heartfelt gratitude to my advisor, Wollela Abehodie (PhD), for her guidance, patience, motivation, and unreserved advice that has helped me to enrich this project. My thesis would not have been possible without her advice and support, and I will be eternally grateful for her help.

I would like to thank all of the people who took part in the interviews and surveys that were performed as part of this study for their valuable time and support. I'm very grateful to all of my friends and colleagues for their motivation and support in completing this work.

My mother deserves special recognition for her prayers and the rest of my family members for their encouragement.

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List of Acronyms and Abbreviations

ADB: Asian Development Bank

ATM: Automated teller machine

CAD: Cash against document

CBE: Commercial Bank of Ethiopia

EPHI: Ethiopian Public Health Institute

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

IMF: International Monetary Fund

NBE: National Bank of Ethiopia

NPL: Non-Performing Loan

PHEOC: Public Health Emergency Operation Center

POS: Point of sale

RQ: Research Questions

WHO: World Health Organization

WW: World War

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Financial institutions play a significant (a remarkable) role in the economy. Financial institutions serve a variety of purposes in the economy, but their primary function is to assist in the transfer of funds from surplus to deficit economic units. They also guide the flow of scarce financial resources to investments of highest return and interest rate (price of capital) is the essential instrument in fulfilling this function (Gondwe, 2004). Greenwood and Jovanovic (1990) argue that better financial institutions lower the cost of transferring savings to investment projects, increase yields, and speed up the growth process. Sound financial service can facilitate economic growth of a given country (Rajaraman and Visishtha, 2002). It is classified as good performance or poor performance in any country or region. Good performance of these financial institutions is the symbol of prosperity, whereas, poor performances of these institutions hinder the economic growth and structure of the particular region also affects the whole world (Khan and Senhadji, 2001).

Banking is an industry that plays significant role for the development of nations economy as a whole and particularly for the under developed countries like Ethiopia. Funds mobilized from households and companies through deposit, encourages investment. Banks are depository financial institutions that play pivotal role for financial stability and are also engines for economic development of a given nation (Al-Karim&Alam, 2013).

Commercial banks are very important in socio-economic development in any country, from developing to developed countries. Commercial banks have a crucial role in the economy as they enhance economic growth through efficient allocation of financial resources. All Commercial banks are licensed to operate by receive deposits and make loans to their customers. Commercial banks may also provide financial services such as: wealth management, currency exchange, and safe deposit boxes to keep their customers' valuable assets.

In recent time, the global Commercial banks affected significantly by political factors, economic factors, socio-cultural factors, technological factors, legal factors, environmental and health factors. COVID-19 is a new phenomenon that affects global commercial banking that spreads from late 2019, a novel corona virus (SARS-COV-2) emerged in Wuhan City, Hubei Province in China causing a disease called COVID-19 (Addis Standard, 2020).

COVID-19 pandemic is a new incidence that has impact on every aspect of human life now days. According to Sozi (2020) it is an unprecedented crisis unlike any since the end of World War the 2nd. The virus is extremely infectious and has spread to every continent. Lockdowns in various degrees have been imposed in various countries and territories around the world. Some include total movement control while others have enforced restrictions based on time.

In order to slow the spread of the pandemic, several countries agreed to temporarily close educational institutions. As part of the world, Ethiopian government decided to temporarily close schools from kindergarten up to university education. The government of Ethiopia gave special attention for the pandemic by organizing quarantine centers and giving awareness to the society. It adopted strict passenger-screening procedures at Bole international airport in January 2020.

More comprehensive life insurance policy was also implemented to support front-line health officers. The Ethiopian government has been constrained by declining revenues and the need to re-allocate budget spending to reduce the damage of the pandemic (World Economic Forum, 2020)

Ethiopian banking industry has been realizing an unprecedented period of achievement and growth now days. However, the COVID-19 pandemic has begun to disrupt the operations of the industry. Lelissa (2020) revealed that the COVID-19 pandemic has an impact on banks' balance sheet and profit-loss statement. According to Mersha and Worku (2020) the performance of the banking sector in terms of loans, deposit mobilizations, international banking and profit of banks might be negatively affected due to the pandemic. E-banking service quality dimensions are significant fore-runner to customer satisfaction during this period (Eyob and Yalemwork, 2020). While there are attempts to study COVID-19 pandemic's impact on the economy, to the knowledge of the researcher there seems to be limited knowledge about commercial banks'

operations during the pandemic. This study hence intended to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia.

In the next sections of this chapter statement of the problem, objective of the research, specific research questions, scope, significance and organization of the study are presented orderly.

1.2. Statement of the problem

The COVID-19 pandemic became the most serious global health threat since the Spanish Flu a century ago in a very short period of time. The novel corona virus has already reached almost all continents, countries, areas (territories) with cases around the world. Although some governments have taken drastic steps to slow the spread of the disease, such as stringent travel restrictions, border closures, lockdowns and limiting immediate interaction to family plus one non-family member, others have chosen to take softer or largely voluntary measures. WHO and governments encourage prevention techniques such as social distancing, hand hygiene, mask use, and others to slow the spread of the COVID-19 virus.

As a result, COVID-19 is a major public health emergency, but it's still a lot more. It's a systemic shock with far-reaching consequences in the short, medium, and long term. The pandemic has resulted in a major short-term economic recession, with many large and small businesses shuttered, tens of millions of people out of jobs, global supply chains disrupted, health care severely strained, and fiscal capability severely strained (WHO, 2020).

According to IMF (2020) due to COVID-19 pandemic, commercial banks face financial and operational challenges. The financial one is the way how to address and overcome (alleviate) decrease of value of assets or liquidity problems and the operational challenges that banks face is, how to solve the risk of failure of resources such as: people, processes, technology, facilities and information to deliver intended service of the banks.

Melamedov (2020) points out that as the virus spreads across the world, businesses and borrowers face job losses, reduced sales volume and decreasing profits. As a result, customers

are likely to ask for financial aid, and Federal bank in the United States is asking banks to help them.

Limited studies conducted on the issue, tried to identify the effect of COVID-19. Among these studies Lelissa (2020) studied the impact of COVID-19 on the Ethiopian private banking System. The findings showed that after Covid-19, the banking industry will be strengthened by growth of new banking products such as E-commerce, digitalization, e-banking and consulting services. The future will be dominated by the internet and digitalization. To accommodate such changes and speed up the recovery process, comprehensive reform and financial sector restructuring programs should be considered. Geda (2020) study the COVID-19 damage on the Ethiopian service Sector: a supplement using Google search trend “Big data”. The study conclude that the government has realized the extremely challenging situation the sector has found itself (and is going to be hit further each passing day) and takes appropriate actions. Eyob and Yalemwork (2020) the purpose of the research was empirically to test the impact of M-Banking quality service on Bank of Abyssinia customer’s satisfaction during COVID-19 pandemic. The findings from the study showed that e-service quality dimensions are significant forerunner to customer satisfaction. Beyene et al. (2020) study sought to investigate about the economy wide impact of the COVID-19 in Ethiopia: Policy and recovery options. The findings of the study concluded, the COVID-19 pandemic is likely to have adverse effects on every key sector of the Ethiopian economy.

The above researchers focused on impact of COVID-19. It is early to measure its impact as the pandemic emerges late 2019 and difficult to make recommendations related to overall impact of COVID-19 in this very short period of time. The above mentioned issues coupled with the knowledge gaps identified in chapter 2 necessitate the conduct of this study.

1.3. Broad Objective and Specific research questions

The broad objective of the study is to assess the operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia.

The following basic research questions (RQ) have been established based on the above general research objective.

RQ1. How does COVID-19 influence on commercial banking operations in Ethiopia?

RQ2. What operational challenge does the commercial banking industry face due to COVID-19 pandemics?

RQ3. What are the operational measures commercial banks take in response to COVID-19 pandemic in Ethiopia?

RQ4. What are the lessons the commercial banking industry in Ethiopia could further learn from international experiences in dealing with the challenges of the pandemic on the industry?

1.4. Significance of the study

The primary use of this research is to the commercial banking industry. The findings of the study help the banks to identify the influences and challenges of COVID-19 on the banking operations and show direction for the future plan. Further, the study has paramount use for different stakeholders and other researchers who have interest on the topic area.

1.5. Scope and limitations of the study

The study has aimed to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia, because of the banking sector is among the largest public interest with significant contribution to the economy. Due to different factors, business sectors other than commercial banking industry have not been addressed in this particular study.

Thus, the study was not without limitations; the most important limitation was existence of limited literatures on the subject area and the researcher's lack of experience.

1.6. Organization of the thesis

The final report of this study has presented in five chapters. The first chapter deals with introduction including background of the study, statement of the problems, objectives of the study, research questions, research methods, significance of the study, and scope of the study. The second chapter has been review of related literature. The third chapter incorporates the research design including the methodology has adopted and techniques has used for collection of data and analysis has made. The study's findings and interpretation were then addressed in the fourth chapter. Finally, the fifth chapter has presented the conclusions and recommendations of the thesis based on its findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter focused on reviewing theoretical and empirical aspects of the study. It helps to reveal knowledge for more understandings of operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia and supports the way of analysis of the findings of the study.

2.1. Theoretical Review

The subsequent sections presented the review of theoretical literature on banking operations and impacts of such occurrences as COVID-19 pandemic. Accordingly, section 2.1.1 presented the overview of banking and its theories, section 2.1.2 discussed Operations of commercial banks, section 2.1.3 was about roles of commercial banks, section 2.1.4 presented about corona Virus (COVID-19) pandemic, and finally section 2.1.5 discussed about COVID-19 and banking operations.

2.1.1. Overview of banking and its theories

A bank is a financial institution that accepts deposits from the public, while simultaneously making loans (Hoggson, 1926). Lending activities can be performed either directly or indirectly through capital markets. Due to the importance of banks in the financial stability of a country, most jurisdictions exercise a high degree of regulation over banks. Most countries have institutionalized a system known as fractional reserve banking, under which banks hold liquid assets equal to only a portion of their current liabilities.

Banking in its modern sense evolved in the 14th century in the prosperous cities of Renaissance Italy but in many ways functioned as a continuation of ideas and concepts of credit and lending that had their roots in the ancient world. Thus, banking system plays valuable role in individual household's way of life and overall economy of the world as a whole.

There are three main theories of banking. The financial intermediation theory of banking, the fractional reserve theory of banking and the credit creation theory of banking are popular theories of banking. Each theory has been discussed in the following paragraphs.

The financial intermediation theory of banking: The financial intermediation theory of banking, among others, is the prevalent theory today. It claims that banks are nothing more than financial intermediaries, similar to other non-bank financial institutions, in that they raise deposits and lend them out. According to (Dewatripont, Rochet, and Tirole (2010) banks create liquidity by borrowing short and lending long, which means banks borrow money from depositors with a shorter maturity date and then lend it to borrowers with a longer maturity date.

According to Baltenperger (1980) banks are merely financial intermediaries, unable to create money, and instead engaging in a somewhat vague process of ‘risk transformation’. The main economic functions of financial firms are those of consolidating and transforming risks on the one hand, and of serving as dealers or ‘brokers’ in the credit market on the other hand.

Riordan (1993) holds that banks serve as financial intermediaries between borrowers and lenders. Banks, to be more accurate, borrow from depositors and lend to investors. The majority of investment projects in a capitalist economy are owned and operated by private entrepreneurs and companies. In most cases, these investors do not have enough money to completely fund their ventures and must rely on loans to do so. Banks, on the other hand, pool deposits in order to provide these loans.

According to Kashyap et al. (2002) banks are pure financial intermediaries, presenting a model of banking in which a bank purchases assets with funds it had acquired in the form of deposits or the issuance of equity or bonds.

Casuet al. (2006) states that banks as other financial intermediaries play a pivotal role in the economy, channeling funds from units in surplus to units in deficit. They reconcile the different needs of borrowers and lenders by transforming small-size, low-risk and highly liquid deposits in to loans which are of larger size, higher risk and illiquid (transformation function).

According to Matthew and Thompson (2005) to be able to lend, banks must first raise deposits. Financial intermediation refers to deficit units borrowing from financial institutions rather than from surplus units directly. As a result, financial intermediation is characterized as a process in which surplus units deposit funds with financial institutions, which then lend to deficit units.

The fractional reserve theory of banking: The second banking theory is the fractional reserve theory. It disagrees with the former theory (financial intermediation theory of banking) concerning the collective, macroeconomic role of banks: it argues that, together, the banking system creates money, through the process of ‘multiple deposit expansion’. According to Gurley and Shaw (1955) banks and non-bank financial institutions are largely similar in that they were both financial intermediaries able to ‘create financial claims’. Intermediaries merely receive a portion of current voluntary saving and serve the purpose of making these funds available for the funding of current expenses, to the degree that their activities are as defined thus far.

The credit creation theory of banking: The third banking theory contradicts the other two by depicting banks as neither financial intermediaries in aggregate nor individually. Instead, if a bank conducts bank loan contracts or purchases properties, it is said to generate credit and capital out of thin air. As a result, banks do not need to collect deposits or reserves before lending. Since bank lending is said to generate new credit and deposit capital, total balances rise without corresponding decreases elsewhere. In contrast to the financial intermediation theory, which states that only current purchasing power can be re-allocated and the money supply does not increase, this theory claims that bank balance sheets and measurements of the money supply appear to show a growing pattern over time as outstanding bank credit rises. Some advocates of this theory include Macleod (1856) and Hawtrey (1919).

Maurice (2018) individual banks may make money, according to the credit creation theory of banking, and banks do not only lend out deposits that have been given to them. Instead, as a result of bank lending, the bank generates bank deposits.

According to Maurice (2018) credit creation enhances bank profitability in two ways. Firstly, Bank credit creation expands the number of profitable bank lending opportunities available to the bank. Secondly, the average interest rate paid on depositor balances that have been generated by

the bank is lower than the commercial market interest rate paid on bank debt that would otherwise have to be used to promote additional bank lending, lowering the bank's cost of capital.

Banks generate credit in the form of what bankers call "deposits," and this credit is money, according to the credit creation theory. According to (Schumpeter, 1912) as cited in (Richard 2016), the role of the banker, the producer of and dealer in credit, is to choose from the variety of plans provided by entrepreneurs.

Schumpeter (1954) argued that construing bank credit on the model of current funds being withdrawn from previous uses by an entirely fictional act of saving and then lent out by their owners greatly alters the analytic situation and makes it extremely inadvisable. It is much more realistic to claim that banks "create credit," that is, that they "create deposits" in the act of lending, rather than that they "lend" the deposits entrusted to them. The explanation for this is that depositors should not be invested with the insignia of a position in which they do not participate.

According to Howe (1915) as cited in Richard (2016) banks do not lend their deposits; instead, they build them by their own lines of credit .A loan from one bank results in the creation of credit, which is the equivalent of deposit creation, up to the loan amount. If the bank were a financial intermediary, it would move funds from another account, either within or outside the bank, rather than creating a new deposit for the borrower.

2.1.2. Operations of Commercial Banks

A commercial bank is a depository entity that is largely allowed to issue checking accounts and is relatively unregulated in its ability to make commercial loans. The most significant depository institution is a commercial bank (Leroy and Vanhoos, 2006).

One of a commercial bank's most significant role is to offer loans to companies. Banks borrow money from people by mobilizing deposit and lend it to people who need it for a variety of reasons. As a consequence, banks' intermediary role is crucial to economic activity. The very purpose of banks is accepting deposits from customers and use the deposit mobilized to give to other customers in the form of loan or invest in assets that will generate a higher return than the

sum paid to the depositor (McCarthy et al., 2010) cited in (Seyoum, 2010). As a result, since deposits are the main source of bank loans, increasing or guaranteeing deposits has a direct positive effect on lending. Therefore, bank credit is the most affordable form of debt financing for the vast majority of customers, and good loans are the most profitable assets for banks.

As a result, a loan, like all debt instruments, involves the gradual transfer of financial assets from the lender to the borrower. The borrower earns a sum of money from the lender, which he or she must repay to the lender in daily installments, though not always. This service is usually given at a rate, which is known as debt interest. The provision of loans is one of the primary functions of financial institutions, and it is traditionally the primary source of income for banks. Loans are a major source of revenue for financial institutions, as well as a way of increasing the amount of capital available in the economy (Waymond, 2007).

According to Seyoum (2010) the provision of resources from one party to another is known as lending. The second party does not repay the first party immediately, resulting in a mortgage, instead, it makes plans to repay or refund those funds at a later date. Banks act as financial intermediaries, raising funds from savers in the form of deposits and distributing them to borrowers in the form of loans.

In addition to these, the banks act as agents of its customers. The bank performs a number of agency functions which include: transfer of funds, collection of cheques, periodic payments, portfolio management and periodic collections. Allen and Carletti (2010) by screening and monitoring borrowers at a lower cost than individual lenders, banks act as delegated monitors, ensuring that companies use the resources allotted to them. They can also mitigate asymmetric information, resulting in adverse selection and moral hazard, by screening and monitoring borrowers at a lower cost than individual lenders.

2.1.3. Roles of Commercial Banks

According to Greenbaum and Thakor (2007) and Freixas and Rochet (2008) core operations of banks consist of granting loans by deposits from the general public. They vary from other financial institutions in that they take deposits and offer loans at the same time. They act as intermediaries between deficit units and surplus spending units. In this case, banks collect

demandable deposits from its customers and raise funds in the short term capital markets which are then repackaged and invested in long term assets such as loans, investment in bonds and equity securities (Allens and Elena, 2008).

Commercial banks also assist in spurring economic growth through provision of finance to firms which is in turn used to finance various projects. Firms use these funds to invest in various profitable projects which spur economic growth. In addition, these projects create employment for the citizens (Allens and Elena, 2008). According to Diamond and Dybvig (1986), one of the most important functions of banks is to generate liquidity. As a result, banks perform useful activities on both sides of their balance sheets by providing loans to borrowers and liquidity on demand to depositors.

Banks not only provide liquidity, but they do so by converting their balance sheets' various assets. Banks provide maturity, liquidity, and risk transformation between their assets and liabilities by granting loans and collecting deposits. They provide both borrowers and lenders with permanent or long-term capital, as well as liquidity deposits for their asset holdings, which are liquid enough to be converted into cash at a moment's notice. To reconcile the demands of lenders and borrowers, financial intermediaries such as banks convert a firm's cash flow into a form that lenders prefer (Gurley and Shaw, 1960; Casu and Girardone, 2006).

Moreover, banks help in diversification of financial risks in the economy by creating an avenue for investors to diversify risk in the form of fixed deposits (Debt securities) in addition to investment in equity securities (Allens & Elena, 2008). Because of economies of scale and scope, banks have a comparative advantage over other financial intermediaries, such as individual lenders or specialized firms, as lending providers in information production. According to Leland and Pyle (1977) diversification lowers the cost of delegated monitoring to a financial intermediary, allowing banks to provide monitoring at a lower cost than individual monitoring. Banks also develop long-term trust-based financial relationships with their customers as a result of this, which may help to mitigate the negative effects of adverse selection and moral hazard on the resource allocation process (Mayer, 1988).

2.1.4. Corona Virus (COVID-19) pandemic

The word “Pandemic” comes from the Greek word pan meaning “all” and demos “the people” and the term is widely used to describe an infectious disease outbreak that spreads around an entire nation or one or more continents at the same time (Honigsbaum, 2009). It is the introduction of a new epidemic around the globe.

The Dictionary of Epidemiology's internationally agreed concept of a pandemic is simple and well-known: "an outbreak occurring globally, or over a very wide region, crossing international borders, and typically affecting a large number of people." Modern meanings include "extensive outbreak," "epidemic affecting a large proportion of the population over a large area," and "distributed or occurring widely across a nation, world, continent, or globally," among others (Morens et al., 2009). In the case of influenza, biologists additionally require that pandemic strains bear key genomic mutations, called substance shift. For WHO to pronounce tier six pandemic alert there should be sustained transmission in a minimum of 2 regions at an equivalent time. WHO's normal definition of pandemic grippe refers to a state of affairs during which a brand new and highly unhealthful infectious agent subtype, one to that nobody (or few) within the human population has immunologic resistance and that is well transmissible between humans, establishes a footing within the human population, at that purpose it quickly spreads worldwide (WHO, 2011a).

The most recent pandemics include the HIV pandemic as well as the 1918, 2009 H1N1 pandemics and COVID-19 pandemics are pandemics covers large range of population in the world. The following section discusses some features of COVID-19. This is because the main interest of the study was assessing the commercial banks' operations during COVID-19 pandemic.

According to World Health Organization (WHO, 2020) corona virus disease 2019 (COVID-19) is an infectious disease caused by SARS-COV-2 (severe acute respiratory syndrome corona virus). It was first discovered in late 2019 in China and spread throughout the world, resulting in a pandemic.

The following are some of common symptoms such as cough, fever, shortness of breath, loss of taste and smell. The time between exposure and the onset of symptoms is normally about five days, but it may be anywhere between two and fourteen days (Ahmad et al., 2020).

The virus is transmitted primarily through secretions from the nose and mouth, including small droplets formed by coughing, sneezing, and talking. Normally, droplets do not fly long distances by air. People may become infected by touching a contaminated surface and then touching their faces. In enclosed spaces, transmission can often occur by smaller droplets that can remain suspended in the air for longer periods of time. It is most contagious in the first 3 days after signs occur, but it can also spread before signs appear and from people who don't show signs (WHO, 2020).

Frequent hand washing, maintaining physical distance from others (especially those with symptoms), quarantine (especially for those with symptoms), cough covering, and holding unwashed hands away from the face are all recommended methods for preventing infection. Health officials have urged, and some authorities have required, the use of fabric face coverings such as a scarf or a bandana in public settings to reduce the risk of transmissions (WHO, 2020).

2.1.5. COVID-19 and Banking operations

Banking crisis is a type of financial crisis that affects the intended roles of the banks. Banking crises do not happen overnight, and they occur in stages, including banking runs, which affect a single bank, then many banks and then systemic banking crises in which a country experiences many defaults (Paul, 2010).

As any other businesses, banking industry is the one that can be affected directly or indirectly by the causes and consequences of COVID-19 pandemic. According to World Bank (2020) due to the COVID-19 pandemic, financial structures have been impacted in four ways: The 1st is the danger of the market: Acute fluctuations in investor sentiment, coupled with increased uncertainty, can drive up funding costs for governments and the private sector on both foreign and domestic markets. The 2nd is liquidity risk, which has already fueled demand for liquidity as a result of market uncertainty. Furthermore, cash flow disturbances in affected firms and changes in public demand for cash may cause banks to tighten their funding and liquidity conditions,

affecting lending to the private sector. Increased demand for foreign exchange instruments, in particular, could result in a severe liquidity shortage. The 3rd is credit risk: As the economy weakens, NPLs (non-performing loans) will rise, discouraging both banks and non-banks from lending to finance real activity. When cash-strapped businesses and households have debt commitments to meet and are unable to obtain bridge funding to offset a loss of revenue, credit risks are multiplied. The 4th and final one is risk to earnings and resilience. The financial sector's earnings and profitability will be harmed by the aforementioned risks, particularly if stressed conditions persist (World Bank, 2020).

The financial sector has a lot of power to help offset COVID-19's effect on the real economy. Bridge funding and loan restructuring for sound borrowers who have become cash-strapped will help them offset the consequences of the pandemic's crisis (World Bank, 2020). According to Acharya and Steffen (2020) also the financial sector, especially banks, is expected to play a critical role in absorbing the shock by providing much-needed funds.

The financial sector, particularly banks, is expected to play a critical role in absorbing the economic shock due to the pandemic by providing funds to their customers (Acharya and Steffen, 2020).

According to IMF (2020) the COVID-19 pandemic has created weighed heavily on the Ethiopian economy. It causes a fall in demand for exports, combined with domestic containment measures will slow growth and weaken external and fiscal accounts.

Awad et al. (2020) note that the greatest effect on banks is linked to their loan portfolios, where many borrowers from various industries are experiencing a dramatic drop in their profits, making it difficult for them to repay their obligations on time.

Baret et al. (2020) note that it is difficult to know long-term implications of COVID-19 for financial markets and banking and capital markets firms; but banks and capital markets firms will likely have learned a few lessons. This may include how to maintain organizational resilience in the face of potential pandemics, as well as how to design new operating models including alternative work arrangements. COVID-19 may further accelerate migration to digital channels and connectivity (Baret et al., 2020).

Countries' central banks make some sort of measures to alleviate the impacts of the pandemic. According to IMF (2020) Central Bank liquidity provision and targeted re-lending facilities for funding-affected firms can help ensure that credit provision continues, while policy rate cuts and asset purchases can limit the rise in cost of borrowing.

According to ADB (2020) on top of demand impact, mobility restrictions due to COVID-19 pandemic disrupt the production of goods and services. Except for a few essential services such as medical facilities, groceries, logistics companies, banks and selected government services, are partially or completely closed (including schools). These lead to lower cash flow, falling rates of return, and labor displacements.

Easypaisa, one of Pakistan's most popular mobile money platforms, reported a 35% increase in new customers, a 17% increase in daily transactions, and 185% increase in bank transfers through mobile wallets during the lockdown (Kumar and Shah, 2020).

The Central Banks of Canada, Luxembourg, Germany, and New Zealand have all stated that the risk of infection from currency notes is extremely low, and that cash should be considered a safe medium of exchange. The Bank of Korea and the People's Bank of China have gone so far as to sterilize currency notes before circulating them in the economy, while Kuwait and Hungary's central banks have put newly printed notes on hold for two weeks (Auer, Cornelli and Frost, 2020)

According to Carboni and Bester (2020) fees for mobile money transfers, transfers between bank accounts and mobile wallets, and charges for mobile banking have all been waived by the National Bank of Rwanda. The bank has also extended the limit on individual mobile money wallet transfers by 3 times before.

2.2. Empirical review

Capelle-Blancard and Desroziers (2020) conducted a study assessing how stock markets have integrated public information about the COVID-19, the subsequent lockdowns and the policy reactions. They collected data for 74 countries from January 2nd to April 30th, 2020. The results of the study suggest that stock markets have been less sensitive to each country's macroeconomic fundamentals prior the crisis, than to their short-term reaction during the crisis. Variables selected explain only a small part of the stock market variations, so it is hard to deny

that the link between stock price movements and fundamentals have been anything other than loose.

The study's strength was its breadth of coverage; as previously reported, they gathered data for 74 countries. With a larger sample size, a researcher might be able to better evaluate the average value of their data. The data was only available for a limited period of time, from January to April 2020. This was a weakness of the study.

During the COVID-19 pandemic in Scandinavia, Sheridan et al. (2020) found that social distancing laws cause only slight economic losses. Around 760,000 Danish and 100,000 Swedish active Danske Bank clients were sampled for analysis. Using real-time data from a large Scandinavian bank, the findings showed the effect of social distancing laws on consumer spending in the COVID-19 pandemic. The study takes advantage of a natural experiment to distinguish between the virus's symptoms and the laws aimed at containing it: While Denmark and Sweden were both affected by the pandemic, only Denmark enforced severe social and economic restrictions. The study's results indicate that the virus is to blame for the majority of the economic recession, which happens regardless of social distancing rules.

COVID-19 and related topics are recent, and further research is required to ensure that the study field is comprehensive. However, the study's emphasis on only one bank was a limitation; in order to collect more data, it would be easier if more banks were included.

Bello (2020) examined the effect of COVID-19 pandemic on the global economy. The outbreak resulted in an unexpected drop in oil prices, causing economic distress in oil-dependent economies. The shock of the pandemic is likely to have a smaller impact than the dramatic measures taken to prevent the virus from spreading, such as quarantine, lockdowns, and restrictions on travel and movement. The study recommended that countries should be coordinated to limit the spread of the pandemic and a fiscal response for targeted productive sectors.

Concentrating on the effect of the pandemic on major economic activities was one of the study's strong points; however, incorporating hotel and tourism, mining, agriculture, transportation, and other industries, in addition to oil prices and stock markets, could broaden the scope of the study.

Tawiah& Keefe (2020) examine the impact of cash holdings on corporate investment during the COVID-19 pandemic. Their sample was using the compustat fundamental quarterly data-base to obtain the firm-quarterly-level US data and other accounting variables from January 2018 to June 2020. Their findings show that Capital Expenditure and mergers and acquisition (M&A) levels decrease by 37% and 71% respectively during the COVID-19 pandemic. The pandemic plausibly represents an exogenous shock for which firms hold cash. COVID-19, on the other hand, has a lower effect on investment for businesses with cash on hand. The COVID-19 pandemic has had a negative impact on corporate investment activities, but cash reserves have mitigated the effect.

The strength of the study was trying to compare effects of cash holdings on corporate investment before and during COVID-19 pandemic where as its weak side was they have not given justification for the rationale behind excluding firms in the financial, insurance and utility industry and firms have different fiscal year start and end dates. It is better if their study accommodate such issues for the credibility of the study.

Sembiring et al. (2020) studied banking employee performance during pandemic COVID-19: remuneration and motivation. The research approach adopted in this study was quantitative approach. The very purpose of the research was to obtain information about the effect of remuneration and motivation on performance bank employees in Surabaya. Based on data analysis and discussion of this research, they concluded that remuneration and work motivation simultaneously influence employee performance and remuneration has the most dominant influence on the performance of banking employees during the COVID-19 pandemic.

Newness of the topic was one of appreciable part of the study; but its sample size was very small. It may be better if it incorporates larger sample size for the soundness of the findings.

Demirguc-Kunt et al. (2020) studied banking sector performance during the COVID-19 crisis. The study used an event study technique to test the effect of policy announcements on the stock returns of banks. Between May 2, 2018 and May 1, 2020, they used global data on all publicly traded banks and non-bank financial firms in 53 countries. The analysis looked at bank stock prices all over the world to see how the COVID-19 pandemic will affect the banking industry.

The paper examined the impact of financial industry policy announcements on the output of bank stocks, using a global database of policy responses during the crisis. The results of the study revealed that the recession and banks' planned counter-cyclical lending positions have put banking structures under significant strain, with bank stocks outperforming domestic markets and non-bank financial firms. The study's findings indicate that the COVID-19 shock had a much greater and longer-lasting negative effect on banks than on corporations and other non-bank financial institutions. They also suggest that some policy interventions, such as liquidity support, borrower aid, and quantitative easing, helped to mitigate some banks' negative effects.

Conducting a study on such a hot and a new topic and covering about 53 countries has been taken as strong side of the study; but trying to compare (measure) performance of the banks and or non-bank sectors to examine the impact of COVID-19 within this a short period of time is too early.

Ozili and Arun (2020) studied spillover of COVID-19: impact on the global economy. They empirically examined whether social distancing policies affected economic activities. They used a one-month data from the 23rd of March to 23rd of April, 2020. They collected data from stock markets in four continents: North America, Africa, Asia and Europe. The study's results show that the increasing number of economic-policy choices, lock-down days, and movement constraints have an impact on the economy.

The strength of the study was its coverage, as mentioned above stock market data from about four continents. On the other hand limitation of this study was the short period of analysis due to limited dataset. A longer study period may capture the socio-economic consequences of government policies during the pandemic. And in addition to stock markets, if other sectors included in the study, it may help to explore more.

Lelissa (2020) conducted research to better understand the effects of the COVID-19 pandemic on Ethiopia's private banking system, as well as to inform interventions and policy responses. Methodologically, the study used descriptive method to outline the impact of COVID-19 on the key performance indicators of the banking sector in Ethiopia and the result shows that the pandemic has impact on both B/sheet and profit-loss statements of the banks. A strong side of

the study was focusing area, which is current incidence and has wide range of effect on people as well as global economy as a whole; on the other hand it is too early to measure the performance of the banks because as the pandemic discovered late 2019. It is better if the study tried to address its impacts on the banking operations.

Geda (2020) study sought to investigate about the COVID-19 damage on the Ethiopian service sector: a supplement using Google search trend “Big data”. The findings of this study revealed that the demand for hotels and restaurants, transport and tourism have contracted significantly due to the pandemic.

The use of Google search-based information for a study is a new experience and very appreciable because using such type of data in a research may be efficient in terms of time and resource. As he rose in the study as a weakness, the study has a limitation on reflecting the true (actual) image of demand for the service sector in Ethiopia, because the study was highly dependent on internet access of the country.

Mersha and Worku (2020) studied about effect of COVID-19 on the banking sector in Ethiopia; the research design used was descriptive desk research, based on reports, books, web contents, published articles, magazines and local newspapers and the research approach adopted was qualitative. They conclude the findings that Ethiopian banking sector have been enjoying tremendous growth before the pandemic; but currently, COVID-19 has started showing its effect on every banking service including: deposit mobilization, credit management, international banking and system security. They recommended that banks should focus on re-assessing the risk profiles of their borrowers affected by the pandemic as high and low risk; and they need to search new banking products that will fit the current situation and enhance their deposit and liquidity measures.

The strength of this study was issue of concern, which is effect of COVID-19 pandemic on the banking in Ethiopia; for the comprehensive understanding, number of studies needed on the topic area. As of the researchers explained, it would have been good if the study was supported with primary data, but due to movement restrictions they used only secondary data.

Beyene et al. (2020) study sought to investigate about the economy wide impact of the COVID-19 in Ethiopia: Policy and recovery options; the study used a quantitative research approach to assess the potential short-term and medium-to-long-term impacts of the pandemic in Ethiopia and used secondary data for analysis. The findings of the study concluded, the COVID-19 pandemic is likely to have adverse effects on every key sector of the Ethiopian economy.

The strong sides of the study are: it tried to address or capture the impact of the pandemic through different dimensions such as: GDP, consumption, investment, government revenue, expenditure, trade, FDI (Foreign direct investment), employment and household welfare. On the other hand the weak side is used only secondary type of data reports from NBE, IMF and Central Statistics Authority. It is better if it incorporates primary data in addition to secondary data used for inclusiveness of the study.

Kibrom et al. (2020) studied winners and losers from COVID-19 global evidence from Google search. The researchers tried to measure the pandemic's economic consequences as it unfolded. COVID-19's immediate effects on demand for selected services were estimated using historical and near real-time Google search data from 182 countries. The study took advantage of the virus's temporal and spatial variations to discover that demand for services that involve face-to-face contact, such as hotels, restaurants, and retail trade, has decreased significantly. On the other hand, demand for services such as information and communications technology (ICT) and deliveries that can be done remotely or offer solutions to the challenges of decreased personal interactions has risen significantly.

The strength of the study was its newness of the topic. As COVID-19 occurred late 2019, it is very important conducting a research on such untouched areas for comprehensiveness of the topic area. According to Kibrom et al. (2020) Google search popularity index is not directly comparable across terms and geographic areas. So this is considered as limitation of the study.

Eyob and Yalemwork (2020) the purpose of the research was empirically to test the impact of M-Banking quality service on Bank of Abyssinia customer's satisfaction during COVID-19 pandemic. The researchers adopted a quantitative study approach and a descriptive research design with survey research method. The study's results indicated that e-service quality

dimensions are a good predictor of customer satisfaction. The researchers suggested that management of Bank of Abyssinia, as a service provider, should focus on the defined dimensions, especially the ease of use and reliability of m-banking services, when designing e-banking strategies in order to provide high service quality and satisfaction to its customers.

Strength of this study was its focusing area, which was M-Banking. M-Banking used to conduct financial transactions without physical contact of cash. It is a method that recommended to reduce the spread of the virus. The limitation of the study was its coverage; the samples are only from Bank of Abyssinia. It seems good if it includes other banks to increase the reliability of the results of the study.

2.3. Knowledge Gap and Conclusion

From the researcher's observation, most of studies conducted on the topic area were focused on impacts and effects of COVID-19 on the economy and performance of banking and other sectors. The operations part was not concern of these studies. For instance, Sembiring et al. (2020) studied banking employee performance during pandemic COVID-19: remuneration and motivation, Bello (2020) examined the effect of Covid-19 pandemic on the global economy, Lelissa (2020) about impacts of the COVID-19 pandemic on Ethiopian private banking system, Mersha and Worku (2020) studied effect of COVID-19 on the banking sector in Ethiopia, Eyob and Yalemwork (2020) about the impact of M-banking quality service on customer's satisfaction during COVID-19 lock down, Geda (2020) studied to investigate the COVID-19 damage on the Ethiopian service sector and Kibrom et al. (2020) studied winners and losers from COVID-19 global evidence from Google search.

To the researcher's knowledge and observation, there was no study conducted on commercial banking operations during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia at all. Therefore, this study is different from previously conducted studies by focusing on the influences and challenges of commercial banking operations, measures taken and lessons shared from other countries. The study has also its own contribution for comprehensiveness of the subject area in advance.

The following chapter is about the research design and methodology adopted. In this regard,

planned research approaches, specific research methods that are applied for the study along with the proper justification for the selection of a particular research method and techniques of data analysis presented as follows.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

The blueprint for achieving research goals and addressing research questions is the research design. In other words, it's a master plan that lays out the strategies and procedures for gathering and analyzing the data that's needed. The aim of research design, according to Kothari (2004) is to allow for the collection of relevant evidence with minimal expenditure.

This chapter presents briefly the general frame work about how this particular study is about, the research design and method adopted, then the different research approaches, the types of data needed, way of analysis employed and finally, justification of choice of particular method, data and data analysis for the intended study presented.

3.1. Broad objective and specific research questions

The broad objective of the study is to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia.

Based on the above broad research objective the following specific research questions (RQ) have been developed.

RQ1. How does COVID-19 influence on commercial banking operations in Ethiopia?

RQ2. What operational challenge does the commercial banking industry face due to COVID-19 pandemics?

RQ3. What are the operational measures commercial banks take in response to COVID-19 pandemic in Ethiopia?

RQ4. What are the lessons the commercial banking industry in Ethiopia could further learn from international experiences in dealing with the challenges of the pandemic on the industry?

In order to attain the above broad objective and answer research questions, the appropriate research method to be adopted has been discussed in the subsequent sections of this chapter.

3.2. Research approach used

In this study, the researcher has adopted mixed research approach. The very importance of using mixed research approach in a research, it provides a better understanding of research problems and complex phenomena than either approach alone (Creswell and Clark, 2007). The better understanding can be obtained by cross checking and incorporating one set of results with another and this helps to enhance the validity of the conclusion to be made. There are different tools available to the researcher to collect the required data in mixed research approach such as observation, interview, document analysis and questionnaires. For this study, the researcher has adopted sequential mixed approach begins with qualitative (document analysis and in-depth interview) and then quantitative (survey design) in selected commercial banks. The purpose of starting from qualitative and then quantitative approach is it helps the researcher to well understand the issue of concern and further develop appropriate survey instrument for the study.

3.2.1. Qualitative aspects

As part of the qualitative component of this study, in-depth interviews and documentary reviews have been used as principal methods of data acquisition. The purpose of using these methods is to get detailed view and helps to incorporate different data set on a particular topic or idea. Using different data source and method in a research provide a confluence of evidence that breeds credibility (Bowen, 2009).

For the study, as the data collected through in-depth interview and documentary analysis, the following discussions presented the features of in-depth interview and document analysis.

Purposeful discussion and/or conversation with two or more people, helps the researcher to gather valid and reliable data that are relevant to answer research questions and achieve its objectives. An interview is a dialogue between two or more people with the intention of learning more about them (Kahn and Cannell, 1957) as cited in (Saunders et al., 2009). An interview might be structured (using standardized questions), semi-structured, and un-structured (in-depth)

conversations (Saunders et al., 2003). A structured interview is one in which pre-determined questions are asked in a set order and conducted in a standard manner.

The in-depth interviews were used to understand in detail commercial banking operations in Ethiopia during COVID-19 pandemic and to inform the quantitative aspect of the study. In that, the results of in-depth interviews and documentary reviews were used to inform the survey. In-depth interview conducted with ten selected managerial level staffs from CBE, Bank of Abyssinia, Dashen Bank, Hibret Bank, Nib International Bank and Awash Bank, with the intent of gathering information that needs clarification and not be achieved through other techniques. In order to help to hold experienced or concerned respondents, purposive sampling technique has used. In such type of sampling, it is not possible to specify the possibility of one person being included in the sample. Basic changes or measures made on the operations of banking due to COVID-19 and related issues has addressed by in-depth interview in this study.

In addition to the data obtained through other methods, this study also employed document analysis. Documents relevant for the study such as reports of National Bank of Ethiopia, Commercial banks, and others reviewed as its necessity.

3.2.2. Quantitative aspects (Survey) design

The purpose of employing survey in a given study used to collect data from a predefined group of respondents to gain information and insights into a topic of interest. In this study, survey of participants from selected commercial banks conducted to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia.

3.2.2.1. Total population and Sampling design

The total population of the study was all commercial banks at its head office level. As companies are unit of analysis, senior and managerial level staff members of its head offices and head office branches who were engaged on banking operations. The very reason of the study concentrated on their headquarters is because of its convenience in terms of accessibility. In this regard currently, there are 1 state owned 16 private commercial banks are operating in the country since the conduct of this research.

To select the required sample of banks, the study used a purposive sampling technique and number of participants from the above total population of commercial banks. Purposive sampling is a form of non-probability sampling that follows a set of rules. As a result, the researcher used judgmental sampling, which is one of the purposive sampling techniques. Furthermore, judgmental sampling allows the researcher to choose supreme objects for the sample based on the researcher's selection criteria. The selection criteria set by the researcher was, based on the total number of branches. Therefore, based on data for 2018/19, commercial banks relatively with high number of branches were considered.

Therefore, out of the seventeen commercial banks, eight banks with high number of branches were considered. These are Commercial Bank of Ethiopia (CBE), Awash Bank, Dashen Bank, Cooperative Bank of Oromia, Bank of Abyssinia, Hibret Bank, Nib International Bank and Oromia International Bank. The very reason for considering banks with high number of branches is that it shows the market share of banks to the some extent.

Regarding the sample of participants engaged in the survey were also purposively selected from senior and managerial level staff members. This helps the researcher to incorporate well experienced individuals who can give valuable information for the study. The appropriate sample size for a research has to be ranges between 30 and 500 (Roscoe, 1975). Taking this in to account the sample of the survey participants have been 200 (Two hundred). These were distributed to each bank proportionally.

Table 3.1 shows the proportion of participants from each bank according to their number of branches they have.

Table 3. 1 The proportion of survey participants with respect to their No. of branches

No.	Name of Banks	Number of Branches	Number of survey participants
1.	Commercial Bank of Ethiopia	1,456	76
2.	Awash Bank	410	22
3.	Dashen Bank	413	22
4.	Cooperative Bank of Oromia	389	20
5.	Bank of Abyssinia	337	18
6.	Hibret Bank	274	14
7.	Oromia International Bank	265	14
8.	Nib International Bank	261	14
	Total	<u>3,805</u>	<u>200</u>

Source: 2018/19 annual reports of the banks and own computation.

3.2.2.2. Instrument design and conduct of the survey

Survey can be defined as a means for gathering information about the characteristics, actions, or opinions of a large group of people (Pinsonneault and Kraemer, 1993). According to Salant and Dillman (1994) surveys can also be used to assess needs, evaluate demand, and examine impact. By analyzing a sample of the population, survey research offers a quantitative or numeric overview of research patterns, behaviors, or opinions. It involves cross-sectional (data collected at a single point in time) and longitudinal (data collected over time at various intervals) studies in which data is collected through systematic interviews, questionnaires, and documentary reviews with the goal of generalizing from the sample to the population (Creswell, 2009).

For the study, the survey (questionnaire) used comprises both closed and open ended questions. Closed ended questions with five Likert-scale level of agreement has developed based on the objective of the research. The questionnaires has ranked help to measure the degree of their agreement or disagreement of the respondents and open ended questions allow them to give freely their own opinion on the issue of concern. Thus, senior and managerial staff members have participated in the survey; the researcher believes that the data collected from those experienced participants was very important for this study.

The survey instrument that was disseminated was in the form of self-administered questionnaire. After permission was secured from concerned officials of those commercial banks, the researcher in person has distributed and collected the questionnaire from the respondents. The instrument was developed in English language (Appendix 1).

Actual conduct of the survey: The survey instrument was designed and conducted in the form of self-administered questionnaire. It helps the respondents answer at their convenience. It is easy to complete and efficient in terms of time and cost as compared to other data gathering tools.

The sample size for the survey was 200 senior and managerial level staff members of commercial banks so that 200 questionnaires were distributed and out of which 173 responses were collected; this was 86.5% of totally distributed questionnaires. A response rate of 50% is adequate for data analysis; a rate of 60% is good and a rate of 70% and above is excellent (Mugenda and Mugenda, 2003). Based on this assertion the response rate for the survey of the study was excellent. The survey was administered (conducted) in the month of February 2021.

3.2.2.3. Validity and Reliability of the instruments

According to Yin (2009) he defined four measures that can be used to determine the standard of empirical social research, including a case study, which he classified as a type of social research. Validity, internal validity, external validity, and reliability were all constructed. It is recommended that several sources of evidence have been used to determine reliability and validity in order to improve the reliability and legitimacy of a report. In this regard the study reviewed documents including annual reports of NBE and selected commercial banks, conducted in-depth interview with managerial level staffs and survey with senior and managerial level of staffs from selected commercial banks. Validity and trustworthiness increase accountability in qualitative research and reduce resources for researcher bias (Singh, 2014).

According to Kothari (2004) the degree to which the sample of test items reflects the material that the test is intended to assess is known as validity. Before being distributed, the questionnaire in this study went through several stages of development. The study's questionnaire is examined for content validity and checked for grammar, sequence and structure of the questionnaire by a

person who has experience on a research methods and my advisor. The instrument's final draft incorporated the suggestions for material and structure.

3.3. Data analysis method

As explained earlier, the researcher has adopted mixed research approach; the way of data analysis adopted for quantitative and qualitative aspects discussed below.

In analyzing the survey data (quantitative aspect) the researcher used descriptive statistics and presented results with respect to mean, standard deviation, percentages, minimum and maximum values. For qualitative aspect of the study (in-depth interviews and documentary reviews), the research employed thematic data analysis method. According to Braun & Clarke (2006) thematic data analysis is a method for identifying, analyzing, organizing, describing, and reporting themes found within a qualitative data set.

3.4. Ethical Considerations

During the data collection process for this study, ethical concerns were taken into account when obtaining access from individual in-depth interview and survey participants. In fact, the participants' personal information was kept private and confidential. The research participants were also assured that the information they provided and the study's findings would be used solely for academic purposes, and that there would be no danger or harm to them as a result of their participation in the study.

3.5. Conclusion

In this study, the researcher has adopted mixed research approach. As mixed research approach incorporates both quantitative and qualitative aspects, each aspect uses different knowledge claims, strategies of inquiry and methods of data collection and analysis were as discussed above. The relation between the research questions and research methods has adopted in this particular study is presented with proper justification; and ethical issues regarding participants, collection of data and its use were presented. The subsequent section has presented results and discussion of the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

In the previous chapter, the research design and methodology adopted has been discussed. This chapter presents the results of the study and its discussions. The chapter is organized in four sections. The first section (4.1) presents the broad research objective and specific research questions to connect it with the results of the study. This is followed by results of the document analysis, in-depth interview and survey in section (4.2) and discussions (analysis) of the results in section (4.3) and finally conclusion of the chapter has been presented in section (4.4).

4.1. Broad research objective and specific questions

The broad objective of the study is to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia.

The following basic research questions (RQ) have been established based on the above general research objective.

RQ1. How does COVID-19 influence on commercial banking operations in Ethiopia?

RQ2. What operational challenge does the commercial banking industry face due to COVID-19 pandemics?

RQ3. What are the operational measures commercial banks take in response to COVID-19 pandemic in Ethiopia?

RQ4. What are the lessons the commercial banking industry in Ethiopia could further learn from international experiences in dealing with the challenges of the pandemic on the industry?

In order to attain the above broad objective and answer research questions, the appropriate research method to be adopted has been discussed in Chapter 3 above and the subsequent sections of this chapter presents the data collected through different methods presented in the results section below.

4.2. Results of the study

In this section, the results and discussions of the data collected through document analysis, in-depth interview and survey has been presented.

4.2.1. Qualitative aspect-results of document reviews and in-depth interviews

As indicated fourth quarter report of NBE 2019/20 regarding volume of transactions of foreign exchange traded in the inter-bank foreign exchange market decreased by 1.64% compared with that of a year ago. And also in the same period, Forex bureaus of commercial banks purchased and sold decreased by 23.6% this is mainly due to COVID-19 pandemic.

Regarding measures taken by NBE in response to the outbreak, injects liquidity for banks and encourages banks to fully implement the existing NBE Directives that provide re-financing and/or re-scheduling of loans and advances for sectors that have been hardily hit by the impact of COVID-19 through undertaking case by case assessment and decision making at the discretion of each bank in a responsible manner and NBE temporarily suspends the conditions stipulated under Article 6.1.6 of Asset Classification and Provisioning Directive No. SBB/68/2018 to exempting banks from holding provision that have been required otherwise the same. And on the same Directive, Article 8.2 temporarily suspends that restricts bank's short-term loan and advances from being at least 40%,and medium and long-term loans and advances not exceed 40% and 20% of the total loans and advances respectively.

Regarding measures taken in response to COVID-19 pandemic, 2019/20 annual report of Hibret Bank S.C. stated the bank along with other banks, took certain mitigating measures such as lowering interest rates and extending repayment periods of loans already granted to businesses engaged in sectors considered relatively more vulnerable to the impact of the pandemic. Included among such sectors were tourism and the entire hospitality industry, the flower industry and the like. The measures, estimated at the time to cost the Bank somewhere around Birr 50 million in the last quarter of the financial year alone, were implemented with a great sense of satisfaction. And also the bank indicated in its report the intervention of NBE by way of injecting considerable cash as loans to all banks operating in the country.

As part of its Corporate Social Responsibility response to the nation's fight against the COVID-19 pandemic, Hibret Bank S.C. donated Birr 5,000,000.00 to the Ministry of Health for the cause. In addition to its grant of Birr 500,000.00 towards Addis Ababa City's project of providing assistance to less fortunate students. This indicates the bank has incurred unplanned cost due to the pandemic.

Oromia International Bank's annual report 2019/20 showed that challenges against their international trade (import/export), deposit mobilization, foreign currency generation and others have caused and may cause significant credit default risk to the banking sector. The bank has also incurred unplanned emergency average monthly expense of Birr 904,150 to facilitate transportation and related services to the employees of the bank. And also the bank has donated about Birr 16.2 million to the National and Regional initiatives of fighting against COVID-19 pandemic to realize its corporate social responsibility.

2019/20 annual report of Bank of Abyssinia showed that GDP growth of Ethiopia forecasted to be 6 percent in 2019/20 according to National Planning and Development Commission. In addition to the negative consequences of the Covid-19 outbreak, the domestic economy has been hit by increased disputes and market disturbances, currency shortages, and worsening terms of trade. As a result, the banking industry faced major difficulties in terms of capital mobilization, both domestically and globally. The report also indicated that the bank incurred a cost to introduce online based trainings due to COVID-19 pandemic.

The global disruptions caused by the pandemic had a significant impact on tourism, exports, imports, and remittances to the country during the second half of the fiscal year, according to the annual report of Dashen Bank 2019/20. The bank has taken all the possible measures to alleviate the adverse effect of the pandemic including taking internal environment safety precautions of employees and customers, encouraging digital transactions by waiving commission fees on transactions through POS terminals and ATMs, support borrowers adversely affected by COVID-19 by reducing different service charges and interest rates and conducting re-negotiation and re-scheduling based on their extent of impact. The bank also promotes highly the digital banking platform Amole, which helps to effect payments, transfer money and buy air time.

The challenges that the Nib International Bank confronted due to COVID-19 was showed on the 2019/20 annual report of the bank include: sporadic shortages of liquidity, and paucity of hard currency. And the bank has taken a sort of measures included: revising its lending interest rate and revised/cut charges on other services related to LC and CAD especially for those sectors that are highly affected by the pandemic.

Generally, the result of document analysis showed that as any economic sector, the Ethiopian commercial banking sector faced different challenges and took different measures in response to the pandemic as discussed above.

With respect to in-depth interviews, the researcher held face to face, one to one interview with managerial level staff from Commercial Bank of Ethiopia, Bank of Abyssinia, Nib International Bank, Awash Bank and Hibret Bank. The interviews focused on banks' operations during COVID-19 pandemic and the results are presented as follows.

Regarding the influence of COVID-19 on banking operations, the interview participants answered that the influence of the pandemic on the banking operation was high from March, 2020 to June 2020 because as that time, the bank's customers were withdrawing their deposits aggressively to purchase consumption items because they expect the spread of the pandemic may be high as they observed experiences of China, Italy and other countries through media and also they expect government of Ethiopia may announce lockdown. And also tourism and hospitality sectors were highly affected due to movement restriction throughout the world. COVID-19, on the other hand, has a positive effect on banks' ability to encourage and actively work on e-banking, such as mobile banking, internet banking, POS and ATM. Because e-banking help customers to effect cash-less transactions (account to account transfer). And it also reduces routinely coming to banks as the pandemic transmit via different kind of contacts.

Regarding banking operations affected by the pandemic, summary of interview indicated that most of banking operations affected such as: loan disbursement and collection, deposit mobilization, foreign currency generations through export and remittance, interest income and different charges on services were affected. Bank customers engaged service sectors specially tourism and hospitality sectors were highly affected due to movement restrictions.

Regarding measures taken in response to the COVID-19 outbreak, banks have taken different measures. The interview result showed that all banks re-schedule loan repayment terms for three months, giving working capital loan to their customers, reduction of interest on loans based on the extent of the sectors affected by the pandemic and extending letter of credit (LC) without extension charges.

Regarding measures taken by National Bank of Ethiopia, as the results of the interview stated that liquidity injected by NBE helps the commercial banks to meet their liquidity problem as well as to provide working capital loan for those who were highly affected borrowers due to the pandemic particularly engaged in hotel and tourism sectors.

Regarding countries experience in mitigating the impacts of the pandemic, the interview results showed that banks shared some experiences from other countries including, working on e-banking services, keeping personal hygiene and office equipment sanitization.

4.2.2. Quantitative aspects-Survey results

This section presents the results of the survey. First, survey respondents’ profile is presented. And then this is followed by results of the survey with respect to research questions.

4.2.2.1. Respondents’ background information

Gender and age group of respondents: Out of total respondents 74% were males and 28% were females (Table 4.1). Regarding age of respondents, 6.9% were below 25 years, 69.9% were 26-35 years, 18.5% were 36-45 years and 4.6% were 46-55 years (Table 4.2).

Table 4. 1 Gender and age of respondents

Variables	N = 173	Frequency	Percent
Gender	Male	128	74
	Female	45	26
Age	Below 25 Years	12	6.9
	26-35 Years	121	69.9
	36-45 Years	32	18.5
	46-55 Years	8	4.6

Source: Survey outcomes and own computation

Level of education and field of study: Concerning to educational level of respondents, 38.2% of respondents were first degree holders and 61.8% were master degree holders (Table 4.3). whereas their field of study, Accounting and Finance were 57.8%, Business administration 15.6%, Banking and Finance 1.2%, Economics 13.9% and 11.6% were studied Management (Table 4.3).

Table 4. 2 Educational level and field of study of respondents

Variables	N = 173	Frequency	Percent
Level of education	First Degree	66	38.2
	Masters	107	61.8
Field of study	Accounting and Finance	100	57.8
	Business Administration	27	15.6
	Banking and Finance	2	1.2
	Economics	24	13.9
	Management	20	11.6

Source: Survey outcomes and own computation

Job title and work experience: Regarding the job title of the respondents, 48.6% were senior, 47.4% were managers and the rest of 4% were directors Table (4.4). Whereas work experience, 40.5 % of the respondents were served the bank in their respective title for less than 5 years, 30.6% for 5-10 years, 25.4% for 11-15 years and 3.5 % for above 15 years (Table 4.4).

Table 4. 3 Job title and work experience of respondents

Variables	N = 173	Frequency	Percent
Job title	Senior Bank Officer	84	48.6
	Manager	82	47.4
	Director	7	4
Work Experience	Less than 5 Years	70	40.5
	5-10 Years	53	30.6
	11-15 Years	44	25.4
	Greater than 15 Years	6	3.5

Source: Survey outcomes and own computations

4.2.2.2. Banking operations during COVID-19 pandemic: responses and lessons from international experiences

Influence of COVID-19 on banking operations: Regarding to challenges of COVID-19 on the banks' operations, 88.4% of survey respondents showed that the pandemic has no impact on the banks' operations at all with a mean of 1.73 ± 0.843 (Table 4.5). On the other hand, 80.9% of respondents with a mean of 3.95 ± 0.898 believed that the influence of the pandemic on banking operations is high (Table 4.5). Bankers or respondents also believed that COVID-19 pandemic creates more chances or opportunities for banks to promote electronic banking services as responded by 83.3% of respondents with a mean of 4.21 ± 0.787 (Table 4.5).

Table 4. 4 Summary of responses regarding influence of COVID-19 on banking operations

Statements	N = 173			
	Mean	Std. Deviation	Min	Max
The pandemic has no impact on the bank's operations at all.	1.73	0.843	1	5
The influence of the COVID-19 pandemic on the bank's operations is high.	3.95	0.898	1	5
COVID-19 pandemic creates more opportunity for the bank to promote (introduce) electronic (digital) banking systems.	4.21	0.787	2	5

Source: Survey outcomes and own computation

Operational challenges that banking industry faced due to COVID-19 pandemics:

Concerning to service delivery, 39.3 % of respondents believed that the bank could not give its services properly due to the pandemic with a mean of 3.00 ± 1.006 (Table 4.6). Respondents believed that the bank has faced liquidity problem to settle its short-term needs due to COVID-19 pandemic as responded by 51.5% of respondents with a mean of 3.47 ± 0.774 (Table 4.6). Regarding to deposit mobilization requirement plan of the banks, 68.8% of respondents showed that COVID-19 affects our bank's deposit requirement plan with a mean of 3.57 ± 1.000 (Table 4.6). The majority of respondents (71.6%) stated that the pandemic has affected loan disbursement of the bank with a mean of 3.87 ± 0.792 (Table 4.6). As 91.4% of survey respondents replied with a mean of 4.22 ± 0.746 , the pandemic has affected the loan collection of the bank (Table 4.6). Regarding international transactions, 87.9% of respondents stated that there

is delay of payments for traders in international transactions due to the pandemic with a mean of 4.22 ± 0.746 (Table 4.6). Respondents believed that the bank has got shortage of foreign exchange due to the pandemic as responded by 91.3% of respondents with a mean of 4.132 ± 0.690 (Table 4.6). Bankers stated that due to the pandemic foreign currency generated through export, remittance and other sources has not met the bank's plan as responded by 89.6% of respondents with a mean of 4.133 ± 0.682 (Table 4.6). Regarding commission and related incomes, 64.7% of respondents showed that commission, interest and other incomes of the bank have declined due to the pandemic with a mean of 3.797 ± 0.848 (Table 4.6). The expenses of the bank were increased due to COVID-19 pandemic with a mean of 3.595 ± 0.645 as stated by 57.8% of respondents (Table 4.6). Regarding costs incurred, 62.4% of respondents not take position that the bank has incurred high cost to implement E-banking services such as: ICT equipment, networking and software development due to COVID-19 with a mean of 2.618 ± 0.499 (Table 4.6). Most of projects (loans) financed by the bank would lead to default and NPL due to the pandemic with a mean of 2.434 ± 0.733 as stated by 57.8% of respondents (Table 4.6).

Table 4. 5 Summary of responses regarding operational challenges of COVID-19

Statements	N = 173			
	Mean	Std. Deviation	Min	Max
The bank could not give its services properly due to the pandemic.	3.00	1.006	1	5
The bank has faced liquidity problem to settle its short- term needs due to COVID-19 pandemic.	3.47	0.774	1	5
COVID-19 affects our bank's deposit requirement plan.	3.57	1.000	2	5
The pandemic has affected loan disbursement of the bank.	3.87	0.792	2	5
The pandemic has affected the loan collection of the bank.	4.22	0.746	1	5
There is delay of payments for traders in international transactions due to the pandemic.	4.22	0.820	2	5
The bank has got shortage of foreign exchange due to the pandemic.	4.132	0.690	2	5
Due to the pandemic foreign currency generated through export, remittance and other source has not met the bank's plan.	4.133	0.682	2	5
Commission, interest and other incomes of the bank have declined due to the pandemic.	3.797	0.848	2	5
The expenses of the bank were increased due to COVID-19 pandemic.	3.595	0.645	2	5
The bank has incurred high cost to implement E-banking services: such ICT equipment's, networking and software development due to COVID-19.	2.618	0.499	1	3
Most of projects (loans) financed by the bank would lead to default and NPL due to the pandemic.	2.434	0.733	1	3

Source: Survey outcomes and own computation

Measures taken by commercial banks in response to the COVID-19 Pandemic: The survey results showed that commercial banks have taken measures in response to COVID-19 outbreak. Commercial banks have re-structured loans to their customers 80.35% of respondents (Table 4.7), waiving commission or charge on ATM services 13.29% of respondents (Table 4.7), increased used of e-banking services such as: increasing the number of ATM, POS, mobile

banking and internet banking services 73.99% of respondents (Table 4.7), reduction of interest rate on loans and advances based on the extent of the businesses affected by the pandemic 26.01% of respondents (Table 4.7) and Provision of working capital loan for its customers 72.25% of respondents (Table 4.7).

Table 4. 6 Summary of responses regarding measures taken by banks in response to the pandemic (i)

Types of measures taken	Frequency	Percent
Restructuring loan terms	139	80.35
Waiving commission or charge on ATM services	23	13.29
Increased used of e-banking (increasing the number of ATM, POS, mobile banking and internet banking services.)	128	73.99
Reduction of interest rate on loans and advances based on the extent of the businesses affected by the pandemic.	45	26.01
Provision of working capital loan for its customers.	125	72.25

Source: survey outcomes and own computations.

*Multiple answers were possible

**Figures don't add up

Respondents stated that liquidity has been injected by NBE enables the bank to provide debt relief and additional loans to the customers in need as responded by 79.2% of respondents with a mean of 3.79 ± 0.725 (Table 4.8). Part of legal and liquidity reserves released by NBE helps the bank to mitigate its liquidity shortage with a mean of 3.87 ± 0.759 as stated by 78% of respondents (Table 4.8). Regarding interest on loans, 46.2% of respondents showed that the bank has made adjustments (reductions) on interest rate of loans due to the pandemic with a mean of 3.109 ± 1.075 (Table 4.8). Bankers believed that the bank encourages electronic mode of payments and online banking to prevent the spread of the pandemic as responded by 90.8% of respondents with a mean of 4.306 ± 0.710 (Table 4.8). Regarding loan re-scheduling, 72.3% of respondents stated that the bank has re-structured the loan terms of its customers due to COVID-19 pandemic with a mean of 3.109 ± 1.075 (Table 4.5). As 51.4 % of survey respondents replied with a mean of 3.509 ± 0.736 (Table 4.8), the bank has taken effective measures to alleviate the impact of COVID-19 on its operations. The bank has waived import-export related

charges and commission fees on banking services for its customers with a mean of 2.936 ± 1.089 as showed by 34.1% of respondents (Table 4.8). Concerning working capital, 70% of respondents showed that the bank has provided working capital loan for its customers due to the pandemic with a mean of 3.699 ± 0.843 (Table 4.8).

Table 4. 7 Summary of responses regarding measures taken by banks in response to the pandemic (ii)

Statements	N = 173			
	Mean	Std. Deviation	Min	Max
Liquidity has been injected by NBE enables the bank to provide debt relief and additional loans to the customers in need.	3.792	0.725	1	5
Part of legal and liquidity reserves released by NBE helps the bank to mitigate its liquidity shortage.	3.872	0.759	1	5
The bank has made adjustments (reductions) on interest rate of loans due to the pandemic.	3.109	1.075	1	5
The bank encourages electronic payments and online banking to prevent the spread of the pandemic.	4.306	0.710	1	5
The bank has re-structured the loan terms of its customers due to COVID-19 pandemic.	3.861	0.787	1	5
The bank has taken effective measures to alleviate the impact of COVID-19 on its operations.	3.509	0.736	1	5
The bank has waived import-export related charges and commission fees on banking services for its customers.	2.936	1.089	1	5
The bank has provided working capital loan for its customers due to the pandemic.	3.699	0.843	1	5

Source: Survey outcomes and own computation

Responses and lessons from international experiences: Concerned to experiences from abroad (other countries) to mitigate the challenges of the pandemic on the banking operations, the survey result showed that re-structuring loan terms (31.21% of respondents) (Table 4.9), increased used of e-banking services including ATM, POS, mobile banking and internet banking services

(28.32% of respondents) (Table 4.9), giving working capital loan to its customers (31.79% of respondents) (Table 4.9).

Table 4. 8 Summary of responses regarding lessons from international experiences (i)

Lessons learnt	Frequency	Percent
Restructuring loan terms	54	31.21
Increased used of e-banking (increasing the number of ATM, POS, mobile banking and internet banking services.)	49	28.32
Provision of working capital loan for its customers.	55	31.79

Source: survey outcomes and own computations.

*Multiple answers were possible

**Figures don't add up

As 74.6% of survey respondents replied with a mean of 3.168 ± 0.514 , the bank has learnt lessons from other countries that help to facilitate its operations during COVID-19 pandemic (Table 4.10). Further out of total number of respondents, 37.6% of respondents with a mean of 2.959 ± 0.824 stated that the bank has used international experiences effectively to mitigate impacts of the pandemic on its operations (Table 4.10).

Table 4. 9 Summary of responses regarding lessons from international experiences (ii)

Statements	N = 173			
	Mean	Std. Deviation	Min	Max
The bank has learnt lessons from other countries that help to facilitate its operations during COVID-19 pandemic.	3.168	0.514	1	4
The bank has used international experiences effectively to mitigate impacts of the pandemic on its operations.	2.959	0.824	1	4

Source: Survey outcomes and own computation

4.3. Discussions

The analysis section addresses the influence and challenges of COVID-19 on commercial banking operations and measures taken by banks in response to the pandemic as well as lessons from international experiences in dealing with the influences and challenges of the pandemic in the industry.

Influences and challenges of COVID-19 on commercial banking operations: Regarding the influences and challenges of the pandemic on the banking operations, the survey results in (Table 4.5 and 4.6), in-depth interview and document review results in (section 4.2.1) showed that the pandemic affected main banking operations such as: deposit mobilizations, loan disbursement and collection, foreign currency through export and remittance, delay of payments of foreign transactions. The outcome is as expected and in line with previous research. Mersha and Worku (2020) the Ethiopian banking sector has been enjoying tremendous growth before the pandemic; but currently, COVID-19 has started showing its effect on every banking service including: deposit mobilization, credit management and international banking. Demirguc-Kunt et al. (2020) crisis and the counter-cyclical expected lending role of banks has put banking systems under great strain, with bank stocks outperforming domestic markets and non-bank financial firms. However, as the pandemic spread, banks were compelled to encourage their customers to use e-banking services, resulting in a rise in e-banking users. Eyob and Yalem work (2020) stated that e-service quality dimensions are significant forerunner to customer satisfaction. COVID-19 may further accelerate migration to digital channels and connectivity (Baret et al., 2020). The results of the survey in (Table 4.6) also showed that the banking sector faced liquidity problems in meeting short-term needs, as well as a foreign exchange shortage due to movement restrictions. Banks' income from various banking service charges decreased, while their expenses rose, as a result of the decline in foreign currency through export and remittance. In addition, banks incurred unanticipated expenses such as staff transportation, hygiene-related purchases, and social responsibility as documentary review and in-depth interview results indicated in (section 4.2.1). According to IMF (2020) due to COVID-19 pandemic, commercial banks face financial and operational challenges. The financial challenge is addressing and overcoming (alleviating) asset value declines or liquidity issues, while the operational challenge is addressing the risk of failure of resources such as staff, systems, technology, equipment, and knowledge to provide the banks' intended services. According to Lelissa (2020) revealed that the COVID-19 pandemic has an impact on banks' balance sheet and profit-loss statement. Geda (2020) the demand for hotels and restaurants, transport and tourism has contracted significantly due to the pandemic. Tawiah & Keefe (2020) the COVID-19 pandemic has had an adverse effect on corporate investment

activities. Customers are likely to seek financial assistance, and federal bank regulators in the United States are encouraging banks to assist them (Melamedov, 2020).

Operational measures taken by commercial banks in response to the pandemic: Concerning operational measures taken by Ethiopian commercial banking industry, the survey results in (Table 4.7 and 4.8), in-depth interview and document analysis results in (section 4.2.1) indicated that Ethiopian commercial banks take different operational measures in response to COVID-19 pandemic to mitigate its effect such as re-structuring of loan terms, waiving commissions or charges on ATM and related services, promoting and encouraging e-banking including increasing the number of ATM, POS, mobile banking and internet banking services, reduction of interest rate on loans and advances and providing working capital loan based on the extent of the businesses affected by the pandemic. Lelissa (2020) comprehensive financial sector re-structuring plans are needed to shorten the recovery practice after the pandemic and Intensify banking services by improving credit flow to micro and small businesses, product marketing, technology upgrades, and focusing on priority economic sectors. Mersha and Worku (2020) banks should focus on re-assessing the risk profiles of their borrowers affected by the pandemic as high and low risk; and they need to search new banking products that will fit the current situation and enhance their deposit and liquidity measures. According to the study's findings, the governor (NBE) also has responded to the pandemic by injecting liquidity and temporarily suspending Article 6.1.6 and Article 8.2 of Asset Classification and Provisioning Directive No. SSB/69/2018 as well as the quarterly supervisory ranking of each individual bank, with the exception of submitting information to banks for their knowledge without the need for ratification steps. IMF (2020) Central Bank liquidity provision and targeted re-lending facilities for funding-affected firms can help ensure that credit provision continues, while policy rate cuts and asset purchases can limit the rise in cost of borrowing.

Experiences from other countries in response to COVID-19 outbreak: Regarding experiences from other countries in response to COVID-19 outbreak, the survey results in (Table 4.9 and 4.10) showed that banks shared experiences in response to the outbreak of the pandemic concerned to e-banking, loan r-scheduling and working capital loan and also in-depth interview results in (Section 4.2.1) indicated that banks have shared certain experiences from other

countries concerning banking operations such as e-banking, personal hygiene keeping and sanitization of office equipment. According to Kumar and Shah (2020) Easypaisa, one of Pakistan's most popular mobile money platforms, reported a 35% increase in new customers, a 17% increase in daily transactions, and 185% increase in bank transfers through mobile wallets during the lockdown. Concerning physical cash handling, countries take different measures. According to Auer, Cornelli and Frost (2020) the Bank of Korea and the People's Bank of China have gone so far as to sterilize currency notes before circulating them in the economy, while Kuwait and Hungary's central banks have put newly printed notes on hold for two weeks (Auer, Cornelli and Frost, 2020). According to Carboni and Bester (2020) fees for mobile money transfers, transfers between bank accounts and mobile wallets, and service charges for mobile banking have all been waived by the National Bank of Rwanda. The bank has also extended the limit on individual mobile money wallet transfers by 3 times before.

4.4. Conclusions

The chapter has presented the results and analysis of the study along with the presentation of research objective and questions. In the first section, research objective and questions were presented to connect them with the results of the study. The second section has presented the results of the document analysis, in-depth interview and survey respectively. The discussion of the study's findings was discussed in the third section of the chapter.

The results obtained through these three instruments were employed to assess operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia. The findings of all data collection methods were consistent. The findings of all approaches were pooled together and analyzed simultaneously in the third section in order to address the study goal and questions.

In the third section, the results of all methods were combined by pooling them together and analyzed concurrently in order to address the research objective and questions. The study was based on the literature examined in Chapter 2 as well as Ethiopia's socio-economic realities.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

The study's results and findings were discussed in the previous chapter. In accordance with the study's results, this chapter presents the study's conclusions and recommendations. The chapter is divided into two parts. The first part of the chapter deals with conclusions of the study whereas the second part presents some of recommendations suggested by the researcher as a solution to problems that have been identified in the study.

5.1. Conclusions

Banking industry plays a remarkable role in the financial system and the entire economy as a whole. As a key component of the financial system, banks allocate funds from savers (surplus unit) to borrowers (deficit unit) in an efficient manner. They provide advanced financial services that lower the cost of accessing knowledge about saving and borrowing options. Banking operations may be affected by different crisis in different period; but COVID-19 is a new incidence that has impact on banking as well as every aspect of human life in this century. The broad objective of this study was to assess the operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia. The study employed a sequential mixed research approach where the qualitative data was collected first and used to understand COVID-19 pandemic and banking operations in Ethiopia. The results of the qualitative aspect of the study were used to inform the quantitative approach, survey instrument design in particular. Using data obtained from different sources, the study came across with a number of key findings.

First, the study result regarding influences and challenges of COVID-19 on banking operations showed that the pandemic affected main banking operations such as deposit mobilization, foreign currency generation, loan disbursement and collection. As a result of these, incomes from interest, service charges, commissions were declined. And also banking industry has forced to

incur unplanned cost for social responsibility, hygiene and transportation facilities for their staffs.

Secondly, about operational measures taken, the study's result indicated that NBE as a governor injected liquidity and temporarily suspends specially Articles 6.1.6 and 8.2 of Asset classification and provisioning Directive No. SBB/69/2018. And also temporarily suspends undertaking of quarterly supervisory rating on each individual bank except sending of the information to banks for their knowledge without necessarily requiring taking of rectification measures only for those borrowers affected by the impact of COVID-19 for three months from April 01 up to June 30, 2020. And commercial banks have taken a sort of measures such as: loan re-structuring (re-scheduling), facilitating working capital loan, lowering interest rate, waiving charges and commissions from banking services for those highly affected borrowers by the pandemic, encouraging and promoting e-banking usage.

Thirdly, about the international experiences learned in response to the pandemic, the findings of the study showed that the banking industry learned experiences from other countries such in response to the pandemic including e-banking services, working capital loan facility, personal hygiene keeping and sanitization of office equipment.

5.2. Recommendations

Thus, from the findings of the study, some sort of recommendations that are suggested as a solution to mitigate the influences and challenges that Ethiopian commercial banking industry faces due to the COVID-19 pandemic presented as follows.

- ✚ Commercial banks should take measures to support exporters and importers by lowering LC opening, extension, conciliation and other related charges. This helps exporters and importers by giving flexibility to negotiate future export and import contracts with buyers and sellers abroad; and also banks should focus on generating foreign currency by promoting export-oriented platforms and encouraging remittances.
- ✚ E-banking services should be given special consideration by commercial banks, as they enable customers to make payments for a variety of purposes without having to visit the bank or handle physical cash. As a result, the commercial banking sector should

concentrate on various types of e-banking services as much as possible, particularly in this time.

- ✚ Commercial banks should rise saving interest rates to attract depositors. This encourages depositors, while also helping banks to solve their liquidity problems.
- ✚ Commercial banks should incorporate countries experiences regarding measures taken in response to COVID-19 pandemic include arranging conditions for employees who are able to work remotely (at home) and digitalization of banking system.
- ✚ Commercial banks should provide advisory services to their customers who are struggling to recover from the impacts of the pandemic; as the pandemic is a new occurrence, special professional assistance should be needed.

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Appendix -1 Survey instrument

Addis Ababa University

Collage of Business and Economics

Department of Accounting and Finance

Dear Participant:

The title of this thesis is Operations of Ethiopian Commercial Banks during COVID-19 Pandemic: Responses and Lessons from International Experiences. The name of the researcher is Mesay Alemayehu who is currently an MSc in Accounting and Finance student at the College of Business and Economics of the Addis Ababa University.

The aim of this project is to assess the operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences (focusing on commercial banks) in Ethiopia. This questionnaire is prepared to supplement the data obtained from other sources.

This survey questionnaire is being distributed to get relevant information from respondents and participation is totally voluntary. The investigator respectfully requests your kind cooperation in answering the whole question as frankly as possible and your response will be recorded anonymously and strict confidentiality will be maintained.

For further information, please contact the researcher using the following address:

Tel.: +251-913-90-58-69

E-mail: mesayinfo@gmail.com

Part-I: Demographic information

Gender

Male 1 Female 2

Age

Less than 25 Years 1, 36-45 Years 3, 56 Years and above 5,

26-35 Years 2, 46-55Years 4

1. Your job position

Senior bank officer 1, Director 3

Manager 2, Others 4 please specify: _____

2. Experience in your position

Less than 5 Years 1, 10-15 Years 3

5-10 Years 2, Greater than 15 Years 4

3. Level of education

College diploma 1, Masters 3, Others 5 please specify: _____

First degree 2 PhD 4,

4. Educational background

Accounting and finance 1, Banking and finance 3, Management 5

Business administration 2, Economics 4 Others 6 please specify: _____

PART- II: Measures taken by banks in order to respond to the COVID-19 pandemic in Ethiopia

5. What are the measures your bank has taken in response to the outbreak of COVID-19 pandemic in Ethiopia? (multiple answers are possible)	
Restructuring loan terms	<input type="checkbox"/> 1
Waiving commission or charge on ATM services	<input type="checkbox"/> 2
Waiving Import-export and related charges	<input type="checkbox"/> 3
Waiving overdraft fees	<input type="checkbox"/> 4
Increased used of e-banking (increasing the number of ATM, POS, mobile banking and internet banking services.)	<input type="checkbox"/>
Reduction of interest rate on loans and advances based on the extent of the businesses affected by the pandemic.	<input type="checkbox"/> 6
Increase of interest rate on deposits of customers.	<input type="checkbox"/> 7
Provision of working capital loan for its customers.	<input type="checkbox"/> 8
Others,	<input type="checkbox"/> 9

Please specify:	
6. From COVID 19 response measures taken by your bank, which were learnt from other countries' experiences? (multiple answers are possible)	
Restructuring loan terms	<input type="checkbox"/> 1
Waiving commission or charge on ATM services	<input type="checkbox"/> 2
Waiving Import-export and related charges	<input type="checkbox"/> 3
Waiving overdraft fees	<input type="checkbox"/> 4
Increased used of e-banking (increasing the number of ATM, POS, mobile banking and internet banking services.)	<input type="checkbox"/>
Reduction of interest rate on loans and advances based on the extent of the businesses affected by the pandemic.	<input type="checkbox"/> 6
Increase of interest rate on deposits of customers.	<input type="checkbox"/> 7
Provision of working capital loan for its customers.	<input type="checkbox"/> 8
Others, Please specify:	<input type="checkbox"/> 9

PART-III: To assess the operations of banking sector during COVID-19 pandemic: responses and lessons from international experiences, Please complete the questionnaire by putting a thick mark (✓) to show your level of agreement in the box provided in front of each statement below.

No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
9.	The pandemic has no impact on the bank's operations at all.					
10.	The influence of the COVID-19 pandemic on the bank's operations is high.					
11.	The bank could not give its services properly due to the pandemic.					

12.	The bank has faced liquidity problem to settle its short-term needs due to COVID-19 pandemic.					
13.	COVID-19 affects our bank's deposit requirement plan.					
14.	The pandemic has affected loan disbursement of the bank.					
15.	The pandemic has affected the loan collection of the bank.					
16.	There is delay of payments for traders in international transactions due to the pandemic.					
17.	The bank has got shortage of foreign exchange due to the pandemic.					
18.	Due to the pandemic foreign currency generated through export, remittance and other source has not met the bank's plan.					
19.	Commission, interest and other incomes of the bank have declined due to the pandemic.					
20.	The expenses of the bank were increased due to COVID-19 pandemic.					
21.	The bank has incurred high cost to implement E-banking services: such ICT equipment's, networking and software development due to COVID-19.					
22.	Most of projects (loans) financed by the bank would lead to default and NPL due to the pandemic.					
23.	Liquidity has been injected by NBE enables the bank to provide debt relief and additional loans to the customers in need.					
24.	Part of legal and liquidity reserves released by NBE helps the bank to mitigate its liquidity shortage.					

25.	The bank has made adjustments (reductions) on interest rate of loans due to the pandemic.					
26.	The bank encourages electronic payments and online banking to prevent the spread of the pandemic.					
27.	The bank has re-structured the loan terms of its customers due to COVID-19 pandemic.					
28.	The bank has taken effective measures to alleviate the impact of COVID-19 on its operations.					
29.	The bank has waived import-export related charges and commission fees on banking services for its customers.					
30.	The bank has provided working capital loan for its customers due to the pandemic.					
31.	COVID-19 pandemic creates more opportunity for the bank to promote (introduce) electronic (digital) banking systems.					
32.	The bank has learnt lessons from other countries that help to facilitate its operations during COVID-19 pandemic.					
33.	The bank has used international experiences effectively to mitigate impacts of the pandemic on its operations.					

PART-IV:

34. Do you have any ideas, opinions and suggestions related to bank operations and COVID-19 pandemic that have not been addressed in the questions above? Please state here.

Appendix -2 In-depth interview instrument

1. Do you think COVID-19 pandemic has impact on your bank's operations? Explain please,
2. Which types of banking operations highly affected by the pandemic? Why?
3. Did the bank face liquidity problem due to COVID-19 pandemic? What measures have been taken to solve it?
4. Did the bank introduce new banking services considering COVID-19 pandemic? Explain please,
5. What international experience the bank learnt from to mitigate the impact of the pandemic? How these experiences used?
6. What kind of technological tools introduced in your bank to mitigate the impacts on banking operations? Are these effective? How?
7. What self-help measures has your bank taken to facilitate its operations so far?
8. Do you think policy measures taken by NBE are appropriate to solve influences on the bank due to the pandemic? How?
9. What kind of policy responses do you expect from the NBE (Regulatory bodies) will put in to place to help your bank to overcome the difficulties due to the pandemic?
10. How these policy measures help the bank to overcome difficulties that the bank faced due to the pandemic or not?
11. Please, explain the COVID-19 effect on your bank's deposit mobilization requirements.
12. What is the effect of the pandemic on the bank's loan disbursements and collections?
13. What kind of solutions do you recommend to manage the impacts of the pandemic on operations of banking?

Appendix-3 Descriptive statistics

Statement	N	Mean	Std. Deviation
The pandemic has no impact on the bank's operations at all.	173	1.7283	.84300
The influence of the COVID-19 pandemic on the bank's operations is high.	173	3.9595	.89805
The bank could not give its services properly due to the pandemic.	173	3.0000	1.00580
The bank has faced liquidity problem to settle its short- term needs due to COVID-19 pandemic.	173	3.4740	.77434
COVID-19 affects our bank's deposit requirement plan.	173	3.5780	1.00057
The pandemic has affected loan disbursement of the bank.	173	3.8671	.79219
The pandemic has affected the loan collection of the bank.	173	4.2197	.74574
There is delay of payments for traders in international transactions due to the pandemic.	173	4.2197	.82000
The bank has got shortage of foreign exchange due to the pandemic.	173	4.1329	.69022
Due to the pandemic foreign currency generated through export, remittance and other source has not met the bank's plan.	173	4.1329	.68175
Commission, interest and other incomes of the bank have declined due to the pandemic.	173	3.7977	.84880
The expenses of the bank were increased due to COVID-19 pandemic.	173	3.5954	.64554
The bank has incurred high cost to implement E-banking services: such ICT equipment's, networking and software development due to COVID-19.	173	2.6185	.49896
Most of projects (loans) financed by the bank would lead to default and NPL due to the pandemic.	173	2.4335	.73328
Liquidity has been injected by NBE enables the bank to provide debt relief and additional loans to the customers in need.	173	3.7919	.72541
Part of legal and liquidity reserves released by NBE helps the bank to mitigate its liquidity shortage.	173	3.8728	.75945
The bank has made adjustments (reductions) on interest rate of loans due to the pandemic.	173	3.1098	1.07539
The bank encourages electronic payments and online banking to prevent the spread of the pandemic.	173	4.3064	.71024
The bank has re-structured the loan terms of its customers due to COVID-19 pandemic.	173	3.8613	.78751
The bank has taken effective measures to alleviate the impact of COVID-19 on its operations.	173	3.5087	.73626

The bank has waived import-export related charges and commission fees on banking services for its customers.	173	2.9364	1.08986
The bank has provided working capital loan for its customers due to the pandemic.	173	3.6994	.84348
COVID-19 pandemic creates more opportunity for the bank to promote (introduce) electronic (digital) banking systems.	173	4.2081	.78692
The bank has learnt lessons from other countries that help to facilitate its operations during COVID-19 pandemic.	173	3.1618	.51415
The bank has used international experiences effectively to mitigate impacts of the pandemic on its operations.	173	2.9595	.82376

The influence of the COVID-19 pandemic on the bank's operations is high.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	2.3	2.3	2.3
Disagree	10	5.8	5.8	8.1
Neutral	19	11.0	11.0	19.1
Agree	96	55.5	55.5	74.6
Strongly Agree	44	25.4	25.4	100.0
Total	173	100.0	100.0	

The bank could not give its services properly due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	17	9.8	9.8	9.8
Disagree	30	17.3	17.3	27.2
Neutral	68	39.3	39.3	66.5
Agree	52	30.1	30.1	96.5
Strongly Agree	6	3.5	3.5	100.0
Total	173	100.0	100.0	

The bank has faced liquidity problem to settle its short- term needs due to COVID-19 pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	11	6.4	6.4	8.1
Neutral	70	40.5	40.5	48.6
Agree	79	45.7	45.7	94.2
Strongly Agree	10	5.8	5.8	100.0
Total	173	100.0	100.0	

COVID-19 affects our bank's deposit requirement plan.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	42	24.3	24.3	24.3
Neutral	12	6.9	6.9	31.2
Agree	96	55.5	55.5	86.7
Strongly Agree	23	13.3	13.3	100.0
Total	173	100.0	100.0	

The pandemic has affected loan disbursement of the bank.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	9	5.2	5.2	5.2
Neutral	40	23.1	23.1	28.3
Agree	89	51.4	51.4	79.8
Strongly Agree	35	20.2	20.2	100.0
Total	173	100.0	100.0	

The pandemic has affected the loan collection of the bank.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	2	1.2	1.2	1.2
Disagree	4	2.3	2.3	3.5

Neutral	9	5.2	5.2	8.7
Agree	97	56.1	56.1	64.7
Strongly Agree	61	35.3	35.3	100.0
Total	173	100.0	100.0	

There is delay of payments for traders in international transactions due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	11	6.4	6.4	6.4
Neutral	10	5.8	5.8	12.1
Valid Agree	82	47.4	47.4	59.5
Strongly Agree	70	40.5	40.5	100.0
Total	173	100.0	100.0	

The bank has got shortage of foreign exchange due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	8	4.6	4.6	4.6
Neutral	7	4.0	4.0	8.7
Valid Agree	112	64.7	64.7	73.4
Strongly Agree	46	26.6	26.6	100.0
Total	173	100.0	100.0	

Due to the pandemic foreign currency generated through export, remittance and other source has not met the bank's plan.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	6	3.5	3.5	3.5
Neutral	12	6.9	6.9	10.4
Valid Agree	108	62.4	62.4	72.8
Strongly Agree	47	27.2	27.2	100.0
Total	173	100.0	100.0	

Commission, interest and other incomes of the bank have declined due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
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	Disagree	11	6.4	6.4	6.4
	Neutral	50	28.9	28.9	35.3
Valid	Agree	75	43.4	43.4	78.6
	Strongly Agree	37	21.4	21.4	100.0
	Total	173	100.0	100.0	

The expenses of the bank were increased due to COVID-19 pandemic.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Disagree	6	3.5	3.5	3.5
	Neutral	67	38.7	38.7	42.2
Valid	Agree	91	52.6	52.6	94.8
	Strongly Agree	9	5.2	5.2	100.0
	Total	173	100.0	100.0	

The bank has incurred high cost to implement E-banking services: such ICT equipment's, networking and software development due to COVID-19.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	1	.6	.6	.6
Valid	Disagree	64	37.0	37.0	37.6
	Neutral	108	62.4	62.4	100.0
	Total	173	100.0	100.0	

Most of projects (loans) financed by the bank would lead to default and NPL due to the pandemic.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	25	14.5	14.5	14.5
Valid	Disagree	48	27.7	27.7	42.2
	Neutral	100	57.8	57.8	100.0

Total	173	100.0	100.0
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Liquidity has been injected by NBE enables the bank to provide debt relief and additional loans to the customers in need.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	8	4.6	4.6	6.4
Valid Neutral	25	14.5	14.5	20.8
Agree	123	71.1	71.1	91.9
Strongly Agree	14	8.1	8.1	100.0
Total	173	100.0	100.0	

Part of legal and liquidity reserves released by NBE helps the bank to mitigate its liquidity shortage.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	2	1.2	1.2	1.2
Disagree	7	4.0	4.0	5.2
Valid Neutral	29	16.8	16.8	22.0
Agree	108	62.4	62.4	84.4
Strongly Agree	27	15.6	15.6	100.0
Total	173	100.0	100.0	

The bank has made adjustments (reductions) on interest rate of loans due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	6	3.5	3.5	3.5
Disagree	61	35.3	35.3	38.7
Valid Neutral	26	15.0	15.0	53.8
Agree	68	39.3	39.3	93.1
Strongly Agree	12	6.9	6.9	100.0
Total	173	100.0	100.0	

The bank encourages electronic payments and online banking to prevent the spread of the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	1	.6	.6	.6
Disagree	2	1.2	1.2	1.7
Neutral	13	7.5	7.5	9.2
Agree	84	48.6	48.6	57.8
Strongly Agree	73	42.2	42.2	100.0
Total	173	100.0	100.0	

The bank has re-structured the loan terms of its customers due to COVID-19 pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	2	1.2	1.2	2.9
Neutral	43	24.9	24.9	27.7
Agree	93	53.8	53.8	81.5
Strongly Agree	32	18.5	18.5	100.0
Total	173	100.0	100.0	

The bank has taken effective measures to alleviate the impact of COVID-19 on its operations.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	1	.6	.6	2.3
Neutral	89	51.4	51.4	53.8
Agree	65	37.6	37.6	91.3
Strongly Agree	15	8.7	8.7	100.0
Total	173	100.0	100.0	

The bank has waived import-export related charges and commission fees on banking services for its customers.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	22	12.7	12.7	12.7

Disagree	34	19.7	19.7	32.4
Neutral	58	33.5	33.5	65.9
Agree	51	29.5	29.5	95.4
Strongly Agree	8	4.6	4.6	100.0
Total	173	100.0	100.0	

The bank has provided working capital loan for its customers due to the pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	14	8.1	8.1	9.8
Neutral	35	20.2	20.2	30.1
Valid Agree	101	58.4	58.4	88.4
Strongly Agree	20	11.6	11.6	100.0
Total	173	100.0	100.0	

COVID-19 pandemic creates more opportunity for the bank to promote (introduce) electronic (digital) banking systems.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	5	2.9	2.9	2.9
Neutral	24	13.9	13.9	16.8
Valid Agree	74	42.8	42.8	59.5
Strongly Agree	70	40.5	40.5	100.0
Total	173	100.0	100.0	

The bank has learnt lessons from other countries that help to facilitate its operations during COVID-19 pandemic.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	2	1.2	1.2	1.2
Disagree	5	2.9	2.9	4.0
Valid Neutral	129	74.6	74.6	78.6
Agree	37	21.4	21.4	100.0
Total	173	100.0	100.0	

The bank has used international experiences effectively to mitigate impacts of the pandemic on its operations.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	3	1.7	1.7	1.7
Disagree	53	30.6	30.6	32.4
Valid Neutral	65	37.6	37.6	69.9
Agree	52	30.1	30.1	100.0
Total	173	100.0	100.0	