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School of Commerce

Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks

By Kidist Berihu

A THESIS SUBMITTED TO THE SCHOOL OF COMMERCE OF ADDIS
ABABA UNIVERSITY IN FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF MSc IN CORPORATE FINANCE WITH SPECIALTY IN
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Addis Ababa, Ethiopia

Thesis Submission Approval Form

This is to certify that the thesis entitled “**Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks**” submitted to Addis Ababa University, school of commerce, for the Masters of Science in corporate finance with specialty in investment management it is an original work that has been carried out by **Kidist Beri** under my guidance and supervision.

Advisor Dr. Dakito Alemu



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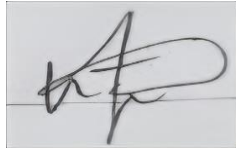
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This is to certify that Kidist Berihu has carried out a thesis on the topic entitled “Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks” in partial fulfillment of the requirements of the MSc degree in Corporate Finance with specialty in Investment Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Examiners



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Declaration

I, Kidist Berihu Gebretsadik have carried out independently a research work on “Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks” in fulfilment of the requirement of Master of Science on Corporate Finance with Specialty in Investment Management with guidance and support of my research advisor, Dr. Dakito Alemu. This study is an original work and was not submitted earlier for any degree either at this university or any other university. It complies with the regulation of the university and meets the accepted standards with respect to originality and quality.

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Abstract

This study explores the absence of Anti-Money Laundering (AML) regulation for cryptocurrency transactions in Ethiopia and how it affects the banking sector. With the widespread international use of online currency, Ethiopia maintains a legal ban on cryptocurrency trading, resulting in a significant regulatory gap. This lack of a clearly defined AML system limits banks from establishing relationships with or responding to growing uses of cryptocurrencies. It also subjects the financial system to possible dangers such as money laundering, fraud, and regulatory risk, yet restricts institutions from being in a position to have the potential benefits of cryptocurrency such as greater financial inclusion, reduced remittance cost, and digital cross-border payments. To study these research, a mixed-methods approach was employed. Primary data were collected through questionnaires distributed to 45 professionals from banking, regulatory experts, fintech and academia and were analyzed using descriptive statistics. Thematic analysis of in-depth interviews with major stakeholders was conducted with 6 professionals from regulatory, banking and fintech. Results showed that Ethiopian banks are constrained by inflexible legal frameworks, lack of appropriate technology capabilities, and institutional uncertainty with regard to crypto-related AML compliance. However, participants recognized the potential of blockchain and digital assets to transform financial services if properly regulated. The study concludes that Ethiopia's present regulatory approach toward cryptocurrencies restricts both innovative processes and risk control methods. The study recommends that Ethiopia should change its prohibition stance by implementing an organized regulatory framework which can adapt to new developments. Through improvements in institutional frameworks and technology integration with fintech advancements Ethiopia can establish an advanced banking system which is both inclusive and secure and forward-thinking.

Keywords: *Anti-Money Laundering, Cryptocurrency, Blockchain, Financial Regulation, Ethiopian Banks, Compliance, Digital Assets*

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CHAPTER ONE

INTRODUCTION

1.1. Background of the study

The sudden growth in financial technologies has revolutionized the finance system globally, bringing with it opportunities as well as threats. Cryptocurrencies, in particular, have been a phenomenon, transforming traditional banking operations as well as cross-border payments. Since the virtual currencies operate outside the jurisdictional boundaries, the virtual currencies pose the issue of AML. The anonymity and decentralized nature of cryptocurrencies make them attractive for illicit financial activities, necessitating robust AML regulations (Albrecht, C., Duffin, K.M., Hawkins, S., & Rocha, V. (2019)).

Cryptocurrencies revolutionized the financial industry by introducing a new, decentralized alternative to the traditional banking mechanism. Security and openness are assured by blockchain technology supporting the currencies through irrevocable transaction records (Nakamoto, 2008). New monetary opportunity in terms of cross-border payments, diversification of investments, and finance access is provided by the currencies (Tapscott & Tapscott, 2016). Decentralized nature and the fact that there is no centralized entity, though, imply new potential risks in the form of finance crime and security flaws are attached to the new potential.

Various nation-states have taken differing methods to monitor cryptocurrency payments and prevent the concomitant money laundering threats. The European Union, by way of the Fifth Anti-Money Laundering Directive (5AMLD), has extended AML to cryptocurrency exchange services and wallet providers to ensure more openness and to prevent criminal exploitation (European Commission, 2020). Cryptocurrency entities in the United States must comply with Bank Secrecy Act regulation, including customer due diligence and reporting on suspicious activity, under the requirements imposed by FinCEN (FinCEN, 2021).

Asian countries have also made important progress. In order to ensure compliance with AML regulations, Japan, one of the first countries to legally recognize cryptocurrencies, mandates that exchanges register with the Financial Services Agency (Houben & Snyers, 2018). China, on the

other hand, has a stringent prohibition on mining and trading cryptocurrencies, which reflects a cautious regulatory approach meant to reduce financial crimes.

South Africa and Nigeria are setting the standard for cryptocurrency regulation in Africa. Guidelines for regulating digital assets with a focus on AML compliance have been established by the Financial Sector Conduct Authority (FSCA) of South Africa (FSCA, 2021). Nigeria has implemented a central bank digital currency (eNaira) to utilize blockchain technology under regulatory supervision, even though cryptocurrency transactions in banks are prohibited (Adedipe, B. 2022).

Nigeria originally banned banks from transacting in crypto, but reversed course in 2023 in order to make it available under regulation by Central Bank- and Securities and Exchange Commission licensed virtual asset service providers. (Adedipe, B. 2022) Kenya has taken the middle path, not legalizing, but not banning, crypto, but allowing it and fostering innovation through regulatory sandboxes. Ethiopia remains stuck on prohibition under an outright ban, but Nigeria and Kenya are moving towards embracing regulation in the form of pro-innovation and pro-regulation. (UNDP, 2023)

Ethiopia currently remains in a regulatory gray area. National Bank of Ethiopia prohibitions on cryptocurrency trading under the Proclamation No. 1359/2025. (NBE, 2025) This is due to concerns on monetary stability as well as illegal operations. In spite of the prohibition, cryptocurrency deals continue through unofficial outlets, creating issues on likely monetary crime threats as well as lack of regulation (Girma, 2021). The absence of a formal regulatory framework leaves Ethiopian banks uncertain about how to address cryptocurrency-related financial activities, making it critical to assess both the opportunities and barriers of AML regulations in this context.

1.2. Statement of the Problem

The global rise of cryptocurrency trade has highlighted its potential benefits, including financial inclusion and lower remittance costs. However, in Ethiopia, the absence of a regulatory framework for cryptocurrencies is compounded by the fact that cryptocurrency trading is explicitly banned. This prohibition creates a unique challenge for the financial sector, as it leaves banks in an

uncertain position unable to engage with cryptocurrencies legally, yet facing the risks associated with their illicit use.

The monetary system in Ethiopia is tightly controlled, and online payments are tightly regulated by the National Bank of Ethiopia. Consequently, cryptocurrency exchange has been forbidden, and a gap in regulation that bars financial institutions from transacting with online assets exists (Girma, 2021). This regulatory void presents two key challenges:

Missed Opportunities

One of the major missed opportunities due to the prohibition on the trade in currencies has been the inability to use the currencies to reduce the high cost of remittances. Traditional remittances are always costly, which could be significantly reduced through the use of cryptocurrencies (Nakamoto, 2008). Remittances to Ethiopia are significant, which form an essential source of the economy. Traditional remittance channels, on the other hand, are costly, with the average transfer fee ranging between 7% and 10% (Samuel, 2021). Cryptocurrencies would be a low-cost cross-border payment option, which reduces the burden on the families in Ethiopia who rely on the remittances.

Another principal opportunity lies in financial inclusion. Ethiopia has a vast unbanked population, and over 65% of adults do not have any access to the formal financial system (Tsega, 2018). Cryptocurrency presents the solution through the ability to make peer-to-peer transfers that do not need the physical assets of banks. This has the power to stimulate economic inclusion for millions of Ethiopians outside the conventional financial system.

Financial & Security Risks

While the economic advantage exists, the unregulated nature of the currencies poses significant financial as well as security threats. One of the major concerns is the money laundering and other illegal financial operations. Due to the privacy nature of the cryptocurrency, the criminals are able to utilize the assets to launder money, evade taxation, as well as finance terrorism. According to Girma (2021), the financial institutions, including the Financial Intelligence Center (FIC), in Ethiopia lack adequate control over the cryptocurrency operations, and it becomes difficult to trace suspicious financial transfers.

Moreover, the currency volatility poses danger for investors as well as businesses. For example, Bitcoin has witnessed price fluctuation more than 30% within a month during the year 2021 (Berhe, 2023). The currency volatility renders the currency inappropriate for safe planning as well as investment in the economy of Ethiopia.

Additionally, fraud and cyber threats are ever-present risks. In the absence of consumer protection, the Ethiopian investors are exposed to fraud and hacking. There have been cases of the use of Initial Coin Offering (ICO) and Ponzi schemes that result in huge financial losses (Tsega, 2018). In the absence of a strong regulatory framework, the citizens and financial institutions in Ethiopia are more exposed when they deal with cryptocurrencies.

Having no AML framework for cryptocurrency trading in Ethiopia is a two-sided coin: depriving the nation of the chance to exploit economic opportunities as well as vulnerability to financial crime and security threats. The lack of an AML regulatory framework not only blocks Ethiopian banks from engaging with cryptocurrency but also leaves the sector vulnerable to untraceable financial crimes a dual challenge absents from current Ethiopian policy discourse.

1.3. Research Questions

The research questions guided the investigation based on the general and specific objectives outlined. The following questions were designed to address key areas of the study:

1. What is the current status of cryptocurrency trade in Ethiopia, and what legal barriers exist to its regulation?
2. What are the key opportunities that AML-compliant cryptocurrency trade could offer to Ethiopian banks?
3. What regulatory challenges do Ethiopian banks will face in implementing AML measures for cryptocurrency transactions?
4. What are the potential risks of cryptocurrency trade to the security of Ethiopia's financial system?

1.4. Objectives of the study

1.4.1. General Objective

The general objective of this study was to analyze the potential opportunities and barriers for Ethiopian banks in the formulation of Anti-Money Laundering (AML) regulations for cryptocurrency trade.

1.4.2. Specific Objective

1. To assess the current status of cryptocurrency trade in Ethiopia and identify legal barriers to its regulation.
2. To identify the key opportunities that AML-compliant cryptocurrency trade could offer to Ethiopian banks.
3. To examine the regulatory challenges Ethiopian banks will face in implementing AML measures for cryptocurrency transactions.
4. To evaluate the potential risks associated with cryptocurrency trade on the security of Ethiopia's financial system.

1.5. Significance of the study

This study is significant in several ways:

Policy Contribution - The research provides valuable information into building an effective AML regulation for Ethiopia's emerging cryptocurrency sector. Through the identification of legal barriers and imitation of international good practice, the research seeks to assist policymakers and regulators in the assertion of effective, good regulation to enable innovation while ensuring financial safety.

Guidance to the Financial Sector - To banks in Ethiopia, who are not yet involved in cryptocurrency trading due to prohibition and regulatory uncertainty, this study outlines potential benefits to AML-compliant cryptocurrency trading such as wider financial inclusion, faster cross-border payments, and alternative revenue streams. The study allows banking institutions to prepare in advance when cryptocurrency trading is regulated and accepted.

Academic Contribution - The research contributes as an academic literature on cryptocurrency regulation and AML measures, particularly within emerging economies like Ethiopia. It offers a new perspective on the intersection of financial regulation, technology adoption, and banking sector strategy in sub-Saharan Africa a region where cryptocurrency adoption is growing despite regulatory challenges. This study may serve as a reference point for future researchers investigating the complexities of AML frameworks in developing financial ecosystems.

1.6. Scope of the study

This study focused on the legal framework of doing trade with cryptocurrencies in Ethiopia, specifically the opportunities and challenges for Ethiopian banks in the adoption of AML. The study analyzed the current legal and institutional environment, the financial sector policy environment, and their implications for banking institutions.

The geographical scope of the research was limited to Addis Ababa, the capital city of Ethiopia, limited to certain commercial banks and the NBE, being the most prominent regulatory body. Legal and institutional issues such as the absence of clear rule-based guidance, potential financial security risks, resistance to policy implementation, and compliance challenges were examined. On the other hand, a number of potential benefits from cryptocurrency adoption were also discussed: i.e., development of new financial instruments, enhanced cross-border payment systems, and schemes emphasizing financial inclusion.

Market volatility, fraud, money laundering risks, and cybersecurity threats pertaining to the trading of cryptocurrencies was addressed. Process-wise, mixed methods was adopted using surveys, interviews, and document analysis to gather stakeholders' views on the matter banking professionals, and financial technology (fintech) experts.

1.7. Limitations of the study

Several limitations are acknowledged in this study:

Lack of Regulatory Framework: Since cryptocurrency trade is not yet legalized or formally regulated in Ethiopia, obtaining direct data and practical examples from the banking sector regarding cryptocurrency adoption and trading was challenging.

Limited Access to Data: The shortage of detailed local reports and studies on cryptocurrency use and trade in Ethiopia has limited the data availability concerning trends and practices.

Allied Regulatory Landscape: Given the dynamic nature of cryptocurrency laws globally and locally, there was a risk that some conclusions might be affected by subsequent policy shifts.

Stakeholder Dialogue: As cryptocurrency is still emerging in Ethiopia, some stakeholders were reluctant to participate, potentially limiting the diversity of perspectives obtained.

1.8. Organization of the study

The paper is organized into five chapters, the first chapter deals with introduction of the study under which consists of the background of the study, statement of the problem, research questions, objectives of the study, significance of the study, scope of the study, and limitations is discussed in detail. The second chapter dealt with a literature review, which consisted of both theoretical and empirical reviews of related literature. The third chapter presented the methodology used for the research, covering the research design, sample size, data collection tools, and methods employed for analysis. In chapter four, the results and discussions were presented. Chapter five addressed the conclusions, and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Review

This section will focus on key theories and models that provide a foundation for understanding for the research.

2.1.1. Anti-Money Laundering (AML) Principles

Definition and Purpose of AML Regulations

Anti-Money Laundering (AML) measures are directed against preventing criminal flows of money via establishing legal environments that discourage money laundering activities. The Financial Action Task Force (FATF), a multilateral agency, has established Forty Recommendations, and they have been enforced on a large scale as global AML standards (Georgieva, 2020). Such measures seek to enhance the openness of the financial sector, shut down criminal groups' access to the banking systems, and curb risks related to financial crime (Albrecht et al., 2019).

For developing economies such as Ethiopia, the application of AML has both opportunities and challenges. Ineffective gaps in regulations, enfeeblement of enforcement mechanisms, and minimal technological capacity make effective monitoring of illicit flows ineffective (McCarthy et al., 2015). Cryptocurrencies also create another challenge because they are pseudonymous, thus making financial flows hard to track under traditional AML control.

Key Components of AML Frameworks

There are three main elements in effective AML systems:

- Know Your Customer (KYC): KYC procedures force financial institutions to verify customer identities to maintain transaction transparency. This protects against fraud and illicit financial transactions (Albrecht et al., 2019). The Leumi Bank scandal, where weak KYC controls allowed tax evasion, highlights the importance of stringent verification procedures (Kumar & Lokanan, 2022).

- **Customer Due Diligence (CDD):** The process of monitoring and verifying client funds to identify suspicious transactions is known as customer due diligence, or CDD. When dealing with high-risk clients, like politically exposed persons (PEPs) or those who trade in high-risk jurisdictions, enhanced due diligence, or EDD, is employed.
- **Suspicious Activity Reporting (SAR):** If banks notice suspicious transactions, they must notify Financial Intelligence Units (FIUs) by filing Suspicious Transaction Reports (STRs). Due to inadequate SAR enforcement, the failure to report suspicious activities led to significant money laundering cases, such as the Lebanese Canadian Bank case, which made drug money laundering possible.

Money Laundering Operations

In most cases Money laundering is a three-stage process:

Placement: Illegal funds find their way into the economy through deposits, buying, or other means.

Layering: Transactions are designed to obfuscate the origin of criminal money, e.g., by employing shell companies or cross-border transactions.

Integration: The laundered money is recycled back into circulation to appear as clean profits (Georgieva, 2020).

Cryptography avoids traditional banking channels, thus making it even harder to track illicit financial flows. It is difficult for nations like the banks of Ethiopia to impose AML procedures without blockchain examination instruments and enhanced regulatory surveillance (McCarthy et al., 2015).

The Role of Financial Institutions in Preventing Money Laundering

Financial institutions constitute the first line of defense against money laundering using AML controls and regulatory compliance measures. Their function is:

Monitoring Transactions: The banks need to monitor and identify unusual transactions, particularly foreign exchange large value transactions (Albrecht et al., 2019).

Internal AML Programs: Compliant institutions need to employ compliance officers, conduct regular audits, and establish AML training programs.

Regulatory compliance: Banks must adhere to global AML regulations, including FATF guidance and local FIU requirements.

In the absence of clearer AML standards for crypto, banks will have a hard time tracking and reporting crypto-based crime.

2.1.2. Overview of Cryptocurrency and Blockchain Technology

Definition and Characteristics of Cryptocurrency

Cryptocurrencies are digital money that facilitates peer-to-peer transactions without the necessity of depending on a central authority like governments or banks. Unlike fiat money, cryptocurrencies employ blockchain technology to offer secure, decentralized, and transparent financial transactions (Nakamoto, 2008). Initially introduced with Bitcoin in 2009, cryptocurrencies have emerged as an international finance phenomenon, influencing various sectors like cross-border payments, remittances, and financial inclusion (Antonopoulos, 2014).

The cryptocurrency industry is made up of several key actors and groups, including exchanges, wallets, payment companies, and miners. Exchanges allow users to buy, sell, and trade cryptocurrencies for either other digital assets or national currencies. Wallets provide secure storage by managing private keys, while the payments sector consists of companies that enable cryptocurrency transactions across various platforms. The mining sector plays a crucial role in confirming transactions and securing the global transaction ledger (the blockchain). Increasingly, many companies in the industry have evolved into “universal cryptocurrency platforms” by offering multiple services within one ecosystem. Wallets now frequently integrate exchange functions to make loading funds seamless, and exchanges often provide built-in wallet storage for newly acquired assets. Payment companies are also expanding into money transfer services, combining cryptocurrency storage, transfer, and currency exchange under a single interface (Aljoshia et al, 2017).

Early research on cryptographic currencies focused mainly on the cryptographic techniques required to ensure privacy and secure transactions. Initially, these systems depended on trusted third parties (TTPs) to guarantee correct operation. This reliance changed in 2009 with the launch of Bitcoin, the first fully decentralized and distributed digital currency. Bitcoin introduced Nakamoto consensus, a mechanism that uses proof-of-work (PoW) to achieve agreement across a decentralized network of potentially anonymous participants. This innovation eliminated the need for TTPs and allowed permissionless participation, marking a major breakthrough in the development of blockchain-based financial systems. At the heart of this system is the blockchain itself, an immutable, publicly verifiable ledger that underpins Bitcoin and other cryptocurrencies (Aljosha et al., 2017).

To emerging economies like Ethiopia, cryptocurrencies represent opportunities and threats. They present a faster and less expensive way than traditional remittance systems that are slow and expensive. It is estimated by the World Bank that remittances contribute a significant percentage to the economy of Ethiopia, and therefore cryptocurrency transactions could be the answer to reduce transaction costs and improve financial inclusion (Shelly S, 2024). However, in the absence of regulation, the potential for illicit financial flows, fraud, and volatility is problematic.

Characteristics of Cryptocurrency Impacting Regulation

The characteristics of cryptocurrencies impair the efforts of regulators and challenge oftentimes the conservation of AML laws:

Decentralization: Cryptocurrencies exist in a distributed form and therefore cannot be said to have an entity that controls the entire system. This stands in radical contrast to fiat currency, where central banks have control. Therefore, the locus of enforcing AML laws and transaction-monitoring activities becomes difficult for Ethiopian regulators (Narayanan et al., 2016).

Pseudonymity: Even though the public can review the transactions on a given blockchain, users have their identities masked behind wallet addresses. This anonymity raises concerns regarding money laundering, tax evading, or financing of illicit activities, and this plays quite a role in hindering Ethiopian financial institutions' work (Tapscott & Tapscott, 2016).

Borderless transactions: Cryptocurrencies allow for the fast transfer of money across borders with little or no intermediary. Such transactions help in promoting financial inclusion but at the same time aggravate the problem of enforcement since the funds can easily move outside of the local banking system (Swan, 2015).

Thus, Ethiopian banks need to revise AML frameworks for integrating crypto-monitoring tools, blockchain analytics, and compliance approaches that are in line with international standards.

Using Blockchain Technology as a tool for Transparency

Though there is caution about regulatory compliance, blockchain which is the basis of cryptocurrencies can act as one such tool which can improve financial transparency and transaction monitoring. A distributed, secure, immutable and publicly verifiable ledger of transactions makes it an excellent tool for AML compliance-writ large (Georgieva, 2020):

Enhanced Traceability of Transactions: Every transaction that takes place on the blockchain creates a permanent audit trail, which could be of service to financial institutions in tracking suspicious activities and consequently strengthen countries AML efforts (McCarthy et al., 2015).

Smart Contracts and Compliance Automation: A few of the cryptocurrencies like Ethereum support smart contracts that may be programmed for enforcement of AML compliance so that human error and fraud are minimized (Antonopoulos, 2017).

If the banking sector of Ethiopia were to integrate this kind of solution, then remittances and trade finance would have less exposure to risks concerning corruption in financial oversight.

Innovation vs Regulation

Ethiopia faces major challenges regarding and balancing between financial innovation and the rapid expansion of fin techs on the one side and the establishment of efficient strict controls for anti-money laundering (AML). On the one hand, cryptocurrency adoption could increase financial inclusion by providing access to digital payments for otherwise unbanked populations. But the absence of clear regulations exposes the banks in Ethiopia to AML risks of penalties from global regulatory bodies. According to Warsame et al., 2020 countries like Ethiopia must:

Establish a legal framework for cryptocurrency exchanges and wallet providers to comply with AML standards; Invest in blockchain monitoring tools through which financial institutions detect illegal transactions without stifling innovations or product development; and Work with international regulatory bodies such as FATF to ensure Ethiopia's AML laws correspond with global advancements in crypto regulations.

Hence it will be the achievement of that balance between innovation and regulation which will determine whether Ethiopia can benefit from the gains of the cryptocurrency phenomenon while at the same time protecting its financial systems from illicit activities.

2.1.3. Regulatory Theories and Financial Sector Compliance

Financial Regulation's Deterrence Theory

According to Becker (1968), deterrence theory states that it must impose solid deterrent mechanisms-including punishment and reputational risks-to non-compliance on the part of the constituent body with financial regulations. Among the issues that banks in the Ethiopian banking sector can face are the imposition of possible fines, withdrawals of licenses and reputational damage in the event of a failure to adhere to new Anti-Money Laundering laws about cryptocurrency transactions. Ethiopia has a seemingly cautious stance on cryptocurrencies, and therefore, banking firms must pay careful attention to their compliance efforts, otherwise, they would find themselves having to deal with stringent measures from regulatory authorities, particularly the National Bank of Ethiopia (NBE), for instance, against the risks posed by digital assets (Berhe, 2023). So long as there is the fear of punishment, banks would undertake thorough implementation of sound compliance frameworks in spite of the lack of comprehensive, dedicated crypto regulations.

Risk-Based Approach to Financial Crime Prevention

Refer to risk-based approach (RBA) in context of financial crime prevention, which raises the regulatory effort as commensurate with the level of risks posed by different financial activities (FATF, 2012). Banks in Ethiopia could focus on risk-prone cryptocurrency transactions such as anonymous wallets in peer-to-peer transfers and cross-border transfers to bring enhanced due diligence (EDD) measures. Low-risk transactions such as trading through regulated

cryptocurrency exchanges would not require much scrutiny. Adopting an RBA would allow Ethiopian banks to manage compliance resources effectively, reduce costs, yet ensure AML and counter-terrorism financing (CFT) obligations.

Institutional Theory and Regulatory Adaptation

This refers to the adaptation of organizations to regulatory pressures for the purpose of maintaining legitimacy, as described by (DiMaggio and Powell, 1983). For banks operating in an environment with little or no guidance regarding cryptocurrencies, regulatory uncertainty leads to varied strategic responses. Some banks may even start adopting technologies like blockchain analytics or transaction monitoring systems in anticipation of future regulation, while others might just be a little better off such as avoiding entirely activities that associate with cryptocurrencies. Also, external institutional pressure by the international financial bodies, for example, the Financial Action Task Force (FATF) and the World Bank, can as well sway Ethiopian policies, compelling banks to align under AML international standards but leaving gaps in regulatory issues inside the country (FATF, 2012).

Institutional theorists often argue that organizations will adapt by transforming with regard to legitimacy due to regulatory pressures. In environments like the Ethiopian banks, which have limited guidelines around cryptocurrencies, banks might have to face regulatory uncertainties. This may, therefore, lead to different adaptive strategies designed by such banks. For example, some might be pre-emptive by integrating analytic tools for blockchain and transaction monitoring systems in preparation for future regulation, while some are conservative by avoiding anything to do with cryptocurrencies (DiMaggio and Powell, 1983). These push pressures also include those from international financial bodies such as the FATF and the World Bank which might push the Ethiopian regulatory policies towards defining AML standards that do not match with those that are domestic (FATF, 2012).

Public Interest Theory vs. Capture Theory

According to Public Interest Theory, regulation is about the public, the integrity of markets, and market failure (Stigler, 1971). In this context, it may be pertinent that the government of Ethiopia would adopt the approach of emphasizing consumer protection, stability, and prevention of illegal

financial activities in regulating cryptocurrencies. The public interest argument would make regulators decree clear AML guidelines for cryptocurrency transactions so that banks can operate safely with digital assets. On the contrary, Capture Theory posits that regulatory policies are subject to the influence of a well-organized financially powerful institution attempting to shape rules for themselves (Peltzman, 1976). Ethiopian banks would use the same channels to lobby the regulators regarding restrictive measures on cryptocurrency trading because of the restriction they would bring from decentralized finance. Hence, this would bring policies that keep up appearances of compliance with AML, while actually catering to interests of the banking sector. In case of capture by a regulatory chamber, there would be hindrances to policy adoption of cryptocurrency in Ethiopia, which will hinder innovation and the opportunity for financial inclusion.

Technology Acceptance Model (TAM) and Cryptocurrency Adoption

The Technology Acceptance Model (TAM) introduced by Fred D. Davis in 1989 asserts the fact that new technology is usually accepted by users if it is more useful and easy to use. In the Ethiopian banking case, the adoption of the services related to cryptocurrency will largely depend on the perceived benefits and challenge of integrating a new service, according to financial institutions.

The Technology Acceptance Model (TAM), posits that two primary factors influence users' acceptance of new technology: perceived usefulness and perceived ease of use.

Perceived Usefulness: Banks would embrace any cryptocurrency that could be useful in enhancing financial efficiency through reduced transaction costs or to facilitate cross-border payments. The perceived usefulness of cryptocurrencies will also find support from concerns over security and transparency through the blockchain.

Perceived Ease of Use: Adoption may take some time if they find the platforms associated with cryptocurrency complicated or misfits with the existing banking system. User-friendly interface and clarity on the regulations can make the integration and compliance with money laundering controls simpler.

When banks think about doing cryptocurrency transactions, perceived usefulness can be seen in terms of the potential gains offered by blockchain technology in terms of transaction speed,

security, and cross-border payment systems. Perceived ease of use means how easy and user-friendly cryptocurrency platforms are according to the expectation that they can be simply integrated into already existing setups of the banking industry. Such knowledge will assist in evaluating the extent to which banks are willing to accept digital assets and blockchain-based financial solutions (Venkatesh & Davis, 2000).

Further, TAM would tell how Ethiopian banks would weigh cryptocurrency as part of their offerings against the perceived advantages of such compared to the uncertainties against regulations and compliance burdens.

Financial Industry's Response to Innovation

The response of the financial industry to innovations like cryptocurrencies generally follows a trajectory of resistance, adaptation, and integration. Initially, financial institutions may resist these innovations due to the threat they pose to established business models. However, as the value and potential of cryptocurrencies become clearer, institutions adapt by exploring and integrating blockchain and other related technologies into their operations (Merton & Bodie, 2005).

2.1.4. Regulatory and Practical Challenges

Evidently, the challenges surrounding cryptocurrency adoption with the end of financial inclusion are enormous in Ethiopia. Barriers include regulatory uncertainties, technological barebones, and digital illiteracy. Cryptocurrencies are often found in a regulatory gray area in many developing countries, Ethiopia included. As Berhe, S (2023) pointed out, the government's decisions on the regulation of cryptocurrencies are expected to have a major effect on whether or not cryptocurrencies will be able to greatly assist the country in achieving financial inclusion. Clear regulations should be laid down so that cryptocurrency is safe and is utilized to achieve its intended purpose.

The digital divide is another issue surrounding Ethiopia. Whereas there seems to be reasonable mobile penetration, in most rural areas, internet access is too limited to enable cryptocurrency use. Nonetheless, perhaps in the coming years, with a constantly enhancing mobile internet infrastructure in Ethiopia, widespread cryptocurrency adoption might not seem too difficult.

2.2. Empirical Review

This chapter will present empirical studies, information, and real-world examples of cryptocurrency trading and their impacts on banks with a special focus on Ethiopia and other similar economies. It will highlight opportunities and challenges in implementing Anti-Money Laundry (AML) on cryptocurrency trading and their impacts on banking.

2.2.1. Global Trends in Cryptocurrency Trade

Cryptocurrency adoption has picked up pace around the world over recent years and has seen countries pursue diverse approaches to regulating the space with a focus on AML policies. The U.S., Japan, and South Korea offer some keen case studies that can be used to advise AML policies in cryptocurrency transactions.

United States (U.S.): U.S. regulation of cryptocurrency is still a work in progress and the Securities. The Exchange Commission (SEC) has come to the conclusion that some cryptocurrencies are securities and are therefore to be regulated under securities law (U.S. Department of the Treasury, 2024,). The Internal Revenue Service (IRS) concluded that cryptocurrency is property and is to be taxed on capital gains (IRS, 2024). More recently, the Infrastructure Investment and Jobs Act required reporting on brokers to report to the IRS so that some kind of regulation could be formed to prevent money laundering from occurring (Harris Beach PLLC, 2021).

Japan: One of the first countries to allow cryptocurrency payments was Japan. Through the Payment Services Act (PSA), the Financial Services Agency (FSA) enforces Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations. The system in Japan attracted investors, reduced criminal activity, and established a safe and open cryptocurrency market (Amaya, 2022).

South Korea: South Korea's regulatory framework is robust with a focus on AML and KYC requirements. Crypto trading platforms fall under the supervision of the Financial Services Commission (FSC), and through the 2020 amended Act on Reporting and Using Specified Financial Transaction Information, Virtual Asset Service Providers (VASPs) have been required

to comply with AML and KYC rules (Guneet Kaur, 2023). The regulatory goal is to prevent money laundering as well as to maintain market integrity.

2.2.2. Current Status of Cryptocurrency Trade and Legal Barriers in Ethiopia

Overview of Ethiopia's Financial Regulatory Environment:

The anti-money laundering (AML) regime in Ethiopia is mainly regulated by the Prevention and Suppression of Money Laundering and the Financing of Terrorism Proclamation No. 780/2013, which is in line with international finance-related security standards (National Bank of Ethiopia, 2023). Regarding digital assets, there is a conservative approach by the National Bank of Ethiopia (NBE). Cryptocurrencies can be permitted for mining, but their usage for payments, including transactions, is not allowed.

Ethiopian Bank of Ethiopia (NBE) has adopted a restrictive stance to cryptocurrency with a statement that proclaims that Ethiopian Birr is the only legal tender that is formally accepted (Girma, 2021). There is no clear Anti-Money Laundry (AML) rule that addresses digital assets in current regulation and therefore banks have no clarity in assessing risks, creating compliance frameworks, or venturing into cryptocurrency related services with certainty. Such regulatory uncertainty forces banks to play it safe and abstain from innovations in digital assets to minimize legal and financial risks. In the absence of clear AML guidance, banks cannot effectively impose due diligence controls with ensuing gaps in monitoring transactions and putting themselves at a heightened risk of inadvertently facilitating criminal transactions, depriving banks of clear instructions on handling cryptocurrency transactions (Asfaw, 2021). Such a regulatory void keeps the banks uncertain and cannot allow innovations while cannot prevent developing financial crimes related to digital assets.

Current Legal Stance on Cryptocurrency Trade

The restrictive Ethiopian regulation has deterred banks to finance cryptocurrency trading. The NBE prohibitions against financial institutions doing business in cryptos due to money laundering, illicit financial flows, and customer protection (Tewabe, 2023). The result has been a parallel and unregulated market with cryptocurrency trade going unchecked (Girma, 2021).

International Comparisons: More innovative frameworks exist in comparable economies such as Kenya and Nigeria, forward-thinking initiatives that can be Ethiopian-applicable. Despite their different financial frameworks, Ethiopia can learn to adapt Kenya's regulatory sandbox framework that enables testing of financial innovations in a contained framework or Nigeria's cryptocurrency regulation under the Securities and Exchange Commission that is receptive to innovations while observing AML compliance. Such frameworks applied to Ethiopia's unique regulatory and banking framework may have a harmonious way forward to cryptocurrency regulation. Kenya's Central Bank has introduced regulatory sandboxes in piloted format to experiment with digital asset innovations while facilitating fintech innovations while keeping watch on AML compliance (UNDP, 2023). Nigeria, after prohibiting it, now governs cryptocurrency exchanges under its Securities and Exchange Commission to strike a balance between regulating and AML compliance. Such frameworks showcase ways Ethiopia can take to formalize digital asset markets without stifling innovations (National Information Technology Development Agency, 2023).

Empirical Evidence of the Effects of Prohibition or Limitation of Cryptocurrency: Absolute prohibitions are seen to drive cryptocurrency transactions underground, worsening AML issues. Sobrado (2024) notes that nations with absolute bans see heightened peer-to-peer (P2P) trading where exchanges occur outside normal financial networks, making it harder for AML enforcement. The pattern has been noted in Nigeria pre-regulation, where informal markets flourished in spite of early prohibitions (UNDP, 2023).

2.2.3. Opportunities for Ethiopian Banks in AML-Compliant Cryptocurrency Trade

Case Studies of Banks in Countries with Institutionalized Cryptocurrency AML Regulations: South African banks have been a case study in point. The Intergovernmental Fintech Working Group (IFWG, 2021) issued guiding principles for cryptocurrencies with AML compliance, licensure, and cross-border regulation being prioritized. As a result, banks can offer crypto-related services with guaranteed financial integrity. Another example is the granting of Regulatory Sandbox Licenses to cryptocurrency companies in Mauritius, a regional hub for fintech aspirants, with the guarantee of AML compliance in a regulated ecosystem (UNDP, 2023).

Possible Benefits: For Ethiopian banks, cryptocurrency trading that is AML-compliant has possibilities to enhance financial inclusion. Cryptocurrencies have the ability to bank the unbanked, as it has been in Kenya where cryptocurrency exchanges were combined with M-Pesa to enhance financial access to over 30 million users (UNDP, 2023). Similarly, acceptance of blockchain-based remittance services in Nigeria has reduced the transaction cost and increased access to rural banking, especially in rural areas, which is in line with Ethiopia's financial inclusion agenda (National Information Technology Development Agency, 2023). Cheaper and quicker cross-border remittances can also increase Ethiopia's already high remittance receipts, reducing reliance on traditional money transfer operators.

Opportunities for Innovation: In addition, there are additional opportunities provided by the blockchain technology, especially for secure smart contracts and cross-border payments. Through the adoption of the use of permissioned blockchain networks, countries like Ethiopia its banks can enable transparency, automate compliance checking, and lower the cost of a transaction, thereby improving operational efficiency (Kasula, 2024).

2.2.4. Regulatory Challenges for Ethiopian Banks in Implementing AML Measures

Study on Banks' Capacity in Implementing AML Systems: Ethiopian banks are severely limited in their ability to implement AML systems for the purpose of managing cryptocurrency transactions. Effective compliance is hampered by inadequate resources, a lack of infrastructure, and a shortage of skilled labor. Implementing sophisticated blockchain analytics software, transaction monitoring systems, and secure digital asset storage infrastructure presents particular challenges for banks. One example of a workforce training gap is the absence of senior AML specialists with knowledge of blockchain forensics, regulatory reporting, and cryptocurrency risk identification. Closing the gaps would include special training programs, compliance technology expenditure, and collaboration with foreign AML experts to build capacity in accordance with the financial environment of Ethiopia. (Asfaw, 2021). On the other hand, banks in comparatively more developed economies in Africa, such as South Africa and Nigeria, have used regulatory frameworks to build effective AML systems (IFWG, 2021).

Cost Implications of AML Compliance: The costs of compliance present an additional obstacle, especially to small Ethiopian banks. AML systems require advanced blockchain analysis software,

real-time monitoring systems, and specialized training all expensive. Small banks are barely able to absorb such costs without the support of regulations or shared infrastructure schemes (Sobrado, 2024).

Cross Border Regulatory Disparities: It is difficult for Ethiopian banks to adapt to international AML norms in the absence of local regulatory guidance. Countries like Kenya and Nigeria, with more transparent regimes, have better cross-border integration (UNDP, 2023). Lack of regulatory clarity in Ethiopia could deter international cooperation and correspondent banking relationships, limiting access to international financial networks.

2.2.5. Potential Risks of Cryptocurrency Trade to Ethiopia's Financial System

Empirical Evidence Concerning Financial Crimes Involving Cryptocurrency

The pseudonymous feature of cryptocurrencies makes them easy targets for money laundering and other criminal financial transactions. Research suggests that unregulated markets in emerging economies frequently serve as hotbeds of such transactions (Sobrado, 2024). The absence of regulation in Ethiopia further makes it susceptible to cross-border money laundering schemes, hence it is important to implement anti-money laundering (AML) controls.

Financial Instability Risks

One big risk to financial stability is the extreme volatility in the prices of cryptocurrencies. Sudden price movements could lead to banks facing liquidity risk when undertaking any kind of digital asset service if they do not have the appetite for risk or an adequate risk management strategy to contain such adverse effects (Kasula, 2024). Moreover, crypto markets without regulations would also accelerate capital flight, weakening Ethiopia's already fragile currency stability (Asfaw, 2021). Research identifies that developing nations with less strong financial infrastructures are more exposed to capital flight through crypto-driven transactions (McCarthy et al., 2015)

Cybersecurity Risks

Ethiopian banks face acute threats concerning cybersecurity for cryptocurrency transactions, such as phishing, exchange hacks, and ransomware attacks. There are reports that every kind of financial

institution has been targeted globally through crypto-related cyber activity, taking advantage of weak security measures to conduct fraud and laundering (Albrecht et al., 2019). The need is for deploying secure digital asset custody solutions, which include cold storage and multi-signature authentication, to confront these threats.

Balancing between Mitigating Risks and Promoting Innovations

To remain competitive in the industry, Ethiopian banks need to find a fine balance between AML compliance with financial innovations. South Korea has been a very good case of AML compliance existing with a fully operational digital asset market where banks can explore blockchain solutions while staying protected from financial crime (Guneet Kaur, 2023). International trends show how strict AML regulations such as the 5th Anti Money Laundering Directive from the EU can improve transparency while permitting selected adoption for cryptocurrency (European Commission, 2020).

Synthesis and Research Gaps

Comparison with Ethiopian and International Regulatory Environments: Ethiopia's restrictive approach is inconsistent with progressive AML crypto policies being pursued by other nations. South Africa, Nigeria, and Mauritius offer examples of regulatory frameworks that promote innovation while mitigating AML risks. Ethiopia's current policy, therefore, could potentially deny opportunities to harness cryptocurrency for economic growth and financial inclusion.

Gap Identification in Ethiopian Cryptocurrency and AML Regulation Literature: Empirical studies have been few on the capacity of Ethiopia to manage cryptocurrency through a bank-based AML system. The country's unique economic setting state-led banking industry, restricted access to foreign exchange, and low financial literacy in digital technology renders the models from overseas less relevant directly. Furthermore, the National Bank of Ethiopia's strict regulation of financial innovations is unlike Kenya's and Nigeria's more permissive regulatory space. Such differences indicate Ethiopia-focused studies ought to explore how AML systems can function in harmony with local banking sectors and economic imperatives.

Need for Context Specific Empirical Research: The Ethiopian financial system, characterized by a state-dominated banking sector and limited digital infrastructure, necessitates context-specific

research. A context-specific AML crypto framework needs to be established to balance innovation and financial stability appropriately.

The Role of Balancing Regulatory Protection with Financial Innovation: Ethiopian banks can lead in digital transformation using AML compliant cryptocurrency strategies. To achieve this, however, there must be regulation reforms that welcome innovation while protecting against financial crime for an inclusive and resilient financial system.

2.3. Conceptual Framework

The conceptual framework for this study is designed to clarify the relationships between the formulation of Anti-Money Laundering (AML) regulations on cryptocurrency trade and opportunities and barriers for Ethiopian banks.

This framework represents how AML regulations for cryptocurrency trade impact both opportunities and barriers for banks. This include the regulatory environment, financial crime risks, and technological infrastructure, which influence how banks engage with cryptocurrency under an AML framework. A well-structured regulatory environment ensures that cryptocurrency trade is governed by clear compliance measures, including AML/KYC requirements, transaction monitoring, and financial sector oversight.

Supportive and well-crafted regulations can unleash a number of advantages such as higher financial inclusion, improved innovation in banking products, reduced transaction costs, and increased investment opportunities in digital currencies. Combined with strong technological backbone, the regulations empower banks to efficiently integrate blockchain analytics and improve their compliance efficiencies.

On the contrary, too rigid or ambiguous rules can pose some challenges. Such challenges include security threats that have escalated, market volatility, uncertainty in regulation, and resistance from well-established financial institutions. Moreover, views on financial crime risk significantly rest on the relationship between banks and cryptocurrency, with elevated concerns resulting in heightened debt controls and greater compliance requirements.

The capacity of banks to accept and profit from cryptocurrencies is primarily dependent on how well the AML regulation laws are organized. By analyzing these the study provides useful advice on how Ethiopia can create a cryptocurrency regulatory framework that lowers financial risks and generates significant opportunities for the banking industry.

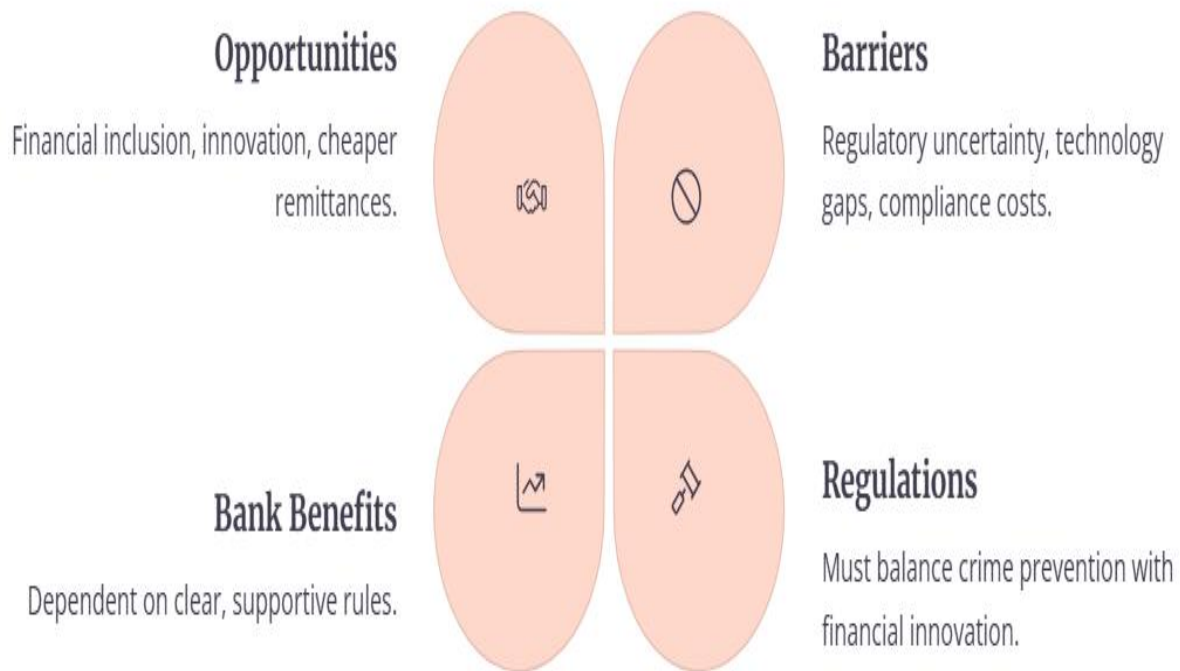


Figure 2.1: Conceptual Framework (Source: Researcher, 2025)

CHAPTER THREE

METHODOLOGY

3.1. Research Design

This study employed a mixed method approach research design to explore the opportunities and barriers associated with cryptocurrency trade regulations in Ethiopia. Since cryptocurrency trading is currently prohibited in Ethiopia, the study focuses on banks, regulatory institutions, fintech companies, and academic professionals who can provide expert insights on the subject.

Since it is bringing together the power of both qualitative and quantitative research, a mixed-methods design was employed. It is necessary in a complex issue like AML compliance and cryptocurrency regulations. Although quantitative surveys offer more general confirmation by finance professionals, qualitative interviews offer data from banks and policymakers.

3.2. Population Size, Sampling Technique, and Sample Size

3.2.1 Population Size

The focus of this study is on financial institutions as well as regulatory agencies that operate within Ethiopia's financial sector and handle AML compliance and cryptocurrency financial decision-making. The National Bank of Ethiopia (NBE) serves as the primary regulatory institution alongside various fintech companies that operate in financial services and traditional commercial banks.

3.2.2 Sampling Technique

The research employed purposive and stratified random sampling methods to select a representative group of participants. Purposive Sampling was the method used to identify essential institutions that handle anti-money laundering compliance and cryptocurrency financial choices. Study participants were selected because of their relevance to the study's main themes and their active participation in them. Purposive sampling techniques enable the integration of expert

viewpoints together with institutional perspectives which are fundamental to the study objectives. Stratified Random Sampling techniques operated within the banks to guarantee a diverse sampling framework for professionals at all levels and positions throughout the institutions. This data-collection method enables the study to obtain multiple perspectives from workers who perform operational duties and those who handle compliance as well as management staff.

3.2.3 Sample Size and Composition

The research project examined commercial banks in Ethiopia through the National Bank of Ethiopia's five-generation classification framework which allowed for the selection of one bank from each generation except the 2nd generation which included two banks for balanced representation based on the length of operational activity. The research selection method enables the examination of institutional structures alongside operational maturity and exposure to AML and cryptocurrency issues across different banking generations. The inclusion of two fintech companies enabled the study to gain new insights about the developing digital finance environment. The National Bank of Ethiopia was selected to participate as the central regulatory authority which oversees financial operations and establishes industry-wide policies.

In total, the study's sample includes:

- Commercial Banks: one from each generation (1st, 3rd, 4th, and 5th), and two from the 2nd generation.
- 2 Fintech Companies: representing emerging digital finance players.
- 1 Regulatory Body: The National Bank of Ethiopia.

A total of 45 questioners was distributed. The banks were sampled purposefully to secure a broad and representative analysis of the financial sector of Ethiopia with respect to cryptocurrency and AML regulation. The selection of banks from all five generations means that the study harnesses institutional difference by age, operational maturity, and capacity to adopt technology. From the cross-generational span of the study, there can be a comparison between the old and traditional banks with more established structures and processes and the new entrants that are more technologically advanced and agile. The additional inclusion of two second-generation banks

provides another strength to the analysis in the sense that it offers broader insight into the attitudes and practices of the mid-range institutions.

The addition of two fintech firm adds insight from non-bank financial participants who have a developing involvement in the world of digital finance. Their participation brings a new direction to the problem and opportunity of cryptocurrency usage with AML compliance in a changing technological world.

Lastly, the selection of the National Bank of Ethiopia (NBE) represents the regulatory viewpoint. As the central organization responsible for creating and setting in motion regulations for the financial sector, NBE's participation is significant to comprehend the existing policy regime, institutional readiness, and extent of regulatory change for application in relation to cryptocurrency and AML uptake.

This purposive and stratified sampling approach ensures that the study captures a diverse range of perspectives from institutions with varying levels of experience, regulatory compliance frameworks, and exposure to digital financial innovations. The participants were selected from key departments such as compliance, digital innovation, AML, and policy units across the selected institutions.

Interview Sample Size (Qualitative)

A total of 6 key informants will be selected using purposive sampling: 4 senior professionals from the 6 selected commercial banks (compliance, IT, or strategy) 1 senior official from the National Bank of Ethiopia and 1 senior professional from fintech company.

These interviews will provide qualitative insight into AML compliance readiness, institutional limitations, and crypto risk perceptions from a regulatory and banking operations perspective.

Ethical Considerations

this study was conducted in compliance with academic and professional ethical standards. Prior to data collection, participants were informed about the purpose of the research, and their consent was obtained voluntarily. Participation was entirely optional, and respondents were assured of their right to withdraw at any time without consequence. Anonymity and confidentiality were guaranteed since no personal identifiers were gathered.

All data were securely collected and used strictly for academic purposes. The research design avoided any form of harm to participants, particularly in handling information related to banking and financial regulation.

3.3. Sources of Data

The study uses primary and secondary data collection methods to develop a thorough and contextual explanation of the research problem. The study gathered primary data through semi-structured interviews of key informants and through structured surveys of banking professionals. The study conducted interviews with bank representatives and the National Bank of Ethiopia as the regulatory body to gain detailed information about AML policies and banking sector readiness and regulatory difficulties and cryptocurrency sentiment in Ethiopia. The banking professionals responded to the survey to provide a comprehensive view about their approach to AML compliance and their sector-wide readiness for cryptocurrency financial services.

The secondary sources comprised data from government reports issued by the National Bank of Ethiopia and legislative frameworks and regulatory guidelines. The research used academic literature which included journal articles and books together with research papers to establish theoretical foundations about AML frameworks, cryptocurrency regulations and international best practices. The study analyzed industry reports along with financial statements and market analyses from global financial institutions and consultancy firms and market research organizations to understand the wide-ranging trends, challenges and opportunities of the modern global financial environment. When conducting the analysis, the secondary sources became essential for validating primary data and enhancing the overall research process.

3.4. Method of Data Analysis

A mixed-methods analytical approach was used in this study, together with thematic analysis for the qualitative data and descriptive statistical analysis for the quantitative data. This combination helped for a comprehensive exploration of the research problem, enabling the study to have both the depth of expert insights and the breadth of perspectives from banking professionals.

3.4.1 Qualitative Data Analysis

The qualitative data gathered from semi-structured interviews were analyzed using thematic analysis, which is based on Braun and Clarke's (2006) six-phase approach. Thematic analysis was used due to the simplicity of locating, examining, and interpreting patterns and themes in qualitative information. The thematic analysis began with familiarization where interview

transcripts were read and re-read carefully in order to have an in-depth understanding of the participants' opinions. Open coding was then applied to label significant chunks of data related to AML policies, regulatory frameworks, banking readiness, and cryptocurrency-related issues. These were subsequently collapsed into more generic themes which captured common patterns and meanings across the data, such as regulatory barriers, opportunities for banks, and challenges in implementing AML. These themes were scrutinized thoroughly and refined to ensure coherence, internal fit, and relevance to the research questions. Finally, brief definitions and terms were assigned to each theme, and findings were gathered to a formal report that related the themes to the study aims and theoretical framework.

3.4.2 Quantitative Data Analysis

The quantitative information collected from formally structured questionnaires were processed according to descriptive statistical methods. The rationale behind this is to summarize and represent the data in a compact and understandable form such that trends, patterns, and response distributions among banking professionals for AML compliance procedures and for making decisions on cryptocurrencies can be determined. Statistical analysis such as SPSS created frequency tables, percentages, and cross tabulations that provided a clear image of the levels of AML readiness and cryptocurrency use in the banking sector. Descriptive analysis complemented the qualitative findings, providing a bigger picture of the practical issues and possibilities of AML and cryptocurrency management within the Ethiopian financial sector.

3.5. Reliability Test Results

45 questioners were distributed, properly filled and assessed. In consistency of the constructs used in the research instrument, Cronbach's Alpha reliability tests were conducted on four major scales: Regulatory Perception (Q3–Q5), Opportunities (Q6–Q11), Challenges in AML Implementation (Q12–Q15), and Risks of Cryptocurrency Trade (Q16–Q19).

Test Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
(Q3 - Q5)	0.747	0.748	3
(Q6 - Q11)	0.945	0.945	6
(Q12 - Q15)	0.745	0.834	4
(Q16 - Q19)	0.747	0.754	4

Table 3.1: Reliability Analysis test

The three-item Regulatory Perception scale from (Q3-Q5) received a Cronbach's Alpha of 0.747 which demonstrates strong internal reliability. The results show that participants showed consistent responses to items which evaluate the significance and effects of regulatory clarity on cryptocurrency trading.

The Opportunity scale shows high internal consistency through a Cronbach's Alpha value of 0.945 for its six items (Q6–Q11). The results demonstrate that respondents reached a high level of consensus about the positive outcomes that AML-compliant cryptocurrency trading can bring to the financial sector as well as to innovation and transparency.

For items Q12 to Q15 of the AML Implementation Challenges scale, the reliability coefficient was 0.745, high enough to provide an acceptable level of internal consistency. This shows the items were consistently measuring the perception of the practical and institutional challenges banks face to implement the AML controls to the crypto transactions.

The Risk scale (Q16–Q19) which measures financial crime, cybersecurity threats, volatility and systemic risk achieved a Cronbach's Alpha of 0.747 which demonstrates strong reliability. Participants demonstrated consistent comprehension regarding the dangers associated with cryptocurrency adoption in banking systems.

All scales within the study show Cronbach's Alpha values surpassing the standard 0.7 threshold which confirms their reliability and suitability for statistical analysis purposes in this research.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRITATION

4.1. Descriptive Analysis of Survey Results

4.1.1. Demographic Information

This section provides essential background on the profile of the 45 respondents who participated in the survey. The distribution of participants across sectors and experience levels offers insight into the diversity and representativeness of the perspectives gathered.

Category	Sub-category	Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Sector	Commercial Bank	34	75.6	75.6	75.6
	Regulatory Institute	7	15.6	15.6	91.1
	Fintech Company	2	4.4	4.4	95.6
	Academia	2	4.4	4.4	100.0
	Total (Sector)	45	100.0	100.0	
Experience	Less than 2 years	8	17.8	17.8	17.8
	2–5 years	18	40.0	40.0	57.8
	6–10 years	13	28.9	28.9	86.7
	More than 10 years	6	13.3	13.3	100.0
	Total (Experience)	45	100.0	100.0	
Descriptive Stats	Sector (1 = Bank, 4 = Academia)			Mean = 1.38	SD = 0.777
	Experience (1 = <2 yrs., 4 = >10 yrs.)			Mean = 2.38	SD = 0.936

Table 4.1: Sectoral and Experience Distribution of Respondents

As can be seen from the frequency table, the majority of respondents (75.6%) were from commercial banks, then 15.6% from regulatory institutions, and 4.4% from fintech companies and academic/research institutions. The mean value of the sector variable stands at 1.38 because commercial banks received the code 1. The standard deviation of 0.777 show how participants tend to group near the commercial banking sector.

This concentration suggests that the survey reflects a strong banking sector perspective, which is vital given that the research investigates Anti-Money Laundering (AML) regulations and cryptocurrency's implications for banks.

The experience Survey data reveals that 40% of participants possessed 2 to 5 years of experience and another 28.9% reported 6 to 10 years of experience while 17.8% had less than 2 years of experience and 13.3% reported more than 10 years of experience. The average participant experience level reached 2.38 years which corresponds to the 2-5-year range. The standard deviation of 0.936 indicates an average distribution of experience levels that demonstrates an adequate mix between new and established professionals.

The analysis of research data demonstrates that most respondents remain actively involved in current banking system regulatory transformations alongside their knowledge about AML methods and emerging financial technologies. The survey incorporates respondents with 6 to 10 years' and 10 years' experience who provide essential institutional knowledge about Ethiopia's financial regulatory past.

4.1.2. Regulatory Perceptions

The descriptive statistics offer useful information on the attitudes of the stakeholders and the banking professionals toward the introduction of Anti-Money Laundering (AML) cryptocurrency trading policy in Ethiopia. The analysis covers four thematic scales: Regulatory Perception, Opportunities, Challenges in AML Implementation, and Risk.

Q#	Response	Frequency	Percent (%)	Cumulative Percent (%)	Mean	Std. Deviation	Variance
Q3	Neutral	1	2.2	2.2	4.44	0.546	0.298
	Agree	23	51.1	53.3			
	Strongly Agree	21	46.7	100.0			
Q4	Neutral	2	4.4	4.4	4.49	0.589	0.346
	Agree	19	42.2	46.7			
	Strongly Agree	24	53.3	100.0			
Q5	Neutral	1	2.2	2.2	4.42	0.543	0.295
	Agree	24	53.3	55.6			
	Strongly Agree	20	44.4	100.0			

Table 4.2: Summary Response for: Regulatory Perceptions

This part is dedicated to the participant's view on the current Ethiopian government attitude towards regulating cryptocurrency and its effect on the banking industry. The values of the Regulatory Perception scale (Q3–Q5) ranged from 3.78 to 4.24 and the maximum value in the sample is observed on the Q3 item with 4.24, which supports the idea that it is necessary to have a regulation for risk reduction in the cryptocurrency field. The relatively high mean values of all three items reflect the strong agreement among the participants that the lack of defined regulation is the most apparent barrier to the integration of cryptocurrencies into the bank system. The results also show the support of the participants for the central role of the state to dictate the future of digital currency and the move away from the prohibitive to the regulatory strategy.

4.1.4. Opportunities for Banks & Challenges in AML Implementation

Opportunities for Banks

Q#	Response	Frequency	Percent (%)	Cumulative Percent (%)	Mean	Std. Deviation	Variance
Q6	Disagree	1	2.2	2.2	4.11	0.885	0.783
	Neutral	12	26.7	28.9			
	Agree	13	28.9	57.8			
	Strongly Agree	19	42.2	100.0			
Q7	Neutral	11	24.4	24.4	4.18	0.806	0.649
	Agree	15	33.3	57.8			
	Strongly Agree	19	42.2	100.0			
Q8	Neutral	9	20.0	20.0	4.20	0.757	0.573
	Agree	18	40.0	60.0			
	Strongly Agree	18	40.0	100.0			
Q9	Neutral	10	22.2	22.2	4.22	0.795	0.631
	Agree	15	33.3	55.6			
	Strongly Agree	20	44.4	100.0			
Q10	Disagree	1	2.2	2.2	4.20	0.842	0.709
	Neutral	9	20.0	22.2			
	Agree	15	33.3	55.6			
	Strongly Agree	20	44.4	100.0			
Q11	Neutral	8	17.8	17.8	4.20	0.726	0.527
	Agree	20	44.4	62.2			
	Strongly Agree	17	37.8	100.0			

Table 4.3: Summery Responses on Crypto Opportunities and AML

This section addressed how blockchain and cryptocurrency could benefit Ethiopian banks and the challenges associated with implementing Anti-Money Laundering (AML) frameworks. The responses reflect a nuanced understanding of both the opportunities and risks.

Opportunity scale items Q6–Q11 recorded consistently high mean values, ranging from 3.80 for Q10: financial inclusion benefits to 4.07 for Q8: investment in blockchain technology. The survey results demonstrate that participants maintain positive expectations about AML-compliant cryptocurrency operations in banking. In particular, the responding individuals perceive opportunities for the utilization of blockchain for improving the monitoring of AML (Q6: 3.96) and offering regulatory sandboxes (Q7: 4.02) for allowing testing of crypto services in an environment of security. The responding individuals also foresaw opportunities through the development of services, modification of operating strategies, and new revenue opportunities (Q9: 4.00). Relatively weak strength of agreement on Q10, however, indicates the degree to which the potential of crypt to bring about financial inclusion is trimmed by infrastructures and accessibility concerns.

Challenges in AML Implementation

Q#	Response	Frequency	Percent (%)	Cumulative Percent (%)	Mean	Std. Deviation	Variance
Q12	Strongly Disagree	24	53.3	53.3	1.47	0.505	0.255
	Disagree	21	46.7	100.0			
Q13	Disagree	23	51.1	51.1	2.71	0.815	0.665
	Neutral	12	26.7	77.8			
	Agree	10	22.2	100.0			
Q14	Strongly Disagree	24	53.3	53.3	1.47	0.505	0.255
	Disagree	21	46.7	100.0			
Q15	Strongly Disagree	24	53.3	53.3	1.47	0.505	0.255
	Disagree	21	46.7	100.0			

Table 4.4: Summery Responses on AML Challenges and Capacity

This section investigated the current readiness and challenges of Ethiopian banks to implement crypto-related AML frameworks and the need for inter-institutional cooperation. The responses were revealing and highlighted several capacity gaps.

The response to Questions on Challenges in AML Implementation (Q11–Q15) was more varied. The lowest average scores were for Q11 (2.82) and Q15 (2.91) because the respondents are not persuaded of the readiness and provisioning of resources by the banks to facilitate AML compliance under the conditions of a crypto-enabled system. Conversely, there is strong agreement with propositions on the lack of clear guidelines on AML (Q12: 4.31) and the necessity of cooperative governance arrangements between agencies (Q13: 4.38). This indicates that while institutional capacity is perceived to be lacking, stakeholders believe in the possibility of policy change and cooperative governance to turn the situation around significantly. The moderate score for Q14 of 3.38 indicates tentativeness or cautious optimism for the readiness of banks if the trade is legalized.

4.1.5. Financial and Security Risks

Q#	Response	Frequency	Percent (%)	Cumulative Percent (%)	Mean	Std. Deviation	Variance
Q16	Disagree	1	2.2	2.2	4.42	0.657	0.431
	Neutral	1	2.2	4.4			
	Agree	21	46.7	51.1			
	Strongly Agree	22	48.9	100.0			
Q17	Disagree	1	2.2	2.2	4.40	0.720	0.518
	Neutral	3	6.7	8.9			
	Agree	18	40.0	48.9			
	Strongly Agree	23	51.1	100.0			
Q18	Disagree	1	2.2	2.2	4.47	0.625	0.391
	Agree	21	46.7	48.9			
	Strongly Agree	23	51.1	100.0			
Q19	Agree	23	51.1	51.1	4.49	0.506	0.256
	Strongly Agree	22	48.9	100.0			

Table 4.5: Summary of Responses on Crypto-Related Risks

The final section dealt with the perceived security and financial risks of implementing cryptocurrency. Overall, the responses reflected a great level of awareness and caution on the behalf of banking professionals.

The Risk scale (Q16–Q19) also had high agreement to all the items, where mean scores ranged from 3.84 to 4.31. The highest concern was the cybersecurity threats (Q17: 4.31), consistent with the rising awareness of technology vulnerability to the use of cryptos. High perceived risk of money laundering through cryptocurrency transactions also existed (Q16: 3.96), consistent with the international concern articulation of the Financial Action Task Force (FATF). Price volatility (Q18: 3.93) and anticipated regulatory obstacles (Q19: 3.84) were also scored high, showing there is willingness to use crypto but this has to be accompanied with important risk mitigating measures.

In general, the descriptive statistics show that Ethiopian practitioners and regulatory officials are in favor of the development of a properly articulated and structured AML regulatory framework for cryptocurrency. Optimism is strong throughout the challenges it raises, especially in fronts of improving compliance, transparency, and innovation. Institutional readiness, cybersecurity, and regulatory uncertainty are still of a concern, though. These results show that there must be policy coordination, capacity building, and phased implementation to ensure a secure and positive trajectory of transition to the use of crypto in the Ethiopian financial sector.

4.2. Thematic Analysis

This thematic analysis follows Braun and Clarke's (2006) method, identifying key patterns across the interviews. The findings are categorized under five major themes with related subthemes.

4.2.1. Government Stance and Legal Barriers

“The interviews state that the Ethiopian government bans cryptocurrency trading, although it shows some welcoming towards mining and the potential future development of a Central Bank Digital Currency. As stated on NBE Proclamation No. 1359/2025, which clearly bans the use of cryptocurrency for payments unless it’s permitted by the National Bank of Ethiopia.” (Regulator, Interview) They emphasized that crypto trading currently occurs in a regulatory gray area, primarily through platforms such as Binance, Telegram, and Bybit, but such activities are not legally recognized and are punished by law. Additionally, according to commercial banks, “banks are legally prevented from engaging in cryptocurrency activities due to existing legal tender laws, AML risks, and a lack of regulatory clarity. The absence of supportive regulation leaves banks

endangered, unable to participate with digital assets while still being exposed to the illicit use of crypto through customer transactions.”

4.2.2. Opportunities for Banks and Financial Inclusion

Nearly all respondents to the survey believed that “banks would benefit immensely from allowing AML-compliant crypto trading.” They listed a number of possible benefits such as better liquidity, lower remittance charges, simplified cross-border payment, higher mobilization of deposits, and even the possibility of extending crypto-backed lending facilities. “Cryptocurrency could also be a means to engage fintech’s in innovation and digital currency transfer platforms, generating new sources of income through transaction fees.” (Fintech, Interview) With regard to financial inclusion, respondents viewed “cryptocurrencies as tools to reach financial excluded groups, especially young people and digital users already active in informal crypto markets. However, many also recognized a significant technological and knowledge gap, particularly in rural areas and among older generations. Without well distributed infrastructure development and educational efforts, the benefits of cryptocurrency for financial inclusion would be limited and uneven.”

4.2.3. Challenges in AML Implementation

All the respondents pointed out “the lack of technological experience and expertise in the local banks’ blockchain systems. Compared with the traditional SWIFT systems, the respondents viewed the blockchain as decentralized, harder to manage, and harder to monitor for suspicious transactions.” Respondents noted that in “the lack of a central authority for such transactions, it becomes challenging to ensure compliance with the obligations under the AML and Know Your Customer (KYC). Second, the cross-border and anonymous nature of cryptocurrency poses serious issues with regard to tracing the transactions.” Interviewees stressed “the fact that for effective implementation, it will require massive investments in technology, risk assessment, and security. Clear regulation, training initiatives, as well as increased institutional coordination, also need to be implemented forthwith in order to fill the compliance gap in place”.

4.2.4. Financial and Security Risks

The respondents were concerned seriously about “the security and financial risks of cryptocurrency transactions, particularly in the absence of regulation. The most common risks they mentioned included money laundering, cybercrime, identity theft, and capital flight. Most of them mentioned the fact that cryptocurrencies could bypass traditional financial systems, and thus money cannot be tracked and its owners determined.” The participants also warned that “the volatility of the cryptocurrency markets can threaten monetary stability and complicate currency reserve management. Better cybersecurity, interchange with national security organizations like INSA, and regulatory reform to prevent it from happening to it and to build public trust”. They highlighted that current infrastructure cannot meet these threats without a big investment in security.

4.2.5. Policy Recommendations and the Role of NBE

Finally, the interviews provided “important policy recommendations and opinions concerning the future operations of the National Bank of Ethiopia (NBE)”. (Commercial bank, Interview) The majority of respondents believed that the NBE should lead balancing regulation with innovation in the form of being both a policy regulator and an innovator. It could include opening regulatory sandboxes, experimentation, and setting up forums to engage with fintechs, banks, and research scholars. “There was a general recommendation that Ethiopia needs to be aligned to the international standard from a regulatory standpoint, including the EU's MiCA regime, the FATF's 40+ Recommendations, the Basel Framework, and even perfect its own regulatory sandbox model”. Respondents also recommended that “the NBE embrace a collaborative approach by closely working with commercial banks in order to develop bespoke compliance tools, KYC verification systems, and crypto-monitoring platforms”. “The stakeholders requested policymakers to include the stakeholders in their decision-making, apply in stages, and establish capacity-building programs to prepare the banks before the regulatory shift”.

Interpretation and Discussion of the Interview

Government Stance and Legal Barriers - The study detects a policy opposition in the current approach of Ethiopia towards cryptocurrency. While there is acceptance for mining to a certain degree and the discussion of central bank digital currency (CBDC) suggests openness to innovation, cryptocurrency trading is prohibited. This ambiguity creates a regulatory gray area where crypto activity continues informally through unofficial platforms. For banks, this legal vacuum is not just restricting but also dangerous, as they remain indirectly exposed to crypto risk without a formal compliance framework.

Benefits to Banks and Financial Inclusion - Nearly all respondents acknowledged the potential operational and financial benefits of properly regulated use of cryptocurrencies. These are enhanced liquidity, cheap remittances, and access to a technologically literate, underserved segment. However, tempting it is there is a concern regarding access and knowledge disparities, particularly rural Ethiopia. What this suggests is that crypto could be a tool of financial inclusion but would depend on parallel investments in digital literacy and infrastructure.

Challenges in AML Implementation - The maturity of blockchain monitoring technology was an inherent challenge. In contrast to centralized platforms such as SWIFT, the decentralized, pseudonymous character of blockchain makes the enforcement of traditional AML and KYC compliance virtually impossible. Respondents demanded that capacity development, technology enhancement, and institutional measures on the coordinating level were immediately necessary to close this gap. In the absence of them, any crypto involvement would introduce compliance risk instead of reducing it.

Financial and Security Risks - Security concerns were consistent across interviews, with threats varying from money laundering and cybercrime to capital flight and monetary instability. Banking professionals and regulators are concerned about the idea that cryptocurrencies enable evading financial regulation. Volatility of prices in digital assets is also seen as a systemic threat. For this, respondents asked for closer collaboration with national security organizations like INSA and the amendment of regulations backed by robust cybersecurity spending.

Policy Recommendations and the Role of NBE - It was widely concurred that the National Bank of Ethiopia must lead a planned, step-by-step regulatory revolution. That is not just law reforms, but regulatory innovations such as regulatory sandboxes, stakeholder involvement, and alignment with global standards. The call for joint policy-making and capacity-building initiatives prior to implementation is based on a realistic understanding: regulatory readiness must precede regulatory reform.

4.3. Data Triangulation and Interpretation

This study employs a mixed-methods approach, combining quantitative survey data from 45 financial sector specialists with qualitative data from key informant interviews. Triangulation is employed to maximize the validity of the findings and to find a richer, more detailed knowledge of Ethiopia's preparedness to regulate cryptocurrency within an Anti-Money Laundering (AML) context.

1. Government Stance and Legal Barriers: Both methods clearly intersect on the fact that regulatory uncertainty is an essential restraint. Every Respondents agreed on the fact that the existing prohibitionist method hinders innovation and increases risk exposure for banks.

2. Opportunities for Banks and Financial Inclusion: Quantitative and qualitative data jointly affirm the potential for fintech-led growth and inclusion, though both caution that systemic readiness and infrastructure gaps could limit impact without parallel investment in capacity-building.

3. Challenges in AML Implementation: Both sources of data affirm a capacity gap in the banking industry of Ethiopia to implement AML on cryptocurrency. Banks, though aware of the imperative to adjust, do not possess the technical, legal, and operational instruments to mitigate crypto-related risks.

4. Financial and Security Risks: Both survey and interviews illustrate a shared perception of cryptocurrency as a high-risk financial tool under the current Ethiopian regulatory context. Risk mitigation especially cybersecurity and traceability is seen as a prerequisite for legal integration.

5. Policy Recommendations and Role of NBE: The quantitative and qualitative data converge in supporting a collaborative, phased, and standards-aligned regulatory roadmap, led by the National Bank of Ethiopia. There is a broad consensus that capacity-building and institutional coordination must precede any regulatory rollout.

The triangulated findings offer a coherent picture: Ethiopia's financial professionals largely support the integration of cryptocurrency under a well-regulated AML framework, but they are acutely aware of the technological, legal, and operational challenges that must be addressed first.

There is a high level of awareness and readiness for innovation, particularly among fintechs and mid-experienced professionals. However, the system still lacks clear legal direction, strong cybersecurity frameworks, trained professionals, and tested compliance mechanisms. Moving forward requires inclusive dialogue, international alignment, and a step-by-step implementation plan anchored by policy experimentation and institutional readiness.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

The research demonstrates a detailed understanding of how the banking sector in Ethiopia responds to AML regulations together with cryptocurrency trading. The study demonstrates that institutions in Ethiopia show increasing awareness of the benefits available through cryptocurrency trading although the practice remains forbidden by law. The participants from various banking institutions including regulatory agencies and financial technology companies all confirmed the absence of an official legal and operational structure for processing cryptocurrency transactions in the country. The existing National Bank of Ethiopia sanctions primarily stop banks and financial institutions from participating in and supporting digital currency transactions. Lack of regulatory infrastructure in Ethiopia brings about financial sector volatility while excluding the country from competing with digital finance innovations in the rest of the world.

The data also showed that Ethiopian banks face grave technical and regulatory challenges to deploying AML compliant crypto systems. Most of the Ethiopian banks lack cutting-edge technology infrastructure, high-level professionals, and clear compliance guidelines for monitoring decentralized financial transactions. Reliable Know Your Customer (KYC) and AML controls are extremely difficult to deploy based on the anonymous nature of crypto transactions and the lack of digital identity verification systems and antiquated data infrastructure.

However, the survey discovered widespread positive attitudes toward using cryptocurrency and blockchain technology to resolve enduring financial industry problems. Blockchain technology according to respondents provides benefits through better transaction visibility together with lower operational expenses and improved cross-border payment systems that enhance financial inclusion among young digital users and diaspora groups. Participants underlined that cryptocurrency trading should receive proper regulation because it can function as an effective method to collect deposits while improving liquidity operations and cutting remittance expenses.

In addition to the experts from regulatory entities and banks, professionals suggested using the EU's MiCA framework alongside FATF's AML recommendations and Basel standards for benchmarking Ethiopia's policies. The industry participants showed agreement that regulatory sandboxes and pilot programs represent valuable tools for evaluating new crypto-related services within predetermined testing environments. The respondents highlighted how these methods would enable Ethiopia to accumulate experience while discovering risks before building institutional capacity for crypto management.

In conclusion, the study finds that while Ethiopia is not yet equipped to integrate cryptocurrency into its formal financial system, there is both recognition of its strategic value and a desire for reform. A balanced, phased, and well-regulated approach tailored to Ethiopia's legal, institutional, and technological context will be essential for leveraging the opportunities that cryptocurrency offers while mitigating its associated risks.

5.2. Recommendation

Ethiopia needs to develop a comprehensive approach for smoothly introducing cryptocurrency into its financial system through a well-structured strategy that simultaneously promotes innovation while executing stringent regulatory controls. The primary focus for Ethiopia should be establishing a detailed legal structure which defines the standard operations for cryptocurrency trading and mining and usage rights. The model will give legal certainty to some cryptocurrency activity under governed systems while establishing unambiguous standards to AML and KYC processes and consumer protection requirements. Implementation of this step will help to facilitate improved bank participation in crypto services as well as avoiding such business outside market authorization by improving legal certainty.

Ethiopia will need to actively use the best practices followed by other countries when establishing its legal framework. The European Union's Markets in Crypto-Assets (MiCA) regulation together with the Financial Action Task Force's (FATF) 40+ Recommendations and the Basel Committee's AML and capital risk guidelines form essential regulatory models. International frameworks provide proven methods for handling digital asset risks which include transaction transparency, cross-border information exchange and institutional compliance. Ethiopia needs to adapt the

regulations it borrows from global models by customizing them to its existing technological capabilities and financial systems as well as its socio-economic environment.

Enabling new legislation will involve big investments in digital infrastructure as well as developing institutional capacity to achieve regulatory compliance. The majority of Ethiopian banks do not have a strong cybersecurity software and blockchain technology alongside compliance systems that are necessary for cryptocurrency financial transactions. The financial sector needs the support of the government through the National Bank of Ethiopia (NBE) to come up with training programs that will educate professionals in blockchain technology, as well as AML regulation and cybersecurity risk management. The financial institutions need to move their business systems forward by building new solutions for digital identity verification and also transaction monitoring and data analytics.

The study underlines the significance of regulatory sandboxes which represent controlled testing zones enabling fintechs and banks to verify crypto services and products while under regulatory assessment. The Ethiopian sandbox model from the past provides an architectural framework which can be developed to safeguard financial stability against trials of unknown products. Through sandbox testing, banks acquire firsthand operations and regulators make use of real performance data to make their policy more robust and consumers acquire controlled exposure to cryptocurrency. In the coming year NBE should lead regulatory sandbox to allow controlled testing of crypto products and services, which would enable fintechs and banks to pilot crypto solutions under regulatory oversight. Lessons from Ethiopia's earlier sandbox initiatives can be expanded to create a safe testing ground, enabling real-time data for policy development, consumer exposure management, and institutional learning.

The other key factor is coordination between agencies. Harmonized policy implementation requires effective coordination between the NBE, Financial Intelligence Service (FIS), commercial banks, fintech operators, and line ministries. These stakeholders should work together to develop national guidelines on customer due diligence, suspicious transaction reporting, and crypto licensing. An effective coordination mechanism will also help prevent jurisdictional overlaps and improve enforcement.

Ethiopia should develop a Central Bank Digital Currency as part of its strategic planning for the upcoming years. The central bank can gain full control of blockchain technology benefits through a state-backed digital currency deployment that functions as a bridge between traditional finance and crypto markets. This strategy would train banks and the general public to handle digital money systems and simultaneously reduce risks associated with price fluctuations and financial anonymity and illegal money transfers.

Finally, the government will need to support public education and digital literacy initiatives. Since most Ethiopians especially rural residents lack knowledge of digital finance tools, inclusive educational campaigns will be important in ensuring that the benefits of cryptocurrency are distributed equally to the people. Such initiatives should include explaining the mechanism of blockchain, the identification of scams, and how to operate in digital financial systems securely. Without such foundation knowledge, no matter how robust the regulatory framework may be, the public will not trust or embrace it.

Overall, the journey of integrating cryptocurrency in Ethiopia must be careful, collaborative, and capacity driven. With sound policies, technologies, and investments in education, the country can harness the potential of cryptocurrency without exposing its financial system to exploitation and volatility.

Reference

- Adedipe, B. (2022). Adoption of the eNaira: Issues and the way forward. CBN Economic and Financial Review, Retrieved from Central Bank of Nigeria's Digital Commons repository
- Aljosh, J., Nicholas, S., Katharina, K., & Edgar, W., (2017). Blocks and Chains Introduction to Bitcoin, Cryptocurrencies, and their Consensus Mechanisms.
- Albrecht, C., Duffin, K.M., Hawkins, S., & Rocha, V. (2019). The use of cryptocurrencies in the money laundering process: A global perspective. *Journal of Money Laundering Control*, 22(2), 210-223.
- Antonopoulos, A.M. (2014) *Mastering Bitcoin: Unlocking Digital Cryptocurrencies*, 1st ed.; O'Reilly Media: Sebastopol, CA, USA; pp. 1–304. ISBN 978-1449374044.
- Antonopoulos, A.M. (2017) *The Internet of Money*, Vol. 2; Merkle Bloom LLC: Denver, CO, USA; pp. 1–180. ISBN 978-1947910065.
- Amaya, T. (2022) Regulating the crypto assets landscape in Japan. Japan Financial Services Agency, Available: <https://www.fsa.go.jp/en/news/2022/20221207/01.pdf> (accessed on 01 February 2025).
- Asfaw, Z. (2021). Challenges and Prospects of Adopting Cryptocurrency in Ethiopia: The Case of Selected Commercial Banks in Addis Ababa. Master's Thesis, St. Mary's University, Addis Ababa, Ethiopia.
- Becker, G. S. (1968). "Crime and Punishment: An Economic Approach." *Journal of Political Economy*, 76(2), 169-217. Available: <https://www.journals.uchicago.edu/doi/10.1086/259394> (accessed on 01 March 2025).
- Berhe, S. (2023). Challenges and Possibilities of Cryptocurrency in Ethiopia. Master's Thesis, St. Mary's University, Addis Ababa.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340, DOI: 10.2307/249008. Available online: <https://www.jstor.org/stable/249008> (accessed on 09 February 2025).

DiMaggio, P. J., & Powell, W. W. (1983). "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review*, 48(2), 147-160.

European Commission. (2020). The Fifth Anti-Money Laundering Directive (5AMLD). Retrieved from <https://ec.europa.eu> (accessed on 25 February 2025).

FSCA. (2021). Crypto Asset Regulation. Financial Sector Conduct Authority, South Africa. Retrieved from <https://www.fsca.co.za> (accessed on 24 February 2025).

FinCEN. (2021). Guidance on Virtual Currencies and Regulatory Responsibilities. Retrieved from <https://fincen.gov> (accessed on 25 February 2025).

Financial Action Task Force (FATF). (2012). International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation: The FATF Recommendations. Available online: <https://www.fatf-gafi.org/content/dam/fatf-gafi/recommendations/FATF%20Recommendations%202012.pdf> (accessed on 01 March 2025).

Georgieva, N. (2020). Concept, definition, and characteristics of the money laundering phenomenon. *Journal of Process Management – New Technologies*, 8(2), 1-29.

Gerbrands, P., Unger, B., Getzner, M., & Ferwerda, J. (2022). The effectiveness of anti-money laundering frameworks: A risk-based approach. *Journal of Economic Crime*, 14(2), 1-23.

Girma, S. (2021). The legal status and regulation of cryptocurrency in Ethiopia (Master's thesis). Addis Ababa University, Addis Ababa, Ethiopia.

Guneet Kaur, Cointelegraph. (2023). An Overview of Cryptocurrency Regulations in South Korea. Available online: <https://cointelegraph.com/learn/articles/crypto-regulations-in-south-korea> (accessed on 20 February 2025).

Harris Beach PLLC. (2021). The Infrastructure Investment and Jobs Act: Building A Road to Liability for Cryptocurrency Industry. Available online: <https://www.harrisbeachmurtha.com/insights/the-infrastructure-investment-and-jobs-act-building-a-road-to-liability-for-cryptocurrency-industry/> (accessed on 02 February 2025).

Houben, R., & Snyers, A. (2018). Cryptocurrencies and blockchain: Legal context and implications for financial crime, money laundering, and tax evasion. European Parliament. Retrieved from <https://www.europarl.europa.eu> (accessed on 02 February 2025).

Internal Revenue Service. Digital Assets. Available online: <https://www.irs.gov/filing/digital-assets> (accessed on 02 February 2025).

Kasula, V. K. (2024). Cryptocurrency: An Opportunity for Traditional Banking? International Journal of Advanced Research in Science, Communication, and Technology, 4(1), Available online: https://www.researchgate.net/publication/388138013_Cryptocurrency_An_Opportunity_for_Traditional_Banking (accessed on 02 February 2025).

Kumar, D, & Lokanan, M. (2022). Money laundering influence on financial institutions and ways to retaliate. Journal of Money Laundering Control

McCarthy, K., van Santen, P., & Fiedler, I. (2015). Modelling the money launderer: Micro Theoretical arguments on anti-money laundering policy. International Review of Law and Economics, 43, 1-9.

Merton, R.C.; Bodie, Z. (2005). The Design of Financial Systems: Towards a Synthesis of Function and Structure. Journal of Investment Management. Available online: <https://www.joim.com> (accessed on 22 February 2025).

Nakamoto, S. Bitcoin (2008). A Peer-to-Peer Electronic Cash System; Bitcoin.org: Available online: <https://bitcoin.org/bitcoin.pdf> (accessed on 20 November 2024).

National Bank of Ethiopia. (2013). Prevention and Suppression of Money Laundering and the Financing of Terrorism Proclamation No. 780/2013. Available online: <https://nbe.gov.et/mandates/proclamation/> (accessed on 02 March 2025).

National Bank of Ethiopia. (2025). Proclamation No. 1359/2025. Available online: <https://nbe.gov.et>

Narayanan, A.; Bonneau, J.; Felten, E.; Miller, A.; Goldfeder, S. (2016). Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction; Princeton University Press: Princeton, NJ, USA; pp. 1–336. ISBN 978-0691171692.

National Information Technology Development Agency (NITDA). (2023). National Blockchain Policy, Available online: <https://nitda.gov.ng/wp-content/uploads/2023/05/National-Blockchain-Policy.pdf> (accessed on 20 March 2025)

Peltzman, S. (1976). "Toward a More General Theory of Regulation." Journal of Law and Economics, 19(2).

Ripple: The Digital Asset for Global Payments. Available online: <https://ripple.com/xrp/> (accessed on 10 October 2025).

Sobrado, B. (2024) Crypto Banks Under Fire? Regulatory Crackdowns and Opportunities. Forbes. Available online: <https://www.forbes.com/sites/digital-assets/2024/10/20/crypto-banks-under-fire-regulatory-crackdowns-and-opportunities/> (accessed on 20 February 2025).

South African Intergovernmental Fintech Working Group (IFWG), (2020) Crypto Assets Regulatory Working Group (2020). Position Paper on Crypto Assets (updated in 2021). <https://www.sars.gov.za/wp-content/uploads/IFWG-CAR-WG-Position-paper-on-crypto-assets.pdf>. (accessed on 10 January 2025)

Stigler, G.J. (1971). The Theory of Economic Regulation. The Bell Journal of Economics and Management Science, 2(1), 3–21. DOI: 10.2307/3003160. Available online: <https://www.jstor.org/stable/3003160> (accessed on 01 February 2025).

Swan, M. (2015). Blockchain: Blueprint for a New Economy; O'Reilly Media: Sebastopol, CA, USA, pp. 1–152. ISBN 978-1491920497.

Tapscott, D.; Tapscott, A. (2016). Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World; Penguin: New York, NY, USA; ISBN 978-0-525-54178-3.

Tewabe, M. (2024). Legal Space for the Creation and Operation of Fintech in Ethiopia. Bahir Dar University Journal of Law.

Shelly S. (2024,). Bitcoin vs. Ethereum: Key differences and use cases. Guides. World Coin Index. Available online: <https://www.worldcoinindex.com/news/bitcoin-vs-ethereum-key-differences-and-use-cases> (accessed on 17 January 2025).

Sun, M. (2025). Monitor appointed in TD Bank \$3 billion anti-money-laundering settlement. The Wall Street Journal. Retrieved from <https://www.wsj.com>

United Nations Capital Development Fund. (2020). Building Ethiopia's digital financial services ecosystem: Barriers and opportunities. <https://www.uncdf.org/article/7399/building-ethiopias-digital-financial-services-ecosystem-barriers-and-opportunities> (accessed on 20 February 2025).

United Nations Development Programme (UNDP). (2023). Cryptocurrency in Africa: Alternative Opportunities for Advancing Sustainable Development Goals. Available online: <https://www.undp.org/africa/publications/cryptocurrency-africa-alternative-opportunities-advancing-sustainable-development-goals> (accessed on 03 November 2024).

U.S. Department of the Treasury. (2024). Treasury, IRS Issue Final Regulations Requiring Broker Reporting of Sales and Exchanges of Digital Assets. Available online: <https://home.treasury.gov/news/press-releases/jy2762> (accessed on 12 December 2024).

Venkatesh, V., & Davis, F. D. (2000). "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies." Management Science, 46(2), 186–204. Available online: <https://www.jstor.org/stable/2634758> (accessed on 20 February 2025).

Interview Questions

Dear Sir/Madam

My name is Kidist Berihu, and I am currently conducting my master's thesis titled ***“Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks.”*** As part of my research, I am collecting relevant data from key government institutions and selected Banks & Fin Tech Institutions.

The _____ has been identified as a vital source of data for regulation related to AML on Cryptocurrency. I am therefore writing to kindly request your support in responding to the questions below and in providing any documents or data you consider relevant and helpful to my research.

Your assistance is greatly appreciated.

Sincerely,

Kidist Berihu

Section A: Regulatory Environment

1. How would you describe the current stance of the Ethiopian government on cryptocurrency trade?
2. What specific legal barriers exist that prevent banks from engaging with cryptocurrency transactions?
3. What international regulatory models do you think could be adapted to Ethiopia's banking sector?

Section B: Opportunities for Banks & Challenges in AML Implementation

4. How do you perceive the potential of AML-compliant cryptocurrency trade for Ethiopian banks?
5. In what ways could banks leverage blockchain technology while ensuring AML compliance?
6. What financial inclusion opportunities do cryptocurrencies present for Ethiopia?
7. What are the major compliance challenges banks in Ethiopia would face if cryptocurrency trade were regulated?
8. Do Ethiopian banks have the technological capacity to implement effective AML frameworks for cryptocurrency transactions?
9. What additional resources or policies do banks require to effectively monitor and regulate crypto transactions?

Section C: Financial and Security Risks

10. What specific risks concern your institution regarding cryptocurrency transactions?
11. How significant is the risk of money laundering through cryptocurrencies in Ethiopia's financial system?
12. How should Ethiopian banks prepare to mitigate fraud and cyber threats associated with crypto transactions?

Section D: Future Prospects and Recommendations

13. What role do you think the National Bank of Ethiopia (NBE) should play in balancing financial innovation and regulatory enforcement?
14. How do you perceive the potential impact of a controlled testing environment on Ethiopian banks?
15. What recommendations would you provide to policymakers regarding cryptocurrency regulation and AML compliance?

Questionnaire:

Dear Sir/Madam

My name is Kidist Berihu, and I am currently conducting my master's thesis titled ***“Formulating Anti-Money Laundering (AML) Regulations for Cryptocurrency Trade in Ethiopia: Opportunities and Barriers for Banks.”*** As part of my research, I am collecting relevant data from key government institutions and selected Banks & Fin Tech Institutions.

The _____ has been identified as a vital source of data for regulation related to AML on Cryptocurrency. I am therefore writing to kindly request your support in responding to the questions below and in providing any documents or data you consider relevant and helpful to my research.

Your assistance is greatly appreciated.

Sincerely,

Kidist Berihu

Instructions: Please indicate your level of agreement with each statement by selecting the appropriate response.

Section A: Demographic Information

1. Which sector do you work in?

- ☐ Commercial Bank (1)
- ☐ Regulatory Institution (e.g., National Bank of Ethiopia) (2)
- ☐ Fintech Company (3)
- ☐ Academia/Research (4)

2. Years of experience in the financial sector:

- ☐ Less than 2 years (1)
- ☐ 2-5 years (2)
- ☐ 6-10 years (3)
- ☐ More than 10 years (4)

Section B: Current Status and Legal Barriers

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
3. Establishing a clear legal framework for cryptocurrency trade is essential for reducing illicit financial risks in Ethiopia.	☐	☐	☐	☐	☐
4. Government policy decisions will significantly determine how cryptocurrencies are integrated into Ethiopia's financial system.	☐	☐	☐	☐	☐

5. The current lack of cryptocurrency regulations creates uncertainty that discourages banks from exploring digital asset opportunities.	☐	☐	☐	☐	☐
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Section C: Opportunities for AML-Compliant Cryptocurrency Trade

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
6. Integrating blockchain technology could enhance transaction transparency and improve AML compliance in Ethiopia's banking sector.	☐	☐	☐	☐	☐
7. Establishing a controlled environment (e.g., regulatory sandbox) could help explore crypto-related services safely.	☐	☐	☐	☐	☐
8. Investing in blockchain technology could support compliance and security in the financial sector.	☐	☐	☐	☐	☐
9. AML-compliant cryptocurrency trade could influence service offerings, revenue models, and operational strategies in Ethiopia's banking sector.	☐	☐	☐	☐	☐
10. AML-compliant cryptocurrency trade may affect financial inclusion and cross-border remittance systems in Ethiopia.	☐	☐	☐	☐	☐

11. Cooperation between government agencies and financial institutions is important for developing crypto policies.	☐	☐	☐	☐	☐
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Section D: Regulatory Challenges in AML Implementation

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
12. Banks in Ethiopia are equipped with the tools and knowledge to manage AML compliance for cryptocurrency.	☐	☐	☐	☐	☐
13. The lack of specific AML guidelines for cryptocurrency creates challenges for compliance.	☐	☐	☐	☐	☐
14. Ethiopian banks are currently prepared to manage AML risks if cryptocurrency trade becomes legal.	☐	☐	☐	☐	☐
15. Ethiopian banks have sufficient resources to ensure AML compliance in a future crypto-enabled environment.	☐	☐	☐	☐	☐

Section E: Risks of Cryptocurrency Trade to Financial Security

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
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16. Cryptocurrency transactions could present money laundering risks within Ethiopia's financial system.	☐	☐	☐	☐	☐
17. Cybersecurity should be a key consideration when assessing the impact of cryptocurrency transactions on banks.	☐	☐	☐	☐	☐
18. The price volatility of cryptocurrencies may affect their practical use in Ethiopia's banking sector.	☐	☐	☐	☐	☐
19. Legalizing cryptocurrency trade could introduce regulatory, operational, or security challenges for Ethiopian banks.	☐	☐	☐	☐	☐

Open-ended Question:

- ☐ What policy recommendations would you give to improve Ethiopia's approach to cryptocurrency regulation?