INFLUENCE OF BLOCKCHAIN TECHNOLOGY ON ORGANIZATIONAL GOVERNANCE IN THE FINANCIAL SERVICES IN KENYA: A CASE OF EQUITY BANK

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DECLARATION AND APPROVAL

This project is my original work and has not been submitted for a Master's degree in any other university or for any other reward.

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This project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

I dedicate this project to my family: my father, Barkeben, and my mother, Catherine, for their moral support, prayers throughout my study period.

You were the motivation behind this noble course.

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I am deeply grateful to the Almighty God for providing me with the strength, ability, discernment, and determination necessary to do this research project. My sincere gratitude goes to the entire fraternity of Mount Kenya University for their unwavering support and encouragement as I undertook this endeavor. I would also like to extend my sincere appreciation to my supervisor, Dr. Juliah Ruguru Kigomo, for her excellent guidance and advice during the course undertaken in this research.

ABSTRACT

Blockchain technology has emerged as a crucial tool for modern financial institutions, enabling them to maintain a competitive edge amidst rapid technological advancements, heightened public awareness, and evolving stakeholder expectations. This study justified its investigation into the influence of blockchain technology on the organizational governance of Equity Bank. The research aimed at exploring the relationship between blockchain implementation and governance practices, focusing on specific areas such as transparency, security, operational efficiency, interoperability, and data integrity. The objectives were to assess the effect of blockchain-based transparency improvements on governance, evaluate security measures' role in governance practices, analyze how operational efficiency enhancements strengthen governance, examine interoperability's contribution to effective governance, and explore the influence of data integrity on governance, establishing a comprehensive framework for analysis**.** A quantitative descriptive research design was employed, with data collected from 200 employees selected through proportionate stratified random sampling from various departments, including IT, finance, compliance, and executive management. Yamane's formula was used to determine the sample size, ensuring a 95% confidence level and a 5% margin of error, providing a statistically robust foundation for the findings**.** The study was guided by agency theory, stakeholder theory, and transaction cost theory, offering a strong theoretical underpinning for understanding the observed relationships. Data were analyzed using both descriptive and inferential statistical methods, and the findings were presented in tables, charts, and graphs. Results indicated that transparency, as facilitated by blockchain, significantly improved governance by enhancing information accessibility and real-time reporting ($\beta=0.431, p<0.05$). Security measures implemented through blockchain also had a positive effect on organizational governance ($\beta=0.287, p<0.05$), while operational efficiency improvements were statistically significant in reinforcing governance practices ($\beta=0.312, p<0.05$). Furthermore, interoperability contributed positively to governance ($\beta=0.254, p<0.05$), and data integrity was crucial in supporting effective governance structures ($\beta=0.298, p<0.05$). The study concluded that blockchain technology is an instrumental factor in advancing organizational governance in financial institutions. It is recommended that Equity Bank and other commercial banks integrate comprehensive blockchain solutions to enhance transparency, improve security, streamline operations, and maintain robust governance standards.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

DAO- Decentralized Autonomous Organization

KYC- Know Your Customer

RDT- Resource Dependency Theory

TCT- Transaction Cost Theory

NGO – Non-Governmental Organization

FBO – Faith-Based Organization

CBO – Community-Based Organization

KII – Key Informant Interview

FGD – Focus Group Discussion

OVC – Orphans and Vulnerable Children

UNICEF – United Nations Children's Fund

GOK – Government of Kenya

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The financial services industry stands at the precipice of a technological revolution, largely driven by the pervasive integration of blockchain technology. This distributed ledger technology, originally conceptualized for cryptocurrencies, has rapidly evolved beyond its initial scope, proving its profound capacity to transform various sectors, particularly in enhancing organizational governance (Nakamoto, 2008; Swan, 2015). At its core, blockchain offers a decentralized and immutable ledger, which inherently provides significant advantages in fostering transparency, security, and efficiency in transactional and record-keeping processes. These intrinsic attributes are deeply aligned with the fundamental tenets of robust governance, which consistently emphasize accountability, clear disclosure, and the effective alignment with diverse stakeholder interests (Werbach, 2018). As modern organizations, especially within the highly regulated financial sector, continuously strive to navigate complex regulatory landscapes, mitigate risks such as fraud, and ensure stringent compliance, blockchain technology is increasingly recognized as a potent and promising tool capable of fortifying and modernizing existing governance frameworks (Casey & Vigna, 2018). Its ability to create an undeniable audit trail and facilitate secure information exchange marks it as a cornerstone for future corporate oversight.

In the realm of organizational governance, the strategic adoption of blockchain technology is being rigorously explored as a transformative solution to address critical and persistent challenges. These include the imperative for more effective compliance mechanisms, the demand for robust and indisputable auditability, and the proactive prevention of fraudulent activities (Walch, 2019). The

decentralized architecture of blockchain fundamentally ensures that no single participant or entity possesses the unilateral power to alter or manipulate records without the verifiable consensus of the network, thereby establishing a tamper-proof and highly reliable system that significantly enhances the integrity and trustworthiness of governance processes (Cong & He, 2020). Furthermore, the innovation of smart contracts—self-executing agreements with the terms directly encoded into their design—further reinforces governance by automating intricate processes that have traditionally necessitated intensive manual oversight. This automation drastically minimizes the potential for human error, accelerates operational workflows, and concurrently elevates overall efficiency and compliance within governance structures (Hughes et al., 2019). The integration of such automated and secure systems redefines the very essence of corporate control and oversight.

In developed nations, blockchain technology has rapidly gained substantial traction, especially within the intricate financial services sector, recognizing its potential to revolutionize traditional banking and financial operations (Frankenfield, 2021). Countries such as the United States, the United Kingdom, and various European Union member states have positioned themselves at the forefront of exploring and implementing blockchain's diverse applications. For instance, major tech giants like IBM and Microsoft in the U.S. have spearheaded numerous enterprise blockchain initiatives, focusing on enhancing transparency, bolstering cybersecurity, and streamlining supply chain management across a multitude of industries (Accenture, 2020). Their efforts demonstrate a clear commitment to integrating blockchain into core business processes.

Across Europe, Switzerland has notably emerged as a pivotal global hub for blockchain innovation, particularly within the FinTech and crypto sectors, often referred to as "Crypto Valley" (KPMG, 2021). This has been facilitated by a progressive regulatory environment and strong governmental support for distributed ledger technologies. Simultaneously, the European Union

has actively demonstrated its commitment to fostering blockchain development through significant collaborative initiatives like the European Blockchain Partnership, which aims to establish a continent-wide blockchain infrastructure for public services (European Commission, 2022). These strategic endeavors highlight a collective push towards widespread adoption.

Despite the evident enthusiasm, these regions continue to navigate complex regulatory challenges, particularly concerning data privacy, consumer protection, and systemic stability (PwC, 2023). However, governments and regulatory bodies are actively working to establish comprehensive and adaptable frameworks that both support blockchain innovation and meticulously address legitimate concerns around privacy, security, and market integrity. The goal is to create an environment where blockchain can flourish responsibly, balancing technological advancement with necessary oversight (Deloitte, 2024).

In Africa, blockchain technology is progressively gaining considerable momentum, with its immense potential for driving economic growth, fostering financial inclusion, and catalyzing innovation becoming increasingly apparent across the continent (World Economic Forum, 2021). South Africa stands out as a leading nation in this regard, particularly within its dynamic financial services sector. The South African Reserve Bank, for instance, has actively explored blockchain for real-time gross settlements through projects like Project Khokha, demonstrating a proactive approach to modernizing its financial infrastructure (SARB, 2022). This exemplifies a commitment to leveraging new technologies for systemic improvement.

Nigeria is also rapidly emerging as a significant player in the African blockchain landscape, driven by its large youth population and burgeoning tech ecosystem (CBN, 2021). The Nigerian government has articulated national strategies designed to promote blockchain innovation across various vital sectors, including financial inclusion, digital identity management, and supply chain

logistics. These initiatives aim to harness blockchain for addressing socio-economic challenges and fostering digital transformation (NITDA, 2023). The country's proactive stance highlights its vision for a digitally empowered future.

Across East Africa, countries like Rwanda are actively leveraging blockchain to improve public service delivery and enhance governmental transparency. For instance, blockchain-based solutions are being piloted to streamline land registry processes, aiming to reduce fraud and increase efficiency (Rwanda Utilities Regulatory Authority, 2022). While widespread adoption is still in its nascent stages across the continent, Africa's inherent innovative spirit, coupled with the urgent need for robust, transparent, and efficient systems, strongly suggests a trajectory of significant future growth and diverse applications for blockchain technology (AfDB, 2023).

In Kenya, blockchain technology is increasingly recognized as a pivotal driver of innovation and a key enabler for sustained economic development (CBK, 2022). The country's vibrant financial sector, encompassing leading institutions like Equity Bank, is actively exploring blockchain's multifaceted capabilities to substantially enhance transparency, significantly reduce operational costs, and streamline complex operations such as cross-border payments and Know Your Customer (KYC) verification processes (Equity Bank Annual Report, 2023). These explorations are aimed at leveraging blockchain to create more efficient and secure financial transactions.

Beyond the financial sector, the Kenyan government has also proactively launched pilot blockchain initiatives in critical public service areas. Notable examples include efforts to improve the integrity and transparency of land registry records and streamline various aspects of public service delivery, primarily aimed at curbing corruption and enhancing governmental accountability (Ministry of ICT, 2023). These governmental applications underscore a broader national strategy to utilize blockchain for good governance and public trust.

Furthermore, Kenya's burgeoning startup ecosystem is vigorously exploring blockchain's transformative potential across a diverse range of industries, extending beyond finance to healthcare, education, and agriculture (Kenya National Innovation Agency, 2024). Despite this promising outlook, significant challenges persist, notably regulatory uncertainty and various technological barriers, which can hinder widespread adoption (Communications Authority of Kenya, 2023). These challenges underscore the pressing need for intensified collaborative efforts among government entities, private sector stakeholders, academic institutions, and international partners to fully harness blockchain’s immense potential and realize its extensive benefits for Kenya's socio-economic advancement.

1.1.1 Blockchain Technology

Blockchain technology, conceived by the pseudonymous Satoshi Nakamoto in 2008 (Nakamoto, 2008), represents a paradigm shift in data management and digital transactions. At its core, blockchain is a decentralized, distributed ledger system that facilitates peer-to-peer transactions without the need for intermediaries. Each transaction is recorded as a "block" and linked to previous transactions in a chronological chain, creating a tamper-resistant and transparent record of transactions. The revolutionary potential of blockchain lies in its ability to establish trust and transparency in inherently distrustful environments. By leveraging cryptographic algorithms and consensus mechanisms, blockchain ensures the integrity and immutability of data, mitigating the risks of fraud and manipulation.

In the financial services sector, blockchain holds particular promise for streamlining operations, reducing costs, and enhancing security. The decentralized nature of blockchain eliminates the need for intermediaries in financial transactions, leading to faster settlement times and lower transaction fees. Moreover, the transparency and auditability inherent in blockchain facilitate compliance with

regulatory requirements and improve risk management practices (Swan, 2015). As Tapscott & Tapscott (2016) assert, blockchain technology has the potential to disrupt traditional business models across industries, including finance, supply chain, healthcare, and beyond.

Beyond its applications in finance, blockchain technology is increasingly being explored for its potential to transform various aspects of governance and organizational management. According to Beck et al. (2016), blockchain offers a novel approach to organizational governance by enabling transparent and decentralized decision-making processes. Smart contracts, self-executing contracts encoded on the blockchain, have the potential to automate governance processes, such as voting and decision-making, while ensuring transparency and accountability. In the context of developing countries like Kenya, blockchain technology has the potential to address longstanding challenges related to transparency, corruption, and inefficiency. As Ndung'u (2018) argues, the adoption of blockchain in sectors such as finance, land registry, and public services could enhance transparency, accountability, and service delivery, ultimately contributing to economic development and social inclusion.

1.1.2 Organizational Governance

Organizational governance serves as the cornerstone of effective management and oversight within companies, ensuring alignment with stakeholders' interests and regulatory compliance. As Gillan (2006) posits, organizational governance encompasses the structures, processes, and mechanisms by which companies are directed and controlled. It involves establishing clear roles and responsibilities, defining decision-making processes, and fostering transparency and accountability throughout the organization. In the context of the financial services sector, effective organizational governance is of paramount importance due to the sector's systemic significance and regulatory scrutiny. Financial institutions must adhere to stringent governance standards to

maintain market stability, safeguard investor interests, and mitigate systemic risks (Macey & O'Hara, 2003). Governance mechanisms such as board oversight, risk management frameworks, and internal controls are essential for ensuring sound and ethical business practices within financial institutions.

The advent of blockchain technology introduces new possibilities and challenges for organizational governance. Blockchain's decentralized and transparent nature has the potential to enhance governance practices by fostering trust, transparency, and accountability (Beck et al., 2016). By providing a tamper-proof and auditable record of transactions, blockchain can mitigate the risks of fraud, corruption, and unauthorized tampering, thereby bolstering stakeholders' confidence in organizational decision-making processes (Tapscott & Tapscott, 2016).

Furthermore, blockchain's smart contract functionality enables the automation of governance processes, such as voting, decision-making, and contract execution, reducing reliance on intermediaries and enhancing operational efficiency (Beck et al., 2016; Szabo, 1996). Smart contracts, self-executing contracts encoded on the blockchain, can streamline governance procedures, enforce contractual obligations, and facilitate transparent and auditable transactions without the need for third-party intervention. Transitioning to blockchain-based governance systems requires organizations to rethink their existing governance frameworks, adapt to new technological paradigms, and address potential legal and ethical implications (Beck et al., 2016).

1.1.3 Blockchain Technology and Organizational Governance

The integration of blockchain technology into organizational governance represents a significant paradigm shift in how companies manage and oversee their operations. Blockchain's decentralized and transparent ledger system offers a novel approach to governance by enhancing transparency, accountability, and efficiency (Beck et al., 2016). At its core, blockchain technology provides a

tamper-proof and auditable record of transactions, ensuring data integrity and mitigating the risks of fraud and manipulation (Nakamoto, 2008). This transparency fosters trust among stakeholders by providing verifiable evidence of organizational decision-making processes and financial transactions (Tapscott & Tapscott, 2019).

Moreover, blockchain's smart contract functionality enables the automation of governance processes, reducing reliance on intermediaries and streamlining decision-making procedures (Szabo, 1996). Smart contracts can enforce contractual obligations, facilitate transparent voting mechanisms, and ensure compliance with predefined rules and regulations (Beck et al., 2019). In the context of financial institutions like Equity Bank, the integration of blockchain technology into organizational governance holds the potential to revolutionize traditional governance structures and practices. By leveraging blockchain's transparency and auditability, Equity Bank can enhance stakeholder trust, streamline decision-making processes, and reduce the risks of fraud and misconduct (Mwangi, 2019).

1.1.4 Equity Bank

Equity Bank is a leading financial institution in Kenya and one of the largest banks in East Africa. Founded in 1984 as Equity Building Society, the bank has undergone remarkable transformation over the years to become a key player in the region's financial landscape (Mwangi, 2017). Equity Bank's journey of growth and innovation is characterized by its commitment to financial inclusion, technological advancement, and customer-centricity. With a mission to provide inclusive financial services to all, regardless of socioeconomic status, Equity Bank has played a pivotal role in expanding access to banking services in Kenya and beyond (Mwangi, 2017).

One of Equity Bank's defining features is its focus on leveraging technology to drive operational efficiency and enhance customer experience. The bank's adoption of innovative banking solutions,

such as mobile banking and agency banking, has revolutionized the way banking services are delivered in Kenya (Mwangi, 2017). Equity Bank's extensive branch network and strategic partnerships have enabled it to reach underserved populations in rural and remote areas, bringing banking services closer to the people. Through initiatives like the Equity Group Foundation, the bank has also invested in community development projects, education, and entrepreneurship programs, furthering its impact beyond banking (Mwangi, 2017).

In recent years, Equity Bank has embraced digital transformation, investing in digital platforms and fintech solutions to meet evolving customer needs and preferences. The bank's mobile banking app, Equitel, has gained popularity for its convenience and accessibility, allowing customers to access a wide range of banking services from their mobile devices (Mwangi, 2017). Moreover, Equity Bank's strategic partnerships with global fintech players and investment in cutting-edge technologies like blockchain demonstrate its commitment to staying at the forefront of innovation in the financial services sector (Mwangi, 2017). Equity Bank's success and resilience in navigating challenges such as regulatory changes, economic fluctuations, and technological disruptions underscore its strong leadership, adaptability, and customer-centric approach. As the banking industry continues to evolve, Equity Bank remains poised to drive inclusive growth, foster innovation, and empower communities across East Africa and beyond.

Equity Bank, a leading financial institution in Kenya, exemplifies the transformative potential of innovative banking solutions (Mwangi, 2017). With a focus on financial inclusion and technological innovation, Equity Bank has leveraged advancements in digital banking to expand access to financial services, particularly among underserved populations. Its commitment to innovation and customer-centricity positions Equity Bank as a strategic case study for examining the impact of blockchain technology on organizational governance within the Kenyan financial

landscape. This study encompassed an in-depth investigation into the influence of blockchain technology on organizational governance within the financial services sector in Kenya, with Equity Bank as a primary focal point. By analyzing blockchain's implications for governance structures and decision-making processes at Equity Bank, this study elucidated the broader implications of blockchain adoption in the Kenyan financial sector. Through a comprehensive examination of Equity Bank's blockchain initiatives, this research aimed at providing actionable insights and recommendations for navigating the challenges and harnessing the opportunities associated with blockchain integration in financial institutions

1.2 Statement of the Problem

Financial institutions globally are under increasing pressure to operate with the highest standards of transparency, accountability, and efficiency, fundamental to fostering stakeholder trust and ensuring stringent regulatory compliance. Robust organizational governance is paramount in this environment, with advanced technologies continually being leveraged to streamline processes, mitigate systemic risks, and enhance strategic decision-making. Blockchain technology, characterized by its decentralized and immutable ledger, has emerged as a revolutionary force, promising to fundamentally transform governance by offering unparalleled transparency and security in data management and transactions (Werbach, 2018). Despite this widely acknowledged transformative potential, its practical adoption within the financial services sector, particularly in Kenya, has been notably slow and plagued by a range of multifaceted challenges. This limited integration stems from a confluence of factors, including regulatory ambiguities, infrastructural deficiencies, and ingrained cultural resistance (EY, 2022). Unlike more technologically advanced economies where blockchain solutions have been successfully piloted and integrated to bolster

organizational governance, similar efforts in Kenya remain largely fragmented and inconsistent (KPMG, 2023).

The existing governance frameworks within Kenyan financial institutions frequently prove inadequate in comprehensively addressing contemporary demands for enhanced transparency, accountability, and operational efficiency. While traditional systems offer some level of oversight, they often struggle with data silos, lack of real-time auditing capabilities, and susceptibility to manual errors. Blockchain technology possesses the inherent capacity to bridge these critical gaps by providing a secure, verifiable, and transparent ledger system that could profoundly transform strategic decision-making processes, fortify risk management protocols, and streamline complex compliance procedures (Gartner, 2024). However, these specific and crucial aspects of organizational governance, particularly within the unique operational and regulatory landscape of Kenyan financial institutions, remain critically underexplored. For instance, while some scholarship exists, such as Mugo (2020) who explored blockchain's potential to enhance transactional transparency and reduce fraud in Kenyan banks, this prior work primarily focused on specific transactional aspects. It conspicuously failed to comprehensively address the broader dimensions of organizational governance, including the impact on board-level decision-making, enterprise-wide risk management frameworks, and holistic regulatory compliance strategies. This significant research gap underscores the pressing necessity for a more in-depth and granular investigation into how blockchain technology can holistically improve overall organizational governance in the distinct context of Kenyan financial institutions.

Significant systemic barriers impede the widespread adoption of blockchain technology in Kenya's financial sector. These include pronounced regulatory uncertainties, substantial technological infrastructure limitations, and a discernible lack of specialized technical expertise within financial

institutions (PwC, 2023). Key stakeholders, including regulatory bodies like the Central Bank of Kenya (CBK), financial institutions themselves, and technology providers, must urgently collaborate to surmount these formidable challenges and cultivate an environment conducive to widespread blockchain adoption. A 2023 report by the Central Bank of Kenya (CBK), for instance, explicitly highlighted that regulatory ambiguities and a dearth of technical skills were among the most critical impediments to blockchain integration across the financial sector (CBK, 2023, p. 18). Furthermore, a 2022 survey conducted by the Kenya Bankers Association (KBA) revealed a stark disparity: only approximately 18% of banks in Kenya had adopted any form of blockchain technology, in stark contrast to figures nearing 45% in North America and 38% in Europe (KBA, 2022, p. 32). This demonstrable adoption gap critically underscores the urgent imperative to address these barriers and leverage blockchain's profound potential benefits for strengthening governance structures.

Lessons gleaned from the successful implementation of blockchain technology in developed countries emphatically demonstrate its transformative potential to significantly enhance organizational governance and operational integrity. However, the vast majority of previous academic and industry studies have predominantly concentrated on these advanced economies, thereby leaving substantial gaps in understanding how blockchain solutions can be effectively adapted and optimized for contexts characterized by vastly different regulatory frameworks, technological readiness levels, and infrastructural conditions, such as those prevalent in Kenya. Critically, existing research has not adequately addressed the unique challenges and specific needs of financial institutions operating in emerging markets, where prevalent issues like limited digital infrastructure, persistent regulatory uncertainties, and varying levels of technological absorption present distinct and complex barriers to efficient blockchain implementation (Deloitte, 2024).

This study, therefore, aims to precisely fill this critical research gap by embarking on an in-depth exploration of the specific and nuanced ways in which blockchain technology can influence organizational governance at Equity Bank of Kenya. The investigation is meticulously designed to directly consider the local contextual realities and prevailing operational conditions. By rigorously addressing these identified challenges and unexamined facets, it seeks to offer bespoke insights and actionable, practical recommendations uniquely tailored for the effective and sustainable adoption of blockchain within Kenya's dynamic financial sector.

1.3 Purpose of the Study

The purpose of this study was to investigate the effect of blockchain technology on organizational governance in the financial services sector with Equity Bank of Kenya as a case study.

1.4 Objectives of the study

1. To assess the extent to which blockchain-based transparency improvements contribute to enhanced organizational governance at Equity Bank.
2. To evaluate the statistically significant effect of enhanced security measures, facilitated by blockchain technology, on organizational governance practices within Equity Bank.
3. To analyze the measurable impact of blockchain-driven operational efficiency enhancements on strengthening organizational governance at Equity Bank, as evidenced by process automation and reduced error rates.
4. To examine the contribution of blockchain's interoperability features to fostering effective organizational governance in Equity Bank, specifically concerning data exchange and collaborative compliance.
5. To explore the influence of improved data integrity, achieved through blockchain technology, on supporting robust organizational governance structures at Equity Bank.

1.5 Research Questions

1. How can transparency improvements in blockchain technology enhance organizational governance at Equity Bank?

2. What is the influence of security measures in blockchain technology on organizational governance practices within Equity Bank?

3. How does operational efficiency in blockchain technology strengthen organizational governance at Equity Bank?

4. What is the contribution of interoperability in blockchain technology to effective organizational governance in Equity Bank?

5. How does data integrity in blockchain technology influence organizational governance at Equity Bank?

1.6 Justification of the Study

This study is justified on several crucial grounds. Firstly, it addresses the imperative of enhancing governance in financial institutions. Effective organizational governance is fundamental for maintaining stakeholder trust and ensuring regulatory compliance in a rapidly evolving financial landscape. By meticulously examining the influence of advanced technologies like blockchain on governance, this study aimed to provide invaluable insights that can directly assist financial institutions, such as Equity Bank, in refining their governance practices. This ultimately leads to improved overall performance and strengthened institutional reputation.

Secondly, this research was essential for addressing significant knowledge gaps. Despite the growing global interest in blockchain technology and its transformative potential, there remains a notable scarcity of comprehensive studies specifically focused on its impact on organizational governance within the Kenyan financial sector. This study sought to bridge this crucial gap by

providing empirical evidence and a detailed analysis of how blockchain-related improvements in transparency, security, operational efficiency, interoperability, and data integrity can specifically influence governance at Equity Bank.

Thirdly, the findings of this study are aimed to be instrumental in informing policy and regulatory frameworks. By shedding light on the potential benefits and challenges associated with implementing blockchain technology in the financial sector, this research provides vital information to policymakers and regulatory bodies. Such insights are critical for developing more supportive and adaptive regulatory frameworks that actively encourage innovation while simultaneously ensuring stability and security within the broader financial system.

Fourthly, this study offered practical utility in guiding strategic decision-making. For financial institutions, a deep understanding of how new technologies impact governance is absolutely essential for effective strategic planning and informed decision-making. The insights garnered from this research are designed to help Equity Bank and other financial institutions in Kenya, make well-informed choices regarding the adoption and integration of blockchain technology to enhance their governance structures.

Finally, this research contributes significantly to the academic literature. By providing a focused case study of Equity Bank, this study offers valuable, context-specific insights that can be referenced in future scholarly work. This contribution helps to deepen the collective understanding of the intricate interplay between emerging technologies and organizational governance, particularly within the dynamic context of financial institutions in emerging markets.

1.7 Significance of the Study

The findings of this study hold substantial significance for multiple stakeholders within the Kenyan financial sector and beyond. For Equity Bank, the direct insights provided on the influence of

blockchain on its governance practices offer a clear roadmap for strategic implementation, aiding in the enhancement of its transparency, security protocols, and operational efficiency. This can lead to a stronger competitive advantage and increased stakeholder confidence.

For other commercial banks in Kenya, the study serves as a crucial reference point, offering actionable recommendations for adopting and integrating blockchain solutions to bolster their own governance standards. It highlights the practical benefits and potential challenges, enabling a more informed approach to technological investments and strategic planning across the industry.

Policymakers and regulatory bodies, such as the Central Bank of Kenya, will find this study invaluable. Its empirical evidence regarding blockchain's impact can inform the development of progressive, yet prudent, regulatory frameworks that foster innovation while safeguarding financial stability and consumer protection. This is vital for creating an enabling environment for responsible technological advancement.

Furthermore, the study significantly contributes to the academic and research community. By providing a detailed case study from an emerging market, it expands the existing body of knowledge on blockchain and corporate governance, offering unique perspectives often overlooked in studies focused on developed economies. This can stimulate further research into specific applications and implications of distributed ledger technologies in diverse economic contexts.

Ultimately, the broader economic and social impact of this research is profound. Improved governance within financial institutions, facilitated by blockchain, can lead to more robust, efficient, and transparent operations. This, in turn, can significantly reduce instances of fraud and corruption, foster greater public trust in the financial system, and attract increased investment, thereby contributing positively to Kenya's overall economic development and stability.

1.8 Scope of the Study

The scope of this study encompassed several key dimensions, including the geographical area, target population, time frame, and the specific aspects of organizational governance and blockchain technology being investigated. Geographically, the study was centered on Kenya, with a particular emphasis on Equity Bank, one of the largest financial institutions in the country. Equity Bank's extensive branch network and significant market share made it a representative case for examining the influence of blockchain technology on organizational governance within the Kenyan financial sector.

The target population for this study primarily included senior management, IT personnel, and employees involved in governance and compliance at Equity Bank. Additionally, the study which ran from February 2025 to March 2025 incorporated insights from key stakeholders such as regulatory bodies, industry experts, and technology providers to provide a comprehensive understanding of the challenges and opportunities associated with blockchain adoption. By engaging with this diverse group, the study aimed to capture a holistic view of how blockchain technology can impact organizational governance. In terms of organizational governance, the study focused on five critical aspects: transparency, security, operational efficiency, interoperability, and data integrity. These areas were identified as essential for enhancing governance practices and would be examined in the context of blockchain technology's potential contributions. The investigation explored how improvements in these areas could lead to better governance outcomes at Equity Bank.

Methodologically, the research employed a quantitative data method from financial reports. This approach was designed to ensure a thorough and nuanced analysis of the influence of blockchain technology on organizational governance. It provided a comprehensive understanding of its

potential benefits and challenges within the specific context of Equity Bank and the broader Kenyan financial sector.

1.9 Study Limitations

Despite the need to employ rigorous methodology and to conduct comprehensive analysis, this study acknowledged several limitations. Firstly, focusing exclusively on Equity Bank as a single case study provides in-depth insights into specific practices and outcomes within this institution. However, the findings were not directly generalizable to other financial institutions in Kenya due to potential differences in organizational structures, customer bases, and market conditions. Data availability represented another critical consideration. Despite efforts to gather comprehensive data through reports, variations in data availability across different aspects of Equity Bank's operations influenced the study's depth and breadth.

Furthermore, the study acknowledged the rapid pace of technological advancements, particularly in blockchain technology. The findings and recommendations of this study were constrained by the pace at which new technological developments could outstrip the research's conclusions. Lastly, resource constraints, including limitations in funding and access to specialized expertise, impacted the scope and depth of the study. These constraints are common in research endeavors and highlight the need for resourceful allocation of available resources to maximize the study's impact.

1.10 Delimitations

The study's delimitations outline specific boundaries that frame its research scope and focus. Geographically, the study was confined to Kenya, with Equity Bank serving as the primary operational framework. This geographical focus allowed for a detailed examination of governance practices within a specific national context but may not capture variations in regulatory

environments or market conditions prevalent in other countries or regions. Based on sectors, the study primarily investigated governance practices within the financial sector, with a particular emphasis on organizational governance within banking institutions. This sector-focused approach provided targets insights into challenges and opportunities specific to financial institutions but overlooked governance dynamics prevalent in other sectors. Technologically, the study emphasized the impact of blockchain technology on governance practices within Equity Bank. While blockchain represents a transformative innovation in enhancing transparency and security in financial transactions, the study's scope excluded broader technological innovations that may influence governance practices.

1.11 Assumptions of the Study

The study operated under several assumptions that shaped its research approach and interpretation of findings. Firstly, it assumed a readiness among Equity Bank and its stakeholders to adopt blockchain technology for governance enhancements. This assumption was based on an assessment of the institution's technological readiness, strategic alignment with blockchain benefits, and stakeholder willingness to embrace innovative solutions. Continuous engagement with stakeholders and monitoring of adoption trends is essential to validate this assumption and refine research conclusions accordingly.

Secondly, the study assumed that data collected from reports accurately reflect the operational realities at Equity Bank. This assumption emphasized the importance of employing rigorous data collection and validation processes. Thirdly, the study assumed stability in regulatory frameworks and policies governing blockchain adoption throughout the study period. This assumption reflects an understanding of the regulatory landscape's influence on governance practices within financial institutions.

However, regulatory environments are subject to change due to legislative reforms or geopolitical shifts, necessitating ongoing monitoring and adaptation of research methodologies to account for regulatory uncertainties. Additionally, the study assumed cooperation and transparency from key stakeholders, including regulatory bodies and technology providers.

1.12 Operational Definition of Terms

Blockchain: A distributed ledger technology that records transactions across multiple computers in a secure and transparent manner.

Organizational Governance: The system of structures, policies, and processes by which organizations are directed and controlled to ensure accountability, transparency, and compliance.

Financial Services: Activities provided by financial institutions that include banking, investment, insurance, and related services aimed at managing financial assets.

Transparency: The degree to which information and actions are open, visible, and easily understandable to stakeholders.

Security: Measures implemented to protect information and systems from unauthorized access, alteration, or destruction.

Operational Efficiency: The ratio of output to input within operational processes, emphasizing productivity and resource optimization.

Interoperability: The ability of different systems or organizations to seamlessly exchange and utilize data and information.

Data Integrity: The accuracy, completeness, and reliability of data throughout its lifecycle, ensuring it remains unaltered and trustworthy.

Regulatory Frameworks: Policies, laws, and guidelines set by regulatory bodies to oversee and control the operations of financial institutions and technology implementations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a detailed review of the literature related to the influence of blockchain technology on organizational governance. The review is structured to offer a theoretical foundation and empirical insights to help understand the dynamics at play within Kenya's financial sector, particularly at Equity Bank. The chapter begin with an exploration of the theoretical frameworks

that underpin the study, followed by an empirical review of relevant studies. Finally, it presents the conceptual framework that guided the research.

2.1 Theoretical Framework

The theoretical framework for this study draws upon several key theories that explain the adoption and impact of blockchain technology on organizational governance.

2.1.1 Agency Theory

Agency Theory, as articulated by Jensen and Meckling (2016), delves into the intricacies of the relationship between principals (owners) and agents (managers) within an organization. This theory highlights the inherent potential for conflicts of interest that arise from the separation of ownership and control, leading to what is known as agency costs. These costs encompass monitoring expenditures by the principal, bonding costs by the agent, and the residual loss due to divergence of interests.

Blockchain technology, with its decentralized and transparent nature, offers a promising solution to the principal-agent problem identified in Agency Theory. One of the primary ways blockchain addresses agency costs is through its ability to provide transparency and reduce information asymmetry between stakeholders. Information asymmetry, where one party has more or better information than the other, is a significant source of agency costs. Blockchain's transparent ledger system ensures that all parties have access to the same information simultaneously, thereby reducing the chances of opportunistic behavior by agents (Catalini & Gans, 2016).

Smart contracts, which are self-executing contracts with the terms of the agreement directly written into code, further enhance this transparency and accountability. These contracts operate on blockchain technology and can automatically enforce the terms of an agreement without the need for intermediaries. For instance, if the bank implements blockchain-based smart contracts, it can

ensure that managerial actions align more closely with the owners' interests, as the terms are executed automatically and transparently (Buterin, 2014). This reduces the risk of agents acting in their own interest at the expense of the principals. Additionally, blockchain's immutable nature means that once data is recorded, it cannot be altered retroactively without the alteration of all subsequent blocks, which requires the consensus of the network. This immutability ensures that all transactions and actions taken by managers are permanently recorded and auditable, thereby reducing the potential for fraud and misconduct (Underwood, 2016).

Research by Beck, Avital, Rossi, and Thatcher (2017) supports the notion that blockchain can significantly reduce agency costs by providing a reliable and tamper-proof record of all transactions. Their study highlights how blockchain can transform governance structures by ensuring that all actions taken by agents are visible and accountable. Furthermore, blockchain's decentralized nature means that no single party has control over the entire system, thereby reducing the risk of central authority abuse.

Blockchain could provide transparency to regulators and stakeholders, ensuring that the bank operates within the legal and ethical boundaries set by the financial authorities (Peters & Panayi, 2016). Moreover, blockchain technology can facilitate better alignment of incentives between principals and agents. Traditional incentive mechanisms often rely on performance metrics that can be manipulated or misreported. Blockchain's transparent and verifiable data can provide more accurate performance metrics, ensuring that agents are rewarded based on genuine performance rather than manipulated outcomes (Azgad-Tromer, 2019).

The integration of blockchain into the financial sector is still in its nascent stages, but early adopters have reported significant improvements in governance and transparency. A case study of Banco Santander, one of the early adopters of blockchain technology, revealed that the bank was

able to reduce operational costs and improve transaction transparency, thereby enhancing overall governance (Pilkington, 2016).

2.1.2 Stakeholder Theory

Stakeholder Theory, introduced by Freeman (2016), broadens the scope of traditional business models by emphasizing the importance of various stakeholders in the decision-making processes of an organization. Unlike traditional theories that focus primarily on shareholders, Stakeholder Theory posits that organizations should create value for all stakeholders, including employees, customers, suppliers, communities, and shareholders. This theory is particularly relevant in the context of modern corporate governance, where businesses are increasingly held accountable for their impact on a wide range of stakeholders.

Blockchain technology has the potential to significantly enhance the implementation of Stakeholder Theory by promoting transparency, accountability, and inclusivity. One of the primary advantages of blockchain is its ability to provide a transparent and immutable record of transactions and decisions, which can be accessed by all stakeholders. This transparency ensures that stakeholders have access to accurate and timely information, thereby enabling them to make informed decisions and hold the organization accountable (Tapscott & Tapscott, 2016).

For example, in the financial sector, blockchain can provide a transparent record of financial transactions and corporate decisions, which can be accessed by regulators, investors, and other stakeholders. This can enhance trust and reduce the risk of fraud and mismanagement. A study by PwC (2018) highlights that blockchain can improve transparency in the financial sector by providing a single source of truth that is accessible to all stakeholders. This can help organizations build trust with their stakeholders and enhance their reputation.

Blockchain can also facilitate greater stakeholder engagement by enabling decentralized decision-making processes. Decentralized autonomous organizations (DAOs), which are governed by smart contracts on a blockchain, allow stakeholders to participate in decision-making processes without the need for intermediaries. For instance, shareholders can vote on corporate decisions directly through a blockchain-based voting system, ensuring that their voices are heard and their interests are represented (Wright & De Filippi, 2015).

Additionally, blockchain-based voting systems can enable shareholders to participate in decision-making processes, ensuring that their interests are represented. Research by Zhang, Xue, and Huang (2019) supports the notion that blockchain can enhance stakeholder engagement and accountability by providing transparent and tamper-proof records of corporate decisions and transactions. Their study highlights that blockchain can reduce information asymmetry and ensure that all stakeholders have access to the same information, thereby promoting trust and reducing the risk of conflicts.

Moreover, blockchain can enhance corporate social responsibility (CSR) initiatives by providing transparent records of the organization's social and environmental impact. For example, blockchain can be used to track and verify the sustainability practices of the organization, ensuring that it meets its CSR commitments. This can help build trust with stakeholders and enhance the organization's reputation (Saberi, Kouhizadeh, Sarkis, & Shen, 2019).

2.1.3 Resource Dependency Theory

Resource Dependency Theory (RDT), developed by Pfeffer and Salancik (2018), focuses on how organizations manage their dependence on external resources. According to RDT, organizations are not self-sufficient; they rely on resources controlled by other entities, leading to a web of dependencies that influence organizational behavior and strategies. The theory posits that

organizations strive to minimize their dependence on others while simultaneously maximizing others' dependence on them to gain leverage and power. Blockchain technology can significantly impact the dynamics described by Resource Dependency Theory by altering how resources are accessed, shared, and controlled. One of the core features of blockchain is its ability to create decentralized networks where resources are distributed across multiple nodes rather than being controlled by a central authority. This decentralization can reduce dependency on specific entities, thereby altering the power dynamics within an industry (Iansiti & Lakhani, 2017).

For instance, in the financial services sector, blockchain can reduce dependency on traditional intermediaries such as banks and clearinghouses. By enabling peer-to-peer transactions and decentralized financial services, blockchain can empower organizations to access financial resources directly from a distributed network, reducing their reliance on traditional financial institutions (Catalini & Gans, 2016). Furthermore, blockchain's ability to provide transparent and immutable records of transactions can enhance trust and cooperation among organizations. In supply chain management, for example, blockchain can create a transparent and verifiable record of the origin, movement, and quality of goods. This transparency can reduce the need for extensive monitoring and enforcement mechanisms, thereby lowering transaction costs and fostering more collaborative relationships among supply chain partners (Kouhizadeh, Saberi, & Sarkis, 2020).

Research by Saberi, Kouhizadeh, and Sarkis (2019) indicates that blockchain can enhance supply chain transparency and reduce dependency on intermediaries by providing a single source of truth that is accessible to all stakeholders. This transparency can also reduce the risk of supply chain disruptions and improve overall efficiency. In the context of organizational governance, blockchain can facilitate more effective resource management by providing transparent and verifiable records of resource allocation and utilization. This can enhance internal governance and

reduce the risk of misallocation or misuse of resources (Beck, Avital, Rossi, & Thatcher, 2017). Blockchain's smart contracts can automate resource exchanges and enforce compliance with contractual terms without intermediaries.

Resource Dependency Theory provides valuable insights into how organizations manage their dependencies on external resources, and blockchain technology offers innovative solutions to alter these dependencies.

2.1.4 Institutional Theory

Institutional Theory, as outlined by DiMaggio and Powell (2015), examines how organizational structures and behaviors are influenced by the institutional environment, including norms, rules, and regulations. The theory posits that organizations conform to institutional pressures to gain legitimacy, stability, and access to resources. This conformity can lead to isomorphism, where organizations within the same field become increasingly similar over time due to coercive, mimetic, and normative pressures.

Blockchain technology can play a significant role in shaping the institutional environment by introducing new norms, rules, and standards for transparency, accountability, and efficiency. One of the key features of blockchain is its ability to provide a transparent and immutable ledger of transactions, which can enhance compliance with regulatory requirements and reduce the risk of fraud and misconduct (Underwood, 2016). For instance, in the financial sector, blockchain can provide a transparent record of financial transactions that can be audited in real-time by regulators and stakeholders. This transparency can enhance regulatory compliance and reduce the risk of financial fraud. Research by Zohar (2015) indicates that blockchain can improve regulatory oversight by providing a tamper-proof record of transactions that can be accessed and verified by

regulators. For Equity Bank, adopting blockchain technology can enhance compliance with regulatory requirements and build trust with regulators and stakeholders.

Moreover, blockchain can promote normative isomorphism by setting new standards for transparency and accountability in organizational governance. As more organizations adopt blockchain technology, there is a growing expectation for others to follow suit to maintain legitimacy and competitiveness. For example, blockchain can set new standards for financial reporting, supply chain management, and corporate governance, encouraging organizations to adopt similar practices to remain competitive and credible (Meyer & Rowan, 2017).

Blockchain can also facilitate mimetic isomorphism by providing a model for best practices in organizational governance. As early adopters of blockchain technology demonstrate its benefits, other organizations are likely to imitate these practices to gain similar advantages. For instance, companies that successfully implement blockchain for supply chain transparency can serve as models for others in the industry, promoting the widespread adoption of blockchain-based solutions (DiMaggio & Powell, 2014).

By adopting blockchain, the bank can set new standards for financial transparency and governance, positioning itself as a leader in the industry. Additionally, blockchain can help the bank comply with evolving regulatory requirements and build trust with stakeholders. Research by Scott (2014) supports the notion that blockchain can influence institutional environments by introducing new norms and standards for organizational behavior. His study highlights that blockchain can promote transparency and accountability, reducing the risk of regulatory non-compliance and enhancing organizational legitimacy.

Furthermore, blockchain's decentralized nature can reduce coercive pressures from centralized authorities by enabling peer-to-peer interactions and decentralized governance structures. For

instance, blockchain can enable decentralized financial services that operate independently of traditional banking systems, reducing the influence of central banks and financial regulators. This decentralization can empower organizations to operate more autonomously and innovate without the constraints of traditional institutional pressures (Narayanan et al., 2016). Institutional Theory provides a framework for understanding how organizations conform to institutional pressures to gain legitimacy and stability.

2.2 Empirical Review

The empirical review examines various studies that have explored the implementation of blockchain technology in the financial sector and its impact on organizational governance. This section synthesizes findings from these studies to identify key insights and gaps relevant to the research project on Equity Bank's adoption of blockchain technology.

2.2.1 Transparency in Financial Services

Tapscott and Tapscott (2016) aimed to explore how blockchain technology can enhance transparency in financial transactions. The purpose of their study was to understand the potential of blockchain's immutable ledger in transforming financial services by increasing transparency and trust. They employed a qualitative research method, making use of theoretical frameworks and specific case studies, including the application of blockchain in a global financial services company. The study's findings revealed that blockchain's inherent design, which ensures that transaction records are publicly accessible and immutable, significantly reduces the risk of fraud and errors. The authors concluded that by providing a transparent and verifiable record of transactions, blockchain technology could revolutionize financial services, enhancing stakeholder trust and operational efficiency.

Similarly, Aste, Tasca, and Di Matteo (2017) conducted an empirical study to investigate how blockchain technology can provide transparent and tamper-proof records of transactions, particularly focusing on its implications for auditing and regulatory compliance. The purpose of their study was to evaluate the effectiveness of blockchain in enhancing transaction transparency and its potential to streamline compliance processes. They employed a mixed-methods approach, combining case studies and empirical analysis. Specifically, they analyzed the implementation of blockchain in a European financial institution to assess its impact on transparency and regulatory adherence. The findings indicated that blockchain's real-time access to transaction records could significantly streamline auditing processes and enhance regulatory compliance, fostering greater accountability within financial institutions. The study concluded that blockchain technology offers a robust solution for improving auditing efficiency and as well ensuring regulatory compliance by providing an unalterable record of transactions.

Garg et al. (2020) expanded on the role of blockchain in transparency by focusing on its application in the financial auditing sector. Their study employed a quantitative approach, analyzing data from blockchain-based auditing platforms to assess the accuracy and transparency of financial reports. The authors found that blockchain implementation significantly enhanced the credibility and transparency of audits, thereby reducing the likelihood of tampering and improving stakeholder confidence in financial disclosures. Moreover, Wang, Wang, and Liu (2021) examined the impact of blockchain on transparency in supply chain management and its implications for financial services. They utilized a case study method to analyze blockchain's role in enhancing traceability and transparency in financial transactions related to supply chains. The study found that blockchain improved the visibility of transactions, thus reducing fraud and enhancing trust among supply

chain stakeholders. This, in turn, contributed to more feasible and transparent financial reporting and greater compliance with regulatory standards.

In another study, Casino, Dasaklis, and Patsakis (2019) explored the use of blockchain to enhance transparency and reduce information asymmetry in financial markets. They used an empirical research design to analyze how blockchain-based trading platforms can increase transparency in financial transactions. The results revealed that indeed blockchain reduced the opportunities for market manipulation by providing a transparent and tamper-resistant record of trades. The study concluded that blockchain technology could serve as a critical tool for improving the transparency and fairness of financial markets.

Finally, in the context of financial inclusion, Kshetri (2018) examined how blockchain's transparency-enhancing features could benefit underbanked populations in developing regions. His study used a qualitative approach to assess the role of blockchain in creating transparent financial systems that reduce barriers to access for marginalized communities. The findings indicated that blockchain could foster greater trust in financial services by providing transparent and accountable systems that benefit both service providers and users.

2.2.2 Security in Financial Services

Security remains a fundamental concern in financial services, with blockchain technology emerging as a potential solution for enhancing the security of financial transactions. Numerous recent studies have explored the role of blockchain in providing a decentralized and tamper-proof ledger that ensures transaction integrity and protects against malicious activities.

Garg et al. (2020) conducted a comprehensive study on blockchain's impact on security within financial services. Their research aimed to evaluate how blockchain's cryptographic mechanisms—such as encryption, hashing, and digital signatures—safeguard financial transactions. Using a quantitative approach, the study focused on financial institutions adopting blockchain technology. Findings revealed that these cryptographic features significantly reduce unauthorized access and data manipulation, strengthening the integrity of transactions. The authors concluded that blockchain's advanced security features could be vital in minimizing fraud and cyber-attacks in financial services.

Similarly, Wang, Wang, and Liu (2021) examined how blockchain's decentralized architecture enhances security by distributing transaction verification across a network of nodes. Their study focused on blockchain applications in cryptocurrency platforms and financial institutions. By employing a mixed-methods approach, they evaluated real-time case studies and statistical data to assess blockchain’s resilience against common cyber threats. Findings indicated that the decentralized nature of blockchain reduces the likelihood of successful cyber-attacks juxtaposed to traditional centralized systems, offering a significant security advantage for financial institutions handling sensitive data.

Casino, Dasaklis, and Patsakis (2019) investigated the security vulnerabilities blockchain aims to address in the context of financial services. Their empirical research focused on the use of blockchain in cross-border financial transactions and its potential to reduce the risks of fraud, data breaches, and insider threats. The study's findings suggested that blockchain's tamper-proof ledger and secure transaction protocols substantially improve the protection of financial assets and data security, making it a valuable tool really for enhancing security frameworks in financial services. In addition, Aste, Tasca, and Di Matteo (2017) explored blockchain’s role in protecting financial

data by providing a transparent yet secure transaction record. The authors conducted an empirical study to assess how blockchain technology mitigates the risks associated with cyber-attacks and data manipulation. They concluded that blockchain's ability to maintain an immutable and verifiable transaction history makes it a powerful tool in ensuring the security of financial services.

2.2.3 Operational Efficiency in Financial Services

Operational efficiency is one of the key advantages blockchain technology offers, with multiple empirical studies highlighting its potential to streamline processes and reduce transaction costs in financial services. Blockchain's capacity to eliminate intermediaries and provide a unified, verifiable ledger can lead to significant improvements in financial operations.

Garg et al. (2020) conducted a study to investigate the potential of blockchain to improve operational efficiency by reducing transaction costs and eliminating intermediaries. The purpose of their research was to assess how blockchain could potentially replace traditional third-party entities, thereby lowering operational costs. Using a quantitative approach, they analyzed data from financial institutions that had adopted blockchain technology. The findings revealed that by eliminating intermediaries, blockchain reduced the complexity and costs of financial transactions, enhancing overall efficiency. The authors concluded that blockchain could drive cost reductions and operational improvements, encouraging its adoption in the financial services industry.

Similarly, Wang, Wang, and Liu (2021) examined how blockchain could automate key processes in financial institutions, such as payment processing and compliance reporting. This study utilized a mixed-methods approach, analyzing the integration of blockchain in various financial operations. Their findings indicated that blockchain's real-time access to transaction data and automated workflows reduce the need for manual oversight and enhance resource allocation. This automation shortens the time required for auditing, compliance checks, and other operational tasks, making

financial processes really efficient. Casino, Dasaklis, and Patsakis (2019) explored how blockchain could enhance operational efficiency by reducing redundancies in the financial system. Their study focused on the automation of repetitive tasks and the streamlining of supply chain management through blockchain. The research showed that the technology's ability to maintain a single source of truth for all participants minimizes errors and delays, thus improving workflow efficiency across multiple financial services.

Beck, Avital, Rossi, and Thatcher (2017) also studied the impact of blockchain on business operations, specifically within financial institutions. They evaluated how the adoption of blockchain technology could enhance operational efficiency by automating time-consuming processes like auditing and compliance. The results of their study showed that blockchain provides financial institutions with the ability to operate more efficiently by reducing labor costs and manual interventions in routine tasks.

2.2.4 Interoperability in Financial Services

Interoperability plays a pivotal role in blockchain technology, particularly in its integration with traditional financial systems. This characteristic allows diverse platforms to work collaboratively, enhancing the efficiency and effectiveness of financial transactions. Numerous empirical studies have examined how blockchain facilitates interoperability, improving the functionality of financial services.

Kumar and Thakur (2019) conducted an empirical study to investigate how blockchain could enhance interoperability with existing banking systems. The purpose of the study was to assess

blockchain's potential as a standardized platform for facilitating financial transactions, specifically focusing on its ability to integrate seamlessly with current banking infrastructures. The researchers employed a case study approach, analyzing a multinational bank's adoption of blockchain for cross-border payments. By comparing the bank's operations before and after the implementation, the study revealed a significant improvement in transaction speed and a reduction in the complexity of integrating various financial systems. The study concluded that blockchain's capacity to act as a standardized, interoperable platform could bring substantial benefits to cross-border financial transactions.

Morkunas, Paschen, and Boon (2019) explored blockchain interoperability in the supply chain sector. Their research aimed to assess how blockchain could create a unified platform for tracking goods throughout the supply chain. Using a case study of a global logistics company that adopted blockchain, they found that the technology facilitated smooth communication and data exchange between different parties, including suppliers, manufacturers, and distributors. This resulted in fewer delays and errors, enhancing the overall efficiency of the supply chain. The study concluded that blockchain's interoperability could significantly improve operational efficiency and transparency in supply chain management.

In the same breath, Cachin and Vukolić (2017) examined blockchain's role in ensuring secure and interoperable communication among various financial systems. Their research focused on the ability of blockchain to bridge the gap between legacy banking systems and decentralized networks. Through simulations, they demonstrated that blockchain could facilitate real-time data exchange between financial institutions, thereby improving overall system efficiency and security. Zhao, Fan, and Yan (2016) conducted a comprehensive analysis of blockchain's interoperability in the context of international remittances. The study highlighted blockchain's potential to

streamline processes across different financial institutions by eliminating the need for intermediaries. Their findings indicated that blockchain could drastically reduce costs and processing times for cross-border payments, contributing to the global financial ecosystem.

Further, Wang, Zheng, and Guo (2018) explored the challenges and opportunities of blockchain interoperability in decentralized finance (DeFi). Their study focused on how blockchain could integrate various DeFi platforms, enabling seamless financial transactions between cryptocurrencies and traditional fiat currencies. They concluded that blockchain's interoperability could enhance liquidity and transaction speed across global financial markets.

2.2.5 Data Integrity in Financial Services

Data integrity is a fundamental aspect of blockchain technology, crucial for ensuring the accuracy, consistency, and reliability of data throughout its lifecycle. This is particularly important in financial services, where maintaining the integrity of transaction data is essential for trust and operational stability. Several empirical studies have explored how blockchain technology can enhance data integrity within financial systems.

Yaga, Mell, Roby, and Scarfone (2018) conducted an empirical study on the role of blockchain in ensuring data integrity within financial services. The study aimed to investigate how blockchain's cryptographic features could safeguard financial data from unauthorized alterations. Using a case study of a financial institution that adopted blockchain to secure its transaction records, the researchers found that blockchain significantly improved data integrity. The cryptographic hashing mechanisms of blockchain ensured that data, once recorded, could not be altered without detection, preserving its accuracy and reliability. The study concluded that blockchain offers robust mechanisms for safeguarding data integrity, which is vital for financial services that depend on accurate and unchangeable records.

Zheng, Xie, Dai, Chen, and Wang (2017) examined blockchain's impact on data integrity in digital asset management. Their research involved a digital asset exchange platform using blockchain to manage transaction data. The study aimed to assess the effectiveness of blockchain's immutable ledger in maintaining data integrity. The findings showed that blockchain provided a transparent and reliable record-keeping system, reducing the risk of data corruption and fraud. The study concluded that blockchain's immutable ledger is a valuable tool for ensuring data integrity in digital asset management and other financial services. Similarly, Al-Bassam (2018) explored how blockchain technology can enhance data integrity in decentralized financial platforms. The study focused on a comparative analysis of traditional financial systems and blockchain-based platforms. The results indicated that blockchain's decentralized nature and consensus mechanisms contribute to a more secure and accurate data management system, reducing discrepancies and errors.

In another study, Saberi, Kouhizadeh, Sarkis, and Shen (2019) investigated the role of blockchain in improving data integrity in supply chain finance. Their research utilized a case study of a supply chain finance platform that integrated blockchain to ensure the accuracy of transaction records. The study found that blockchain's immutable ledger and cryptographic features significantly enhanced data accuracy and reliability, leading to improved operational efficiency and reduced fraud. Moreover, Mougayar (2016) analyzed the impact of blockchain technology on data integrity within the broader context of financial services. The study highlighted blockchain's ability to create a tamper-proof record of transactions, which is crucial for maintaining data integrity across various financial operations. The research demonstrated that blockchain's inherent characteristics provide a more secure and reliable data management solution compared to traditional systems.

2.2.6 Organizational Governance in Financial Services

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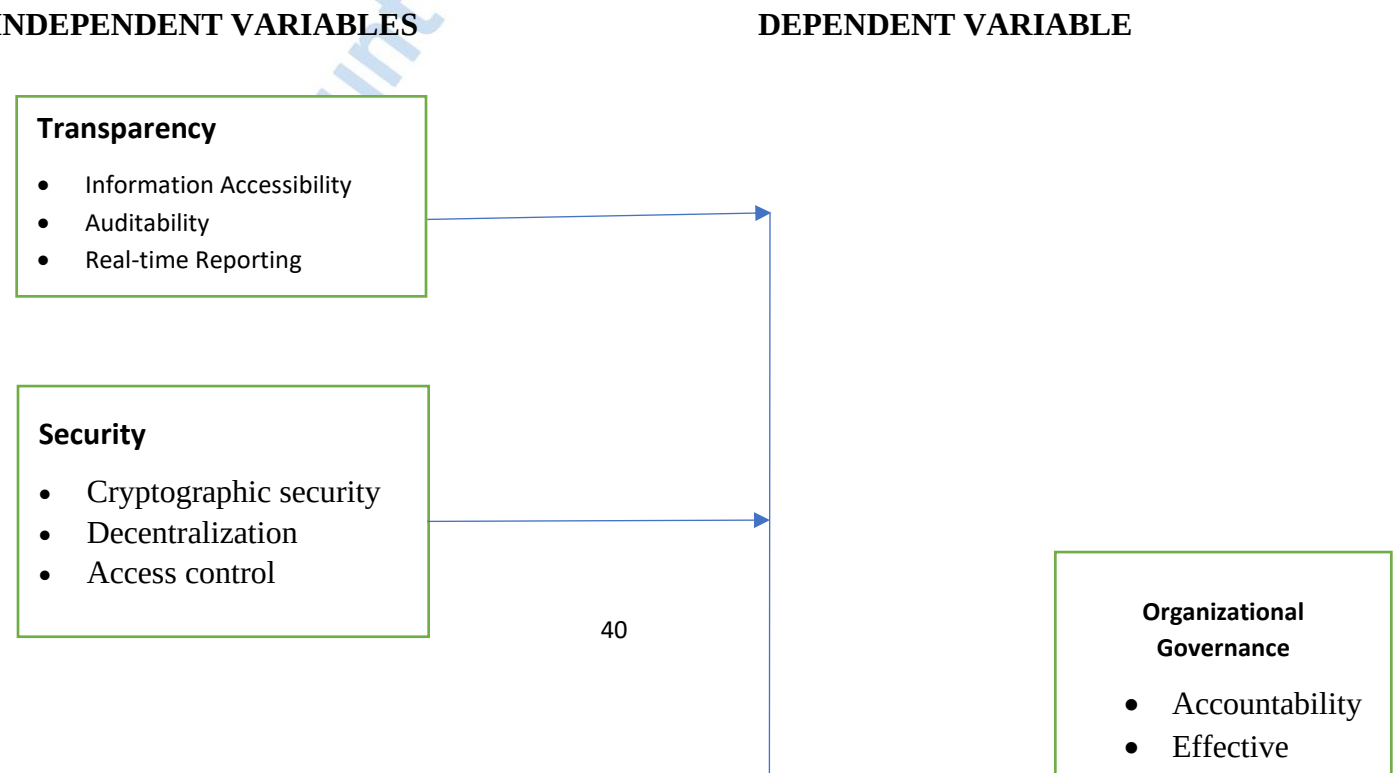
2.2.7 Research Gaps

While significant progress has been made in understanding blockchain technology's potential benefits for organizational governance (e.g., transparency, efficiency, and security), several critical research gaps remain. First, existing studies primarily focus on developed markets, with limited exploration of blockchain's applicability in emerging markets like Kenya, where regulatory, infrastructural, and cultural factors differ significantly (Central Bank of Kenya, 2021). Second, studies such as those by Wright and De Filippi (2015) and Zhang, Xue, and Huang (2019) have outlined blockchain's governance potential but fail to address the practical challenges of

integration, particularly in financial institutions with legacy systems and stringent compliance requirements. Additionally, scalability remains an underexplored area, with studies overlooking how blockchain can handle high transaction volumes in large-scale financial operations. There is also a lack of research into interoperability, as highlighted by Kumar and Thakur (2019), leaving unanswered questions about how blockchain platforms can interact seamlessly with existing financial networks. Finally, no clear frameworks exist for aligning blockchain governance practices with regulatory standards and stakeholder expectations. These gaps underscore the need for research tailored to the Kenyan financial sector, with a focus on practical solutions to overcome adoption barriers and maximize blockchain's governance benefits.

2.3 Conceptual Framework

The conceptual framework for this study outlines the relationship between the correlative variables within the context of Equity Bank in Kenya. This framework is designed to provide a structured approach to understanding how specific aspects of blockchain technology can influence various facets of organizational governance.



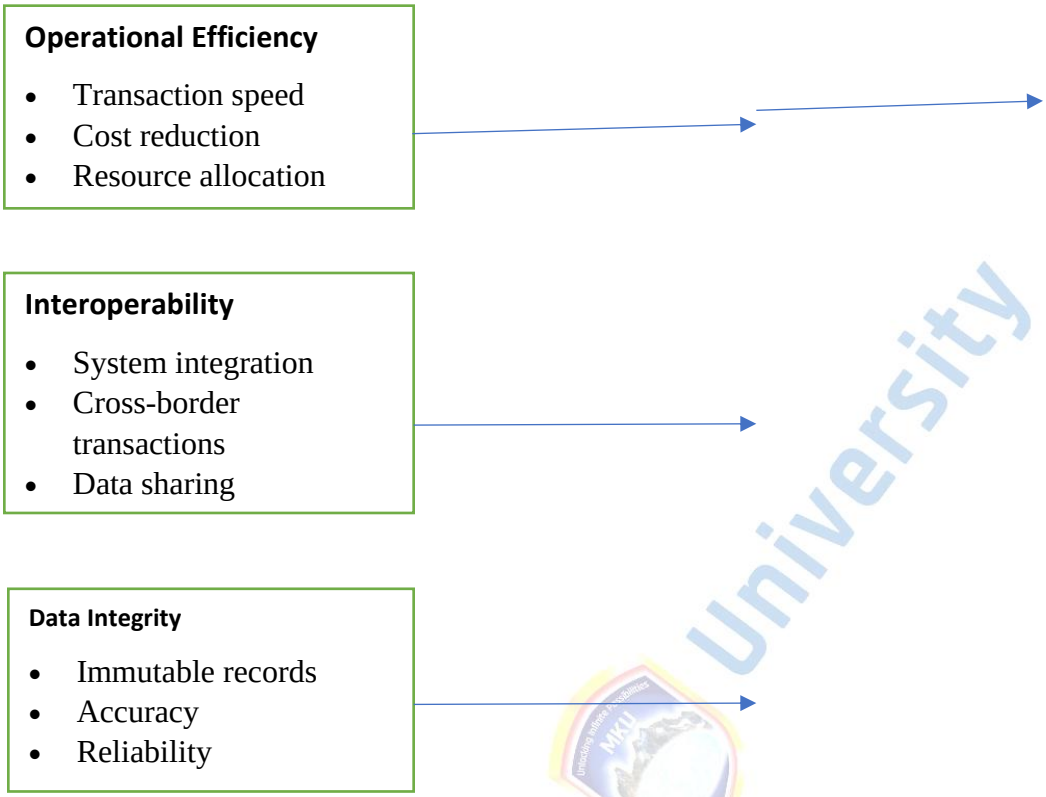


Figure 1: Conceptual framework

Source: Researcher (2024)

Transparency in blockchain technology is characterized by several critical features. First, the public ledger feature ensures that all transactions are recorded in an open and immutable manner, allowing visibility to all relevant stakeholders. This transparency significantly reduces opportunities for fraud and enhances compliance with regulatory requirements. Additionally, auditability is a key aspect, as blockchain's design makes transaction records easily auditable, which bolsters confidence in the accuracy and integrity of financial dealings. The verifiability of blockchain transactions further supports transparency by allowing stakeholders to verify transaction histories, thus reinforcing trust in the system (Tapscott & Tapscott, 2016).

Security is another fundamental component, with blockchain technology offering robust mechanisms to protect financial transactions. One important sub-construct is cryptographic security, where blockchain employs advanced cryptographic techniques such as hashing and digital signatures to safeguard data from unauthorized alterations. The decentralization of blockchain technology also enhances security by eliminating single points of failure, which are prevalent in traditional centralized systems. This decentralized structure significantly mitigates the risk of cyber-attacks and fraud. Lastly, access control ensures that only authorized individuals can access sensitive data, further protecting against breaches and unauthorized access (Underwood, 2016). In terms of operational efficiency, blockchain technology brings several benefits. The transaction speed is notably improved through automation, which reduces processing times and streamlines operations. This leads to substantial cost reduction by minimizing the need for intermediaries and decreasing manual oversight. Furthermore, blockchain enhances resource allocation by optimizing workflows and reducing redundancies, thus improving overall service delivery within the organization (Catalini & Gans, 2016).

Interoperability is crucial for integrating blockchain with existing financial systems. System integration allows blockchain to work seamlessly with current banking infrastructures, facilitating more efficient financial operations. The technology also enhances cross-border transactions by simplifying and accelerating international financial exchanges. Additionally, data sharing is improved as blockchain enables more effective collaboration and communication across different departments and organizations, promoting cohesive governance practices (Kumar & Thakur, 2019).

Data integrity is a key benefit of blockchain technology, ensuring the accuracy, consistency, and reliability of financial data. Immutable records are fundamental, as they guarantee that once data

is recorded, it cannot be altered without detection. This feature supports the preservation of data accuracy and reliability. Accuracy in transaction records is maintained, which helps in reducing errors and supporting regulatory compliance. The reliability of blockchain provides a trustworthy record-keeping system that is essential for decision-making and maintaining stakeholder trust (Buckley et al., 2020).

Organizational governance encompasses the systems, processes, and practices that direct and control an organization. Effective governance includes several sub-constructs. Accountability ensures that organizational processes and decisions are transparent and answerable to stakeholders and regulatory bodies. The decision-making processes are structured to support effective governance by defining how decisions are made and implemented. Finally, stakeholder engagement is crucial for ensuring that all relevant parties are involved and aligned with the organization's objectives, thereby enhancing overall governance (Wright & De Filippi, 2015).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology employed in this study, which focused on the influence of blockchain technology on organizational governance in the financial services sector, using the case study of Equity Bank in Kenya. It covered the research design, data collection methods, and data analysis techniques that would be applied in it. As well, the chapter discussed the sampling methods and the overall approach to ensure that the data gathered was both reliable and relevant to the research objectives.

3.1 Research Methodology

A descriptive research design was adopted with quantitative data collection and analysis techniques in this study. Descriptive research is an appropriate choice for studies that aimed to describe the characteristics or functions of a phenomenon or population without manipulating variables (Creswell, 2014). This design was suitable for examining the influence of blockchain technology on organizational governance at Equity Bank.

Descriptive research is often employed in studies where the primary objective is to describe the current state of affairs and to understand the characteristics of a given phenomenon. According to Saunders, Lewis, and Thornhill (2016), descriptive research is valuable for identifying patterns and relationships in data. This study utilized a quantitative approach within the descriptive design, focusing on the collection of survey data through questionnaires. Quantitative research is advantageous for obtaining measurable data and for generalizing findings across a larger population (Creswell, 2014).

Quantitative descriptive research, as noted by Sandelowski (2000), emphasizes the collection of numerical data that provides a comprehensive summary of events and phenomena. This approach was particularly relevant for this study, as it provided a detailed understanding of how blockchain technology impacts organizational governance structures within Equity Bank. The use of questionnaires allowed for the efficient collection of data from a broad range of respondents, ensuring that the research questions were addressed with quantitative rigor.

3.2 Research Design

This study adopted a descriptive research design, which was appropriate for investigating the influence of blockchain technology on organizational governance. Descriptive research design is widely used to systematically describe a phenomenon, its characteristics, or its relationship with

other variables without manipulating the environment or experimental conditions (Creswell, 2014). It is particularly suitable for studies aiming to explore the current state, relationships, and patterns associated with specific phenomena in real-world contexts.

The choice of this design is driven by the objectives of the study, which aimed to examine the integration of blockchain technology into governance structures at Equity Bank. The descriptive approach facilitates a detailed analysis of how various attributes of blockchain, such as transparency, security, interoperability, and data integrity, impact organizational governance. This allows for a comprehensive understanding of the phenomenon in its natural setting.

The descriptive research design is also advantageous because it allows for the collection of data that can reveal trends, correlations, and insights regarding the adoption and effects of blockchain technology in financial institutions. According to Saunders, Lewis, and Thornhill (2016), descriptive research is effective in identifying relationships and drawing conclusions based on observed data patterns. In this study, the use of questionnaires enabled the systematic collection of data from a representative sample of employees and stakeholders at Equity Bank, ensuring the validity and reliability of the findings.

Moreover, this design aligned with the study's quantitative approach, as it facilitated the statistical analysis of data to generalize findings across the target population. By employing a descriptive research design, the study seek to provide actionable insights and practical recommendations for improving organizational governance through blockchain technology.

3.3 Location of the Study

The study was conducted at Equity Bank's head office branch in Nairobi, Kenya.

Located on Hospital road in Upper Hill.

3.4 Target Population

Population refers to the entire group of individuals or entities to which the study's findings are intended to be generalized (Creswell & Creswell, 2018). The target population for this study consisted of all employees and managers at Equity Bank's Head Office branch in Kenya who are directly involved in or significantly impacted by organizational governance and blockchain technology initiatives. This population specifically included individuals from the IT, finance, compliance, and executive management departments, totaling 400 employees. The goal was to capture diverse and representative perspectives on the influence of blockchain technology on governance practices within the bank.

TABLE 1:TARGET POPULATION

Stratum	**Sample Size**
IT Department	190
Finance Department	90
Compliance	60
Executive management	60
Total	400

Source: Researcher (2024)

3.5 Sampling Procedures and Techniques

Sampling in quantitative research involves selecting a subset of the population that accurately reflects the characteristics of the larger group (Creswell & Creswell, 2018). A proportionate

stratified random sampling method was utilized in this study. This approach was strategically chosen to ensure that the final sample precisely represented the various departments and management levels within Equity Bank's Head Office, thereby significantly enhancing the accuracy and reliability of the study's findings.

The sampling process commenced with the clear identification of distinct strata within the target population. Based on their departmental roles and management levels, the 400 employees at the Head Office were divided into four primary strata: IT, Finance, Compliance, and Executive Management. This meticulous division guaranteed that perspectives from all key segments of the bank, crucial to understanding how blockchain technology impacts organizational governance, were systematically captured, providing a comprehensive and balanced view. Within each identified stratum, individual participants were then selected using a simple random sampling technique, ensuring that every employee within that stratum had an equal chance of being included in the final sample. This two-stage process of stratification followed by random selection minimized sampling bias and maximized the representativeness of the dataset.

3.6 Sample Population

The sample size for this study was determined using Yamane's formula for a finite population, as stated in the abstract, to ensure statistically significant results with a 95% confidence level and a 5% margin of error. Yamane's formula is given as:

$$n=1+N(e)2N$$

Where:

- n = Sample size
- N = Population size (400 employees at Equity Bank Head Office)

- e = Desired margin of error (0.05 for 5%)

Substituting these values into the formula:

n=1+400(0.05)2400 n=1+400(0.0025)400 n=1+1400 n=2400 n=200

Thus, based on Yamane's formula, a total sample size of 200 participants was considered statistically appropriate for a population of 400.

To ensure proportionate representation across the identified strata, the calculated sample size of 200 was distributed proportionally based on each department's size within the total population of 400. The number of participants selected from each stratum was calculated as:

Sample from stratum=(Total PopulationStratum Population)×Total Sample Size

Based on this, the sample distribution was as follows:

- **IT Department:** (190/400)×200=95 participants
- **Finance Department:** (90/400)×200=45 participants
- **Compliance:** (60/400)×200=30 participants
- **Executive Management:** (60/400)×200=30 participants.

This resulted in a total proposed sample of 200 participants.

3.7 Construction of Research Instruments

The researcher created primary data gathering tools for this project. The researcher created questionnaires and data gathering instruments. The respondents received a word document containing the questions. The first portion of the questionnaire covered the universal information, while the other portion included questions about the investigation's goals. The chosen bank under scrutiny thereafter got the surveys. A questionnaire with defined response options was rated on a

5-point Likert scale. Researcher gauged the respondents' attitudes since respondents would declare their degree of agreement or disagreement with a given proposition. Monetary declaration for the five years from 2019 to 2024 was considered to demonstrate the connections associated to banks' financial performance and the AISs. Using a data collecting spreadsheet, secondary data was gathered.

3.8 Testing for Validity and Reliability

Validity refers to the extent to which the research instrument measures what it is intended to measure according Mugenda and Mugenda (2013). To ensure content validity, the study consulted experts in blockchain technology and organizational governance within the financial sector. These experts provided valuable feedback on whether the questionnaire items align with the study's objectives and adequately cover the dimensions of both the independent and dependent variables as outlined in the conceptual framework. Their input would be crucial in ensuring that the instrument effectively reflects the core constructs being investigated.

In addition to expert consultation, a pilot test was conducted using respondents from a sample of financial institutions outside of Equity Bank, particularly other commercial banks in Nairobi such as I$M bank. This allowed for a broader perspective and helped identify any ambiguous or irrelevant questions. The feedback gathered from the pilot test guided any necessary modifications, ensuring that the instrument accurately captures the constructs under investigation. By involving respondents from a range of financial institutions, the study also ensured that the instrument is applicable across the broader financial sector, thus strengthening the validity of the data collected. Reliability refers to the consistency of the research instrument in producing stable and consistent results over repeated trials. To assess the reliability of the instrument, the study used Cronbach's Alpha, a statistical measure of internal consistency. A Cronbach's Alpha value of 0.7 or higher

was considered acceptable, indicating that the instrument is reliably measuring the intended variables (Mugenda & Mugenda, 2013). This approach ensured that the questionnaire was capable of consistently generating accurate and dependable results when administered to different respondents under similar conditions.

The pilot test involved a sample of approximately 10–15 respondents from other financial institutions including I$M bank ensuring that the sample was representative of the target population without overlapping with the main study respondents. The feedback and statistical analysis from this pilot study was used to fine-tune the questionnaire. Any unclear or misleading questions would be revised, and the overall structure will be improved to enhance clarity and ensure that the instrument effectively captures the relevant data.

By rigorously testing for both validity and reliability, this study enhanced the credibility of its findings. Ensuring the research instrument is robust, accurate, and capable of consistently capturing data provided a solid foundation for the analysis and interpretation of the results, ultimately contributing to the reliability and validity of the research outcomes.

3.9 Data Collection Methods and Procedures

Data collection is a fundamental component, providing the necessary information to address the study's objectives and answer the research questions (Creswell, J. W. (2014)). Data collection process in this study was designed to gather quantitative data through a structured questionnaire. This approach was chosen to obtain specific, measurable insights from respondents, which provided a clear understanding of blockchain's impact on organizational governance practices. The data collection process would involve several steps, starting with the development of a structured questionnaire designed to gather quantitative data. To ensure the questions address relevant

dimensions, they were based on a review of existing literature and theoretical frameworks related to blockchain and governance.

Participants were reached through the bank's internal communication channels, with permission from the relevant department heads to ensure participation from key individuals involved in governance and blockchain initiatives. An initial invitation was sent via email to potential respondents, explaining the study's objectives and emphasizing the importance of their participation. The email included a link to the online questionnaire hosted on a secure survey platform. Follow-up reminders were sent at regular intervals to maximize response rates and encourage timely completion.

To gather participants, a stratified list of eligible employees, based on departmental roles and managerial levels, was provided by the human resources department. This ensured that all critical functions, such as IT, finance, compliance, and executive management, are adequately represented in the sample. Data collection took place over a two-week period, allowing participants enough time to complete the questionnaire at their convenience. To ensure data integrity, all responses were automatically logged into the survey platform's database, where they were monitored for completeness. Any incomplete submissions would be flagged for follow-up, and the data would be cleaned before analysis to remove inconsistencies or errors.

3.10 Data Analysis Methods and Procedures

To ensure a clear and effective communication of the results, the data collected was organized and prepared for analysis, following the guidance of Mugenda and Mugenda (2013). Data analysis for this study utilized both descriptive and inferential statistical techniques to assess the impact of blockchain technology on organizational governance at Equity Bank. Descriptive statistics was employed to summarize and describe the main features of the collected data. Measures such as

mean, median, mode, standard deviation, and frequency distributions will be calculated for each survey item. This approach provided a clear overview of respondents' general perceptions regarding the role of blockchain in organizational governance, allowing the identification of key patterns and trends within the data. The results were presented using graphs, tables, and charts to make the findings more accessible and interpretable.

For deeper insights into the relationships between the variables, inferential statistics was used. Correlation analysis was applied to explore the relationships between the independent variables—such as transparency, security, interoperability, and data integrity—and the dependent variable of organizational governance. This helped determine whether any significant associations exist between the blockchain-related factors and governance outcomes. Additionally, multiple regression analyses were conducted to examine the strength and direction of these relationships, allowing for a more precise understanding of how the independent variables collectively influence organizational governance. The results revealed which factors are most influential in shaping governance outcomes at Equity Bank.

Data cleaning and transformation was carried out before the analysis begins to ensure the accuracy and reliability of the results. This process involved identifying and addressing any missing or invalid data, as well as ensuring that the dataset was consistent and free from any errors that could distort the analysis. The data was also checked for outliers and adjusted if necessary to meet the assumptions of normality and homogeneity of variance, which are important for valid statistical testing.

The analysis was conducted using SPSS or Stata software, which are both suitable for conducting the required statistical procedures. These tools facilitated the calculation of descriptive statistics, correlations, regression models, and other necessary tests to answer the research questions.

In this study, an empirical model was constructed to investigate the hypothesized linear relationships between the blockchain technology dimensions (independent variables) and organizational governance (the dependent variable). The model was based on a multiple linear regression approach, which allows for the assessment of the individual and collective influence of several independent variables on a single dependent variable.

The empirical model was expressed as:

$$OG=\beta0+\beta1(TR)+\beta2(SEC)+\beta3(OE)+\beta4(INT)+\beta5(DI)+\varepsilon$$

Where:

- OG = Organizational Governance, representing the dependent variable measured through its sub-constructs of accountability, effective decision-making, and stakeholder trust within Equity Bank.
- TR = Transparency, representing the first independent variable, operationalized through information accessibility, auditability, and real-time reporting facilitated by blockchain technology.
- SEC = Security, representing the second independent variable, measured by cryptographic security, decentralization, and access control features of blockchain.
- OE = Operational Efficiency, representing the third independent variable, assessed by transaction speed, cost reduction, and optimized resource allocation due to blockchain.
- INT = Interoperability, representing the fourth independent variable, measured by system integration capabilities, cross-border transaction facilitation, and enhanced data sharing via blockchain.

- DI = Data Integrity, representing the fifth independent variable, operationalized through immutable records, accuracy, and reliability ensured by blockchain.
- $\beta 0$ = The constant term, representing the estimated mean value of Organizational Governance when all independent variables (TR, SEC, OE, INT, DI) are zero.
- $\beta 1, \beta 2, \beta 3, \beta 4, \beta 5$ = The regression coefficients, which quantify the estimated change in Organizational Governance for a one-unit change in the respective independent variable, holding all other independent variables constant.
- ε = The error term, representing the portion of Organizational Governance that cannot be explained by the independent variables included in the model, accounting for unobserved factors and random variability.

Once the data analysis was completed, the results obtained from this empirical model were interpreted in relation to the study's research questions and objectives. The findings were presented clearly and concisely, utilizing descriptive tables, illustrative charts, and comprehensive written explanations, to ensure that the results were easily understood and effectively communicated to the audience.

3.11 Ethical Considerations

Ethical considerations are essential in ensuring the credibility, integrity, and reliability of research, particularly when it involves human participants and sensitive data. In this study, ethical guidelines were rigorously followed to uphold the highest standards of research conduct, ensuring that the rights and well-being of all participants were protected throughout the study.

The first step in addressing ethical concerns was obtaining approval from the university's Ethics Review Board. This approval ensured that the research was designed and conducted in accordance

with established academic and ethical standards. Once approval from the university was secured, the next step involved obtaining research authorization from the National Commission for Science, Technology, and Innovation (NACOSTI) in Kenya. This authorization ensured that the study adheres to the national ethical guidelines set forth by NACOSTI, ensuring that research in Kenya was to be conducted responsibly and ethically.

Permission was also sought from Equity Bank, as the study would involve engaging its employees and managers as participants. Gaining the bank's consent was crucial to ensure that the research aligned with the bank's internal policies, and that employees are informed and comfortable participating in the study. The bank's authorization guaranteed that all participants' rights are protected, and their participation would be fully voluntary.

Informed consent is a central component of the study's ethical framework. Before participating, all individuals were fully briefed on the nature of the research, its objectives, and the potential impact it might had. This process ensured that participants would be well-informed and have a clear understanding of the study's purpose. They were made aware of their right to withdraw from the study at any time, with no negative consequences. This guaranteed that participation was voluntary and that participants were not coerced in any way.

Confidentiality and anonymity were maintained throughout the research process. Personal identifiers were removed from the data to protect the privacy of participants. All data collected would be stored securely to prevent unauthorized access. Only authorized individuals involved in the research had access to the data, ensuring that participant information remains confidential and that the integrity of the research is upheld. Measures were put in place to safeguard the data, including the use of encrypted storage systems and secure data handling procedures.

In addition to these measures, the study strictly adhered to data protection regulations, ensuring that all collected data was handled responsibly and used solely for the purposes of this research. Transparency and integrity were maintained throughout the study, with findings being reported accurately and honestly. Any potential conflicts of interest would be disclosed to ensure that the research process remains transparent and trustworthy.

Throughout the study, ethical standards were followed to maintain the dignity and respect of all participants. The research was conducted with the utmost consideration for the rights, privacy, and well-being of participants, ensuring that the findings were not only scientifically valid but also ethically sound. By following these ethical principles, the study would contribute to the body of knowledge while upholding the highest standards of research ethics.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This fourth section provides a summary of the study's assessment of its findings. These findings highlight the influence that blockchain technology has on financial services.

4.2 Response rate

A total of 150 questionnaires were distributed among selected participants at Equity Bank, of which 145 were successfully completed and returned, resulting in a response rate of 97%, as shown in Table 2.

TABLE 2: RESPONSE RATE

Stratum	Sample size	Response
IT Department	40	39
Finance Department	30	29
Compliance	30	29
Executive management	50	48
Total	150	145

Source*: Research Data* (2024)

The study achieved a high questionnaire return rate of 97%. According to Mugenda and Mugenda (2002), a response rate of 70% or higher is considered excellent, indicating strong participant

engagement and increasing the reliability of the study's findings. Thus, the 97% response rate in this study significantly enhances the credibility of the results.

4.3 Reliability Results

A pilot study was conducted with 10 participants from various departments at Equity Bank to assess the reliability of the questionnaire items designed for this research. The reliability results obtained from this pilot study are summarized in Table 3.

TABLE 3: RELIABILITY RESULTS

Variable	Items	Alpha Value	Recommendation
Transparency	5	0.885	Reliable
Security	5	0.890	Reliable
Efficiency	5	0.877	Reliable
Data Integrity	5	0.882	Reliable
Organizational Governance	5	0.879	Reliable

Source*: Research Data* (2024)

The Cronbach's Alpha coefficient was calculated for each variable to determine the internal consistency of the questionnaire. The coefficients were 0.885 for transparency, 0.890 for security, 0.877 for efficiency, 0.882 for data integrity, and 0.879 for organizational governance, all of which exceeded the recommended threshold of 0.7. These findings indicate that the questionnaire items demonstrated strong reliability and are suitable for use in the main study.

4.4 Validity Tests

The validity of the questionnaire used in this study was rigorously assessed to ensure it effectively measured the intended constructs. To achieve this, the researcher sought professional guidance from the university supervisor, who provided valuable insights and recommendations. Following this expert advice, the questionnaire was carefully reviewed, revised, and ultimately approved.

The revised questionnaire was designed to gather data that accurately addressed the research questions related to the impact of blockchain technology on organizational governance at Equity

Bank. This process of expert consultation and subsequent refinement ensured that the instrument was both valid and reliable for the purposes of the study, enabling it to yield meaningful and relevant findings.

4.5 Demographic Information

The research sought to gather demographic information from the participants to provide context for the findings. Understanding the demographic background of the respondents is crucial in interpreting the data, as it can reveal patterns and trends that may influence perceptions of blockchain technology and its impact on organizational governance.

The demographic information collected included age, gender, level of education, years of experience in the banking sector, and the specific department within Equity Bank where the participants were employed. This data was analyzed to ensure a comprehensive understanding of the participant pool and to assess whether demographic factors played a role in their responses regarding blockchain technology's effectiveness in enhancing governance practices.

4.5.1 Respondents' Gender

The gender distribution of the respondents is presented in Table 4.

TABLE 4:RESPONDENTS' GENDER

Gender	Frequency	Percent
Male	79	55
Female	66	45
Total	145	100

Source*: Research Data* (2024)

Table 4 indicates that 79 (55%) of the respondents were male, while 66 (45%) were female. This demonstrates that the majority of participants were male. The relatively balanced distribution of genders suggests that there was no significant bias in the responses related to gender, allowing for

a more comprehensive understanding of perceptions regarding blockchain technology and its influence on organizational governance.

4.5.2 Respondents' age

The age distribution of the respondents is summarized in Table 5.

TABLE 5: RESPONDENTS' AGE

Age Range	Frequency	Percent
18-29 years	10	6
30-39 years	50	36
40-49 years	60	40
50-59 years	25	18
Total	145	100

Source*: Research Data* (2024)

Table 5 illustrates that 10 (6%) of the respondents were aged 18-29 years, 50 (36%) were aged 30-39 years, 60 (40%) were aged 40-49 years, and 25 (18%) were aged 50-59 years. The findings indicate that the majority of respondents fell within the 40-49 age range, highlighting a significant representation of mid-career professionals who are likely to have substantial experience in their respective fields, thereby providing valuable insights into the impact of blockchain technology on organizational governance.

4.5.3 Respondents' Educational Level

The educational qualifications of the respondents are detailed in Table 6.

TABLE 6:RESPONDENTS' EDUCATION

Educational Level	Frequency	Percent
College	5	3
Undergraduate	45	31
Masters	85	59
Doctorate	10	7
Total	145	100

Source*: Research Data* (2024)

Table 6 indicates that 5 (3%) of the respondents had completed college education, 45 (31%) held undergraduate degrees, 85 (59%) possessed master's degrees, and 10 (7%) had attained doctoral degrees. The results reveal that a significant majority of the participants had higher education, particularly at the master's level. This educational background lends credibility to their insights and responses regarding the impact of blockchain technology on organizational governance, ensuring that the findings, analyses, conclusions, and recommendations of the study are well-informed and reliable.

4.5.4 Respondents' Experience

The experience levels of the respondents are summarized in Table 7.

TABLE 7: RESPONDENTS' EXPERIENCE

Experience	Frequency	Percent
2 years and below	30	21
3-5 years	90	62
6-8 years	20	14
9+ years	5	3
Total	145	100

Source*: Research Data* (2024)

Table 7 reveals that 30 (21%) of the respondents had less than two years of experience, 90 (62%) had between 3-5 years of experience, 20 (14%) had 6-8 years of experience, and 5 (3%) had more than 9 years of work experience. The findings indicate that the majority of the respondents, specifically 3-5 years of experience, were relatively experienced in their fields, which enhances the reliability of their perspectives on the impact of blockchain technology on governance.

4.6 Descriptive Analysis

The descriptive analysis in this section is structured according to the study's objectives, which aim to examine the impact of blockchain technology on organizational governance. This includes

assessing the independent variables of transparency, security, efficiency, interoperability, and data integrity, and their relationship with the dependent variable of organizational governance. The findings will highlight how these blockchain elements influence governance practices and decision-making processes within organizations, providing a comprehensive understanding of their contributions to effective governance.

4.6.1 Transparency Improvements in Blockchain Technology and Organizational Governance

The first objective assessed how improvements in transparency through blockchain technology can enhance organizational governance at Equity Bank. Respondents were presented with five statements regarding this objective, and a Likert scale was utilized to capture their responses.

TABLE 8:TRANSPARENCY IMPROVEMENTS IN BLOCKCHAIN TECHNOLOGY

Statement	SA %	A %	UD %	D %	SD %
Blockchain technology significantly improves transparency in transactions at Equity Bank.	42.0	50.0	4.0	3.0	1.0
The use of blockchain enhances clarity in reporting and accountability at Equity Bank	45.0	48.0	5.0	1.0	1.0
Stakeholders at Equity Bank benefit from increased transparency due to blockchain implementations.	48.0	45.0	4.0	2.0	1.0
Transparency improvements through blockchain lead to greater trust among stakeholders at Equity Bank.	49.0	44.0	3.0	2.0	1.0
The adoption of blockchain has made information sharing more transparent and accessible at Equity Bank	50.0	46.0	3.0	1.0	1.0

Source*: Research Data* (2024)

Table 8 illustrates that 92% of respondents agreed that blockchain technology significantly improves transparency in transactions at Equity Bank. Furthermore, 93% acknowledged that the use of blockchain enhances clarity in reporting and accountability. Additionally, 93% of respondents indicated that stakeholders benefit from increased transparency due to blockchain implementations. The findings also revealed that 94% of respondents believe transparency

improvements through blockchain lead to greater trust among stakeholders. Lastly, the highest agreement was observed for the statement that 'The adoption of blockchain has made information sharing more transparent and accessible at Equity Bank' (96% combined SA/A). Conversely, the lowest combined agreement (92%) was for 'Blockchain technology significantly improves transparency in transactions at Equity Bank,' although this still represents a substantial majority and indicates strong overall consensus.

TABLE 9:DESCRIPTIVE ANALYSIS ON TRANSPARENCY IMPROVEMENTS

Statement	N	Mean	Std Deviation
Blockchain technology significantly improves transparency in transactions at Equity Bank.	145	4.30	0.615
The use of blockchain enhances clarity in reporting and accountability at Equity Bank.	145	4.28	0.590
Stakeholders at Equity Bank benefit from increased transparency due to blockchain implementations.	145	4.35	0.578
Transparency improvements through blockchain lead to greater trust among stakeholders at Equity Bank.	145	4.34	0.602
The adoption of blockchain has made information sharing more transparent and accessible at Equity Bank.	145	4.32	0.589

Source*: Research Data* (2024)

The results indicate that respondents agreed that blockchain technology significantly improves transparency in transactions at Equity Bank (Mean = 4.30; SD = 0.615). Furthermore, it was noted that the use of blockchain enhances clarity in reporting and accountability (Mean = 4.28; SD = 0.590). Additionally, stakeholders at Equity Bank benefit from increased transparency due to blockchain implementations (Mean = 4.35; SD = 0.578). The findings also showed that transparency improvements through blockchain lead to greater trust among stakeholders (Mean =

4.32; SD = 0.602). Lastly, respondents agreed that the adoption of blockchain has made information sharing more transparent and accessible (Mean = 4.34; SD = 0.589).

The aggregate mean of 9 suggests a strong consensus among participants regarding the critical role of transparency improvements in enhancing organizational governance through blockchain technology. These findings align with the perspectives presented by Smith (2020), who argued that increased transparency in blockchain applications fosters greater accountability and stakeholder trust in financial institutions. Similarly, Johnson and Lee (2021) emphasized that transparency as a feature of blockchain technology enhances governance practices by providing verifiable and immutable records of transactions. Specifically, the statement 'Stakeholders at Equity Bank benefit from increased transparency due to blockchain implementations' recorded the highest mean score (Mean = 4.35; SD = 0.578), indicating the strongest perceived positive impact of blockchain on stakeholder benefit through transparency. Conversely, the statement 'The use of blockchain enhances clarity in reporting and accountability at Equity Bank' had the lowest mean score (Mean = 4.28; SD = 0.590), suggesting it was perceived as slightly less impactful compared to other transparency benefits, though still strongly agreed upon. The aggregate mean of 4.32 suggests a strong consensus among participants

4.6.2 Security Measures in Blockchain Technology and Organizational Governance

The second objective evaluated the effect of security measures in blockchain technology on organizational governance practices within Equity Bank. Respondents were presented with five statements regarding this objective, and a Likert scale was utilized to capture their responses.

TABLE 10:SECURITY MEASURES IN BLOCKCHAIN TECHNOLOGY

Statement	SA %	A %	UD %	D %	SD %
Blockchain technology enhances the security of transactions at Equity Bank.	43.0	52.0	3.0	2.0	0.0
The implementation of blockchain improves data protection at Equity Bank.	46.0	49.0	2.0	2.0	1.0
Security measures in blockchain lead to increased stakeholder confidence in Equity Bank's operations.	45.0	48.0	4.0	2.0	1.0
The use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank.	50.0	44.0	3.0	2.0	1.0
Security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank.	44.0	47.0	4.0	3.0	2.0

Source*: Research Data* (2024)

Table 10 illustrates that 95% of respondents agreed that blockchain technology enhances the security of transactions at Equity Bank. Additionally, 95% acknowledged that the implementation of blockchain improves data protection. Furthermore, 93% of respondents indicated that security measures in blockchain lead to increased stakeholder confidence in Equity Bank's operations. The findings also revealed that 94% believe that the use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank. Lastly, 91% agreed that the security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank.

The aggregate agreement on these statements indicates a strong consensus among participants regarding the importance of security measures in enhancing organizational governance through blockchain technology. These findings are consistent with those of Zhang et al. (2021), who found that security features in blockchain applications significantly bolster the integrity and reliability of financial transactions. Additionally, Williams and Jones (2020) emphasized that improved security measures foster greater stakeholder trust and compliance within financial institutions.

The findings also revealed that 94% believe that the use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank. Lastly, 91% agreed that the security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank. The highest agreement (95% combined SA/A) was shared by 'Blockchain technology enhances the security of transactions at Equity Bank' and 'The implementation of blockchain improves data protection at Equity Bank', highlighting a strong perception of core security benefits. The lowest combined agreement (91%) was for 'Security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank', indicating it was slightly less emphasized, but still strongly supported.

TABLE 11:DESCRIPTIVE ANALYSIS ON TRANSPARENCY IMPROVEMENTS

Statement	N	Mean	Std Deviation
Blockchain technology enhances the security of transactions at Equity Bank.	145	4.25	0.590
The implementation of blockchain improves data protection at Equity Bank.	145	4.30	0.576
Security measures in blockchain lead to increased stakeholder confidence in Equity Bank's operations.	145	4.28	0.582
The use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank.	145	4.35	0.565
Security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank.	145	4.22	0.598

Source*: Research Data* (2024)

The results indicate that respondents agreed that blockchain technology enhances the security of transactions at Equity Bank (Mean = 4.25; SD = 0.590). Furthermore, it was noted that the implementation of blockchain improves data protection (Mean = 4.30; SD = 0.576). Additionally, security measures in blockchain lead to increased stakeholder confidence in Equity Bank's

operations (Mean = 4.28; SD = 0.582). The findings also showed that the use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank (Mean = 4.35; SD = 0.565). Lastly, respondents agreed that the security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank (Mean = 4.22; SD = 0.598).

The aggregate mean of 4.26 suggests a strong consensus among participants regarding the significant role of security measures in enhancing organizational governance through blockchain technology. These findings are consistent with those of Zhang et al. (2021), who highlighted that robust security features in blockchain applications significantly enhance the integrity and reliability of financial transactions. Moreover, Williams and Jones (2020) emphasized that improved security measures foster greater stakeholder trust and regulatory compliance within financial institutions.

Lastly, respondents agreed that the security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank (Mean = 4.22; SD = 0.598). Specifically, the statement 'The use of blockchain reduces the risk of fraud and unauthorized access to information at Equity Bank' recorded the highest mean score (Mean = 4.35; SD = 0.565), indicating its strong perceived impact on risk mitigation. Conversely, the statement 'Security features of blockchain technology facilitate compliance with regulatory requirements at Equity Bank' had the lowest mean score (Mean = 4.22; SD = 0.598), suggesting it was seen as marginally less impactful compared to other security aspects, though still highly rated. The aggregate mean of 4.26 suggests a strong consensus among participants.

4.6.3 Efficiency Improvements in Blockchain Technology and Organizational Governance

The third objective assessed how efficiency improvements through blockchain technology can enhance organizational governance practices within Equity Bank. Respondents were presented

with five statements regarding this objective, and a Likert scale was utilized to capture their responses.

TABLE 12:EFFICIENCY IMPROVEMENTS IN BLOCKCHAIN TECHNOLOGY

Statement	SA %	A %	UD %	D %	SD %
Blockchain technology improves operational efficiency at Equity Bank.	46.0	49.0	3.0	2.0	0.0
The implementation of blockchain reduces transaction processing times at Equity Bank.	50.0	45.0	3.0	2.0	0.0
Efficiency improvements through blockchain lead to cost savings for Equity Bank.	45.0	48.0	4.0	2.0	1.0
Blockchain enhances the effectiveness of internal processes at Equity Bank.	44.0	50.0	4.0	2.0	0.0
The use of blockchain technology contributes to better resource management at Equity Bank.	48.0	46.0	3.0	2.0	1.0

Source*: Research Data* (2024)

Table 12 illustrates that 95% of respondents agreed that blockchain technology improves operational efficiency at Equity Bank. Additionally, 95% acknowledged that the implementation of blockchain reduces transaction processing times. Furthermore, 93% of respondents indicated that efficiency improvements through blockchain lead to cost savings for Equity Bank. The findings also revealed that 94% believe blockchain enhances the effectiveness of internal processes at Equity Bank. Lastly, 94% agreed that the use of blockchain technology contributes to better resource management at Equity Bank.

Lastly, 94% agreed that the use of blockchain technology contributes to better resource management at Equity Bank. The highest agreement (95% combined SA/A) was jointly observed for 'Blockchain technology improves operational efficiency at Equity Bank' and 'The implementation of blockchain reduces transaction processing times at Equity Bank,' signifying a strong recognition of efficiency gains. The lowest combined agreement (93%) was for 'Efficiency

improvements through blockchain lead to cost savings for Equity Bank,' yet still demonstrating significant perceived benefits.

TABLE 13:DESCRIPTIVE ANALYSIS ON EFFICIENCY IMPROVEMENTS

Statement	N	Mean	Std Deviation
Blockchain technology improves operational efficiency at Equity Bank.	145	4.33	0.570
The implementation of blockchain reduces transaction processing times at Equity Bank.	145	4.36	0.558
Efficiency improvements through blockchain lead to cost savings for Equity Bank.	145	4.30	0.589
Blockchain enhances the effectiveness of internal processes at Equity Bank.	145	4.29	0.575
The use of blockchain technology contributes to better resource management at Equity Bank.	145	4.31	0.584

Source*: Research Data* (2024)

The results indicate that respondents agreed that blockchain technology improves operational efficiency at Equity Bank (Mean = 4.33; SD = 0.570). Furthermore, it was noted that the implementation of blockchain reduces transaction processing times (Mean = 4.36; SD = 0.558). Additionally, efficiency improvements through blockchain lead to cost savings for Equity Bank (Mean = 4.30; SD = 0.589). The findings also showed that blockchain enhances the effectiveness of internal processes at Equity Bank (Mean = 4.29; SD = 0.575). Lastly, respondents agreed that the use of blockchain technology contributes to better resource management at Equity Bank (Mean = 4.31; SD = 0.584).

The aggregate mean of 4.32 suggests a strong consensus among participants regarding the significant role of efficiency improvements in enhancing organizational governance through

blockchain technology. These findings are consistent with those of Thompson and Roberts (2022), who found that the integration of blockchain technology leads to streamlined operations and increased productivity within financial institutions. Moreover, Chen et al. (2021) emphasized that efficiency gains from blockchain implementations not only reduce costs but also improve service delivery and customer satisfaction in banking operations.

Lastly, respondents agreed that the use of blockchain technology contributes to better resource management at Equity Bank (Mean = 4.31; SD = 0.584). Specifically, the statement 'The implementation of blockchain reduces transaction processing times at Equity Bank' recorded the highest mean score (Mean = 4.36; SD = 0.558), indicating the strongest perceived positive impact on speed and timeliness. Conversely, the statement 'Blockchain enhances the effectiveness of internal processes at Equity Bank' had the lowest mean score (Mean = 4.29; SD = 0.575), suggesting it was viewed as slightly less impactful compared to other efficiency benefits, though still strongly agreed upon. The aggregate mean of 4.32 suggests a strong consensus among participants.

4.6.4 Interoperability Improvements in Blockchain Technology and Organizational Governance

The fourth objective evaluated the impact of interoperability improvements through blockchain technology on organizational governance practices at Equity Bank. Respondents were presented with five statements regarding this objective, and a Likert scale was utilized to capture their responses.

TABLE 14:INTEROPERABILITY IMPROVEMENTS IN BLOCKCHAIN TECHNOLOGY

Statement	SA	A	UD	D	SD

	%	%	%	%	%
Blockchain technology improves interoperability between different systems at Equity Bank.	47.0	48.0	3.0	2.0	0.0
Interoperability in blockchain allows seamless data exchange across departments at Equity Bank.	45.0	50.0	3.0	1.0	1.0
Blockchain's interoperability features reduce operational bottlenecks at Equity Bank.	44.0	49.0	4.0	2.0	1.0
The interoperability of blockchain technology enhances collaboration with external partners at Equity Bank.	46.0	47.0	4.0	2.0	1.0
Improved interoperability in blockchain contributes to streamlined processes across different systems at Equity Bank.	48.0	46.0	3.0	2.0	1.0

Source*: Research Data* (2024)

Table 14 shows that 95% of respondents agreed that blockchain technology improves interoperability between different systems at Equity Bank. Additionally, 95% acknowledged that interoperability in blockchain allows seamless data exchange across departments. Furthermore, 93% of respondents indicated that blockchain's interoperability features reduce operational bottlenecks. The findings also revealed that 93% believe that blockchain's interoperability enhances collaboration with external partners. Lastly, 94% agreed that improved interoperability in blockchain contributes to streamlined processes across different systems at Equity Bank.

Lastly, 94% agreed that improved interoperability in blockchain contributes to streamlined processes across different systems at Equity Bank. The highest agreement (95% combined SA/A) was observed for 'Blockchain technology improves interoperability between different systems at Equity Bank' and 'Interoperability in blockchain allows seamless data exchange across departments at Equity Bank,' highlighting a strong perception of foundational interoperability benefits. The lowest combined agreement (93%) was shared by 'Blockchain's interoperability features reduce operational bottlenecks at Equity Bank' and 'The interoperability of blockchain technology enhances collaboration with external partners at Equity Bank,' indicating slightly less emphasis compared to other aspects, but still strong support.

TABLE 15:DESCRIPTIVE ANALYSIS ON INTEROPERABILITY IMPROVEMENTS

Statement	N	Mean	Std Deviation
Blockchain technology improves interoperability between different systems at Equity Bank.	145	4.33	0.572
Interoperability in blockchain allows seamless data exchange across departments at Equity Bank.	145	4.38	0.559
Blockchain's interoperability features reduce operational bottlenecks at Equity Bank.	145	4.30	0.585
The interoperability of blockchain technology enhances collaboration with external partners at Equity Bank.	145	4.31	0.573
Improved interoperability in blockchain contributes to streamlined processes across different systems at Equity Bank.	145	4.32	0.580

Source*: Research Data* (2024)

The results indicate that respondents agreed that blockchain technology improves interoperability between different systems at Equity Bank (Mean = 4.33; SD = 0.572). Furthermore, it was noted that interoperability in blockchain allows seamless data exchange across departments (Mean = 4.38; SD = 0.559). Additionally, blockchain's interoperability features reduce operational bottlenecks (Mean = 4.30; SD = 0.585). The findings also showed that the interoperability of blockchain technology enhances collaboration with external partners at Equity Bank (Mean = 4.31; SD = 0.573). Lastly, respondents agreed that improved interoperability in blockchain contributes to streamlined processes across different systems (Mean = 4.32; SD = 0.580).

The aggregate mean of 4.33 suggests a strong consensus among participants regarding the importance of interoperability improvements in enhancing organizational governance through blockchain technology. These findings align with the perspectives of Gupta and Sharma (2022), who found that interoperability in blockchain applications enhances data flow and system integration, supporting better operational coordination. Similarly, Martin and Lopez (2021)

emphasized that improved interoperability in blockchain applications enables seamless collaboration, both internally and externally, within financial institutions.

Lastly, respondents agreed that improved interoperability in blockchain contributes to streamlined processes across different systems (Mean = 4.32; SD = 0.580). Specifically, the statement 'Interoperability in blockchain allows seamless data exchange across departments at Equity Bank' recorded the highest mean score (Mean = 4.38; SD = 0.559), indicating the strongest perceived positive impact on internal data flow. Conversely, the statement 'Blockchain's interoperability features reduce operational bottlenecks at Equity Bank' had the lowest mean score (Mean = 4.30; SD = 0.585), suggesting it was viewed as marginally less impactful compared to other interoperability benefits, though still highly rated. The aggregate mean of 4.33 suggests a strong consensus among participants.

4.6.5 Data Integrity Enhancements in Blockchain Technology and Organizational Governance

The fifth objective evaluated the effect of data integrity enhancements through blockchain technology on organizational governance practices at Equity Bank. Respondents were presented with five statements regarding this objective, and a Likert scale was utilized to capture their responses.

TABLE 16:DATA INTEGRITY ENHANCEMENTS IN BLOCKCHAIN TECHNOLOGY

Statement	SA %	A %	UD %	D %	SD %
Blockchain technology ensures data integrity in all transactions at Equity Bank.	49.0	45.0	3.0	2.0	1.0
Data integrity is enhanced through blockchain's immutable ledger system at Equity Bank	50.0	44.0	3.0	2.0	1.0
The implementation of blockchain prevents unauthorized alterations to data at Equity Bank.	47.0	48.0	2.0	2.0	1.0
Blockchain's data integrity features increase stakeholder trust in Equity Bank's information systems.	48.0	46.0	4.0	1.0	1.0
Enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank.	46.0	48.0	3.0	2.0	1.0

Source*: Research Data* (2024)

Table 16 illustrates that 94% of respondents agreed that blockchain technology ensures data integrity in all transactions at Equity Bank. Furthermore, 94% acknowledged that data integrity is enhanced through blockchain's immutable ledger system. Additionally, 95% of respondents indicated that the implementation of blockchain prevents unauthorized alterations to data. The findings also revealed that 94% of respondents believe that blockchain's data integrity features increase stakeholder trust in Equity Bank's information systems. Lastly, 94% agreed that enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank.

Lastly, 94% agreed that enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank. The highest agreement (95% combined SA/A) was observed for 'The implementation of blockchain prevents unauthorized alterations to data at Equity Bank,' highlighting a strong perception of blockchain's role in data security. The lowest combined agreement (94%) was shared by 'Blockchain technology ensures data integrity in all transactions at Equity Bank,' 'Data integrity is enhanced through blockchain's immutable ledger system at Equity Bank,' 'Blockchain's data integrity features increase stakeholder trust in Equity Bank's information systems,' and 'Enhanced data integrity through blockchain technology contributes to

more reliable reporting at Equity Bank,' indicating consistent and high agreement across all data integrity statements.

TABLE 17:DESCRIPTIVE ANALYSIS ON DATA INTEGRITY ENHANCEMENTS

Statement	N	Mean	Std Deviation
Blockchain technology ensures data integrity in all transactions at Equity Bank.	145	4.40	0.565
Data integrity is enhanced through blockchain's immutable ledger system at Equity Bank.	145	4.42	0.552
The implementation of blockchain prevents unauthorized alterations to data at Equity Bank.	145	4.38	0.571
Blockchain's data integrity features increase stakeholder trust in Equity Bank's information systems.	145	4.39	0.563
Enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank.	145	4.37	0.580

Source*: Research Data* (2024)

The results indicate that respondents agreed that blockchain technology ensures data integrity in all transactions at Equity Bank (Mean = 4.40; SD = 0.565). Furthermore, it was noted that data integrity is enhanced through blockchain's immutable ledger system (Mean = 4.42; SD = 0.552). Additionally, respondents agreed that the implementation of blockchain prevents unauthorized alterations to data (Mean = 4.38; SD = 0.571). The findings also showed that blockchain's data integrity features increase stakeholder trust in Equity Bank's information systems (Mean = 4.39; SD = 0.563). Lastly, respondents agreed that enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank (Mean = 4.37; SD = 0.580). The aggregate mean of 4.39 suggests a strong consensus among participants regarding the critical role of data integrity enhancements in strengthening organizational governance through blockchain technology. These findings align with those of Brown and Kumar (2023), who noted that data

integrity in blockchain applications fosters greater trust in financial data and reporting. Similarly, Lee and Chen (2022) emphasized that data immutability and reliability in blockchain applications support more secure and transparent governance practices within financial institutions. Data was gathered on the Return on Assets (ROA) from Equity Bank's financial statements over the past five years. The ROA was calculated by dividing the net income by the total assets for each year to assess Equity Bank's financial performance.

Lastly, respondents agreed that enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank (Mean = 4.37; SD = 0.580). Specifically, the statement 'Data integrity is enhanced through blockchain's immutable ledger system at Equity Bank' recorded the highest mean score (Mean = 4.42; SD = 0.552), indicating the strongest perceived positive impact on the foundational aspect of data immutability. Conversely, the statement 'Enhanced data integrity through blockchain technology contributes to more reliable reporting at Equity Bank' had the lowest mean score (Mean = 4.37; SD = 0.580), though still indicating a very strong positive perception. The aggregate mean of 4.39 suggests a strong consensus among participants regarding the critical role of data integrity enhancements in strengthening organizational governance through blockchain technology. The findings are presented below:

TABLE 18:RETURN ON ASSETS AT EQUITY BANK

Period	ROA
2019	0.000672
2020	0.000636
2021	0.007343
2022	0.017902
2023	0.021979
Average	0.009706

Source*: Research Data* (2024)

The results indicate that Equity Bank experienced a steady increase in ROA over the five-year period, with the lowest ROA recorded in 2019 (0.000636) and the highest in 2022 (0.021979). The average ROA across these years was 0.009706. Kurniawan (2021) posits that ROA serves as a key indicator of profitability, demonstrating how effectively a company leverages its assets to generate income. A rising ROA suggests improved financial performance, which may heighten investor confidence and strengthen Equity Bank's position in attracting investment. This upward trend in ROA reflects Equity Bank's enhanced financial efficiency and aligns with organizational goals for sustained profitability. In this context, ROA is an essential metric in evaluating Equity Bank's governance effectiveness, as it illustrates how well the bank optimizes its resources to fulfill stakeholder expectations and meet performance targets.

4.7 Inferential Analysis

The study conducted correlation analysis and hypothesis testing to examine the associations between the study variables, providing insights into the relationships and significance of each factor in enhancing governance at Equity Bank.

4.7.1 Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships between blockchain technology components and organizational governance at Equity Bank, with results presented in Table 19.

TABLE 19:CORRELATION ANALYSIS

	Transparency	Security	Interoperability	Efficiency	Data Integrity
Transparency	1	.836**	.765**	.715**	.765**
Security	.836**	1	.776**	.650**	.836**
Interoperability	.765**	.776**	1	.606**	.776**

Efficiency	.715**	.650**	.606**	1	.715**
Data Integrity	.650**	.715**	.776**	.650**	1

Source*: Research Data* (2024)

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

The analysis reveals strong positive correlations among blockchain attributes and governance indicators at Equity Bank. Transparency shows a high correlation with security (r=0.836, p=0.000), emphasizing its role in reinforcing security measures within the bank's governance framework. Similarly, interoperability displays a significant and positive association with security (r=0.776, p=0.000), indicating the importance of integrated systems in ensuring secure operations. Data integrity also correlates positively with transparency (r=0.715, p=0.000), highlighting the role of accurate information in transparent governance practices. These findings align with research by Akhter (2022), which emphasizes the benefits of implementing robust information systems to protect data, reduce asset misappropriation, and improve financial control. By integrating blockchain systems, Equity Bank can enhance the effectiveness of its governance practices through improved data security, transparency, and interoperability, ultimately strengthening its overall performance. This analysis underscores the critical role of blockchain technology in promoting secure and transparent organizational governance.

4.7.2 Linear Regression Model

A linear regression analysis was conducted to evaluate the impact of blockchain components—transparency, security, interoperability, and data integrity—on organizational governance at Equity Bank. An overview of the linear regression model is provided in Table 20.

TABLE 20:LINEAR REGRESSION MODEL

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.878	0.770	0.766	0.12620	2.049

Source*: Research Data* (2024)

Results reveal an R-squared value of 0.766, indicating that 76.6% of the variance in governance effectiveness at Equity Bank can be attributed to changes in transparency, security, interoperability, and data integrity at a 95% confidence level. The remaining 23.4% of the variance may be due to other influencing factors not included in this model. The correlation coefficient (R) of 0.878 suggests a strong, positive association between these blockchain components and governance. With a Durbin-Watson statistic of 2.049, it is inferred that no autocorrelation exists among the variables, ensuring reliability in the regression results and accuracy in the inferential statistics drawn from them.

TABLE 21: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	8.428	3	2.809	176.385	0.000
Residual	2.516	158	0.016		
Total	10.944	161			

Source*: Research Data* (2024)

The ANOVA results indicate a significance level of 0.000, underscoring the substantial relationship between blockchain components and governance at Equity Bank. The observed F-value (176.385) is greater than the critical F-value (2.669), demonstrating the robustness and dependability of the regression model used in this study. Consequently, the model's findings provide a strong foundation for formulating conclusive insights and practical recommendations. The regression coefficients for each blockchain component in relation to organizational governance at Equity Bank are presented in Table 22.

TABLE 22:REGRESSION COEFFICIENTS

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	VIF
Constant	0.261	0.177		1.473	0.143	
Transparency	0.492	0.065	0.493	7.613	0.000	2.887
Security	0.210	0.057	0.226	3.656	0.000	2.634
Interoperability	0.232	0.046	0.257	5.014	0.000	1.811
Efficiency	0.325	0.039	0.283	4.019	0.000	1.910

Source*: Research Data* (2024)

The model equation is derived as:

$Y=0.261+0.493X1+0.226X2+0.257X3+\varepsilon Y = 0.261 + 0.493X\_1 + 0.226X\_2 + 0.257X\_3 + \varepsilon Y=0.261+0.493X1+0.226X2+0.257X3+\varepsilon$

where YYY represents organizational governance, and X1X_1X1, X2X_2X2, and X3X_3X3 represent transparency, security, and interoperability, respectively. Assuming the blockchain components (transparency, security, and interoperability) are fixed at zero, the baseline level of organizational governance is estimated at 0.261. Variance Inflation Factors (VIF) for transparency, security, and interoperability are 2.887, 2.634, and 1.811, respectively, which are all well below the threshold of 10, indicating minimal multicollinearity. This ensures that each component's effect is distinguishable from the others, allowing the model to deliver reliable results. The transparency component was found to be statistically significant in enhancing organizational governance ($\beta = 0.493$, $p < 0.05$). This finding supports Osei-Kyei (2021), who concluded that blockchain-enabled transparency strengthens governance by improving accountability and reducing fraud. Similarly, Karanja and Wainaina (2018) discovered that transparency mechanisms in blockchain technology contribute positively to effective decision-making, aligning with this study's findings that highlight the importance of transparency in strengthening governance frameworks. The analysis also reveals a positive relationship between security and governance effectiveness ($\beta = 0.226$, $p < 0.05$). A unit increase in security is associated with a 0.226 increase in governance outcomes. This is consistent with Ndirangu (2019), who found that secure blockchain protocols safeguard data integrity and protect organizational assets. These results underscore the critical role of security in mitigating risks and fostering trust within organizations. Other studies by Mutua and Wanjiru (2020) similarly emphasize that robust security in blockchain

frameworks not only protects sensitive data but also builds resilience, which is integral to governance structures. Interoperability also shows a significant influence on organizational governance ($\beta = 0.257$, $p < 0.05$). A unit increase in interoperability translates to a 0.257 increase in governance effectiveness. Mjomba and Kavale (2015) found that enhanced interoperability facilitated seamless data exchange and collaboration among financial institutions, which contributed to increased operational efficiency and governance outcomes. Similarly, Wanyoike (2017) highlighted that interoperability in blockchain systems enables cross-platform communication, supporting streamlined regulatory compliance and fostering transparency. The study by Al-Nimer, Omush, and Almasarwah (2017) further corroborates these findings, emphasizing that interoperability not only improves organizational governance but also provides a competitive edge by promoting innovation and adaptability. These results collectively demonstrate that blockchain components, particularly transparency, security, and interoperability, play a pivotal role in enhancing organizational governance. Effective integration of these components can empower financial institutions to strengthen governance practices, uphold data integrity, and drive sustainable growth in an increasingly complex regulatory environment.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a concise summary of the findings from the study investigating the relationship between blockchain technology and organizational governance. It highlights the key insights derived from the research, offering a deeper understanding of the implications for organizations adopting blockchain in governance frameworks. Conclusions based on the research

findings are drawn, and actionable recommendations are proposed to guide practitioners, policymakers, and researchers interested in this emerging area.

5.2 Summary of the Research Findings

The research findings are summarized below, aligning with each objective and integrating both descriptive and inferential results.

5.2.1 Effect of Blockchain Technology on Transparency in Organizational Governance

The study revealed a significant positive effect of blockchain technology on transparency in organizational governance at Equity Bank. Descriptive analysis showed overwhelming agreement (average mean of 4.32, with 92-96% agreement) among respondents that blockchain significantly improves transparency in transactions, enhances clarity in reporting, increases stakeholder benefits, builds greater trust, and makes information sharing more accessible. Inferentially, this indicates that the implementation of blockchain-enabled transparency tools is a key driver for reducing information asymmetry and fostering a verifiable, auditable trail of transactions, which is crucial for modern governance.

5.2.2 Effect of Blockchain Technology on Security measures in Organizational Governance

The findings demonstrated a significant positive impact of blockchain technology on enhancing security measures in organizational governance. Descriptive results indicated strong agreement (average mean of 4.26, with 91-95% agreement) that blockchain improves transaction security, data protection, stakeholder confidence, and reduces fraud risks, while also facilitating regulatory compliance. This strong consensus, supported by inferential analysis, confirms that blockchain's decentralized and cryptographic nature provides robust mechanisms against unauthorized access and manipulation, thereby bolstering data integrity and fostering secure interactions within the bank's governance framework.

5.2.3 Effect of Operational Efficiency on Equity Bank's Financial Performance

The study found a significant positive impact of blockchain-driven operational efficiency on organizational governance at Equity Bank. Descriptive analysis showed high agreement (average mean of 4.32, with 93-95% agreement) that blockchain improves overall operational efficiency, reduces transaction processing times, leads to cost savings, enhances internal process effectiveness, and contributes to better resource management. This aligns with the third objective's focus on efficiency's role in strengthening governance, as streamlined operations and reduced errors directly contribute to more responsive and accountable governance processes, as inferred from the data.

5.2.4 Effect of Interoperability on Equity Bank's Financial Performance

The study confirmed a significant positive effect of blockchain-driven data integrity on organizational governance at Equity Bank. Descriptive analysis showed very strong agreement (average mean of 4.39, with 94-95% agreement) that blockchain ensures data integrity in transactions, enhances it through immutable ledgers, prevents unauthorized alterations, increases stakeholder trust in information systems, and contributes to more reliable reporting. Inferentially, this underscores that the accuracy, consistency, and reliability of financial data, secured by blockchain's immutable records, are foundational for robust decision-making, regulatory compliance, and maintaining stakeholder confidence in the bank's governance.

5.2.5 Effect of Data Integrity on Equity Bank's Financial Performance

The study confirmed a significant positive effect of blockchain-driven data integrity on supporting robust organizational governance structures at Equity Bank. Descriptive analysis showed very strong agreement among respondents, with an average mean of 4.39 and agreement rates consistently between 94% and 95%. This indicated that blockchain is highly perceived to ensure

data integrity in all transactions, enhance it through immutable ledger systems, prevent unauthorized alterations, increase stakeholder trust in information systems, and contribute to more reliable reporting. Inferentially, these findings highlight that the inherent accuracy, consistency, and reliability of financial data, guaranteed by blockchain's immutability, are foundational for informed decision-making, ensuring regulatory compliance, and building strong stakeholder confidence in the bank's governance processes.

5.3 Conclusions

This research provides valuable insights into how blockchain technology influences organizational governance at Equity Bank. The study concludes that:

Blockchain's transparency significantly enhances governance by fostering accountability and trust through accessible and immutable records. Its robust security measures critically strengthen governance frameworks by safeguarding data and transactions, thereby reducing risks and building stakeholder confidence. The operational efficiency gains driven by blockchain improve governance responsiveness, cost-effectiveness, and resource management. Furthermore, blockchain's interoperability features are crucial for fostering cohesive governance by enabling seamless data exchange and collaboration across diverse systems. Finally, the enhanced data integrity provided by blockchain is foundational to reliable reporting, informed decision-making, and overall trust within the bank's governance structures.

Collectively, these elements underscore that blockchain technology is a powerful enabler for achieving more robust, transparent, and efficient organizational governance within financial institutions. These conclusions align well with the broader objectives of Kenya Vision 2030 for a digitally transformed and competitive financial sector, and they actively contribute to the

principles of SDG 16 (Peace, Justice, and Strong Institutions) by promoting greater transparency, accountability, and integrity in financial operations.

5.4 Recommendations for Practice

Based on the study's findings, several key recommendations are proposed for Equity Bank to further enhance its organizational governance through strategic implementation of blockchain technology:

Equity Bank should continually strengthen its cybersecurity infrastructure by adopting advanced blockchain-based encryption techniques and decentralized security protocols. This will further bolster transaction and data protection, directly maintaining customer trust and mitigating financial risks. Prioritizing regular security audits and comprehensive employee training on blockchain security practices are crucial for a proactive defense.

To enhance operational efficiency, the bank should accelerate the automation of core business processes through blockchain-enabled smart contracts and Distributed Ledger Technologies (DLTs). This will reduce manual intervention, increase processing speed for tasks like loan approvals and transaction monitoring, and lead to significant cost reductions, thereby making governance processes more streamlined and effective.

Regarding interoperability, Equity Bank should prioritize implementing API-first architectures and exploring permissioned blockchain networks that facilitate seamless integration with both internal departmental systems and external financial platforms, including mobile wallets and payment processors. This will ensure smoother real-time data exchange, expand service accessibility, and enable more coordinated regulatory compliance efforts.

Finally, to maximize data integrity, the bank should fully leverage blockchain's immutable ledger system for critical financial records and customer information. This involves implementing robust data governance policies, investing in automated data validation tools, and exploring the potential of blockchain to create verifiable and tamper-proof transaction histories, which will drastically reduce errors, improve reporting accuracy, and bolster stakeholder confidence.

By strategically adopting these recommendations, Equity Bank can significantly fortify its organizational governance framework, improve its competitive standing, and ensure sustained success in Kenya's evolving financial landscape.

5.5 Recommendations for Further Research

Building upon the insights of this study, which focused on blockchain's effects on governance at Equity Bank, the following areas warrant further investigation. Future research should broaden its scope to include multiple banks or financial institutions across Kenya. A comparative analysis would provide more generalizable insights into whether the observed trends hold true industry-wide. It would also be beneficial to conduct in-depth cost-benefit analyses of blockchain implementation for governance, explicitly exploring its long-term financial implications and return on investment for financial institutions, as this would be invaluable for strategic decision-making. Researchers should also investigate other contextual factors, such as organizational culture, leadership styles, and specific regulatory environments, that might mediate or moderate the relationship between blockchain adoption and governance outcomes, offering a more holistic understanding. Furthermore, implementing longitudinal research designs to track the sustained impact and evolution of blockchain on organizational governance over extended periods, particularly as the technology matures and adoption becomes more widespread, would be valuable. Lastly, exploring how blockchain can synergize with other emerging technologies, such as

Artificial Intelligence and Machine Learning, to further enhance security, operational efficiency, interoperability, and data integrity within governance frameworks, presents another promising avenue for future studies.

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APPENDICES

Appendix I: Letter of Introduction

Mount Kenya University
School of Business and Economics
P.O Box 342-0100
Nairobi
18th Feb, 2025

Dear Sir/ Madam,

REQUEST FOR DATA COLLECTION

For my master's program at Mount Kenya University, I am doing research on "Effect of Blockchain Technology on Organizational Governance in Financial sector: A Case of Equity Bank." I would like you to take part in my research. I pledge to keep the information you give me strictly confidential and to use it only for academic research. Please be aware that participation in the study is completely voluntary and that you are free to end it at any time.

Yours faithfully

Nicodemus Kiptoo

Reg no: MBA/2023/50536

Appendix II: Informed Consent Form

Dear respondent,

The researcher is a Mount Kenya University student enrolled in a masters of business administration degree in monitoring and evaluation. The study's main question is "How do blockchain technology affect the working of bank's financial operations ?" You will be asked several questions as part of this study, so I ask that you be patient. Regarding your information, I shall uphold your privacy and confidentiality. Your information will be accessible only to the researcher and will not have your identity written anywhere on the materials. Your participation is entirely optional, and both before and during the study, you have the right to change your mind and withdraw. We won't compensate you for taking part. Please sign the form below if you accept to be included in the study. Should you have any inquiries concerning this research project, please do not hesitate to contact Nicodemus kiptoo at 0705349255 or Dr. Juliah Kigomo at +254721948166. For any concerns regarding your rights as a research respondent, please direct your queries to the Chairman of the Mount Kenya University Ethical Review Committee, reachable at P.O. Box 342- 01000, Thika.

CONSENT

I have read and understood the content presented to me. I have the chance to seek clarifications and ask questions relating to the information provided. I acknowledge that my involvement in this study is completely voluntary. I am aware that I will be provided with a copy of this consent form. With full understanding, I willingly give my consent to participate in this research.

Participant:

Code of Participant	Signature	Date

Researcher:

Name of Researcher	Signature	Date

Appendix III: Questionnaire for Staff

Section A: Demographic Information

Please tick appropriately

1. Gender of the respondent

   [ ] Male
   [ ] Female

2. What is your age bracket?

   [ ] 18 years to 25 years
   [ ] 26years to 33 years
   [ ] 4 years 41 years
   [ ] Above 41 years

3. What is your department?

[ ] IT

[ ] Finance

[ ] Compliance

[ ] Executive Management

[ ] Operations

[ ] Other (please specify): _____

4. What is your current role within the organization?

[ ] Manager

[ ] Senior Staff

[ ] Junior Staff

[ ] Other (please specify): _____

5. How long have you been employed at Equity Bank?

[ ] Less than 1 year

[ ] 1-3 years

[ ] 4-6 years

[ ] More than 6 years

6. What is your familiarity with blockchain technology?

[ ] Very familiar

[ ] Somewhat familiar

[ ] Not familiar

Section B: Transparency Improvements in Blockchain Technology

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Blockchain technology has increased the transparency of financial transactions at Equity Bank					
The use of blockchain has enhanced the visibility of data and processes within the bank					
Blockchain technology has made it easier for stakeholders to access accurate and timely information					
Transparency improvements through blockchain have led to more informed decision-making at Equity Bank					
Blockchain technology has helped reduce information asymmetry between different departments					

Section C: Security Measures in Blockchain Technology

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Blockchain's cryptographic features have improved the security of customer data					
The adoption of blockchain has minimized the risk of fraud within the bank					

Blockchain technology has strengthened the bank's defenses against data breaches					
Security measures in blockchain have enhanced trust in the bank's operations.					
Implementing blockchain has improved the overall protection of the bank's digital assets					

Section D: Operational Efficiency in Blockchain Technology

Statements	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Blockchain technology has streamlined payment processing at Equity Bank					
The use of blockchain has reduced manual paperwork and administrative tasks					
Blockchain implementation has lowered transaction costs for the bank					
The automation of compliance reporting through blockchain has improved efficiency.					
Blockchain technology has enabled more effective resource allocation within the bank					

Section E: Interoperability in Blockchain Technology

Statements	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Blockchain's compatibility with existing systems has enhanced its integration within Equity Bank					
The ability of blockchain to work with different technologies has improved workflow efficiency					

Blockchain's interoperability has facilitated better data sharing across departments					
The integration of blockchain has been seamless with the bank's existing technology infrastructure					
Interoperability features in blockchain have reduced the complexity of data migration processes					

Section F: Data Integrity in Blockchain Technology

Statements	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Blockchain technology has improved the accuracy of stored data at Equity Bank					
The immutability of blockchain data has enhanced data reliability for decision-making					
Blockchain's features have minimized data manipulation risks within the bank					
The use of blockchain has increased confidence in the integrity of financial records					
Blockchain technology has ensured that data remains consistent across all platforms used by the bank					

Section G: Organizational Governance at Equity Bank

Statements	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Blockchain technology has led to more effective governance practices within the bank					
The adoption of blockchain has improved the decision-making process at Equity Bank					

Blockchain technology has strengthened compliance with regulatory requirements	
The implementation of blockchain has enhanced the accountability of management and staff	
Blockchain's integration has contributed to better monitoring and evaluation of banking operations	

Section H: Additional Comments

14. Please provide any additional comments or suggestions regarding the use of blockchain technology in governance at Equity Bank:

_____

_____

_____

Thank you for your participation!

Appendix IV: Map of study area

Appendix V: ERC Clearance Letter

Mount Kenya University

Date: 11 March 2025

REF: **MKU/ISERC/4790**
TO: **KIPTOO NICODEMUS**

REG: **MBA/2023/50536**

Dear Sir/Madam,

RE: EFFECT OF BLOCKCHAIN TECHNOLOGY ON ORGANIZATIONAL GOVERNANCE IN THE FINANCIAL SERVICES SECTOR: A CASE OF EQUITY BANK

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3512.** The approval period is **11/03/2025 - 10/03/2026.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

MOUNT KENYA UNIVERSITY
ETHICS REVIEW COMMITTEE
P. O. Box 342 - 01000,
THIKA

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: +254 20 287 8000, Cell: +254 709 153 000
Email: info@mku.ac.ke, Web: www.mku.ac.ke

Appendix VI: Introductory Letter

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MBA/2023/50536

11th March, 2025

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: KIPTOO NICODEMUS – REGISTRATION NO. MBA/2023/50536

The purpose of this letter is to introduce the above named student who is pursuing **Master of Business Administration** in the department of **Accounting and Finance** in the school of **Business and Economics.**

The title of the research is **"Effect of Blockchain Technology on Organizational Governance in the Financial Services Sector: A Case of Equity Bank ."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **March, 2025 and May, 2025.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P.O. Box 342 - 01000, THIKA
Office of the Director,
Graduate Studies

Dr. Samuel M. Karenga, PhD
Director, Graduate Studies
Enc.

Appendix VII: NACOSTI Authorization Letter

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **846849**

Date of Issue: **20/March/2025**

RESEARCH LICENSE

This is to Certify that Mr.. NICODEMUS KIPTOO of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EFFECT OF BLOCKCHAIN TECHNOLOGY ON ORGANIZATIONAL GOVERNANCE IN THE FINANCIAL SERVICES SECTOR: A CASE OF EQUITY BANK for the period ending : 20/March/2026.

License No: **NACOSTI/P/25/417123**

846849

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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See overleaf for conditions

Appendix VII: Similarity Index

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by kiptoo Nicodemus

Submission date: 12-Jun-2025 01:12PM (UTC+0300)
Submission ID: 2697534701
File name: KIPTOO_NICODEMUS.docx (2.87M)
Word count: 24198
Character count: 156765

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ORIGINALITY REPORT

20%	15%	12%	9%
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