

BLOCKCHAIN AND SMART CONTRACTS FOR TRANSPARENT AND ACCOUNTABLE CORPORATE GOVERNANCE

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Abstract

This study examined the impact of blockchain technology and smart contracts on corporate governance in the Nigerian banking industry. A descriptive survey research design was adopted, with a population comprising stakeholders from all listed banks in Nigeria, including executives, compliance officers, auditors, financial analysts, IT professionals, and regulatory personnel. A total of 200 stakeholders were sampled from the Lagos headquarters of ten selected banks based on market capitalization, technological adoption, and industry prominence. Data were collected using a structured close-ended questionnaire designed on a 4-point Likert scale and analyzed through descriptive statistics, factor analysis, linear regression, and the Sobel test. Findings revealed several barriers to blockchain and smart contract adoption, including regulatory uncertainty, high implementation costs, technical challenges, security concerns, and low stakeholder awareness. The study further established that blockchain technology has a positive and significant effect on transparency in corporate governance (0.412, $p=0.000<0.05$) and fraud prevention (0.458, $p=0.043<0.05$). However, smart contracts, while positively influencing accountability and decision-making, showed an insignificant effect (0.428, $p=0.065>0.05$). Additionally, stakeholder perception was found to have a significant moderating effect on the relationship between blockchain adoption and trust in governance ($Z=4.87$, $p=0.000<0.05$). The study concludes that blockchain technology significantly enhances transparency, fraud prevention, and stakeholder trust in corporate governance. It recommends that financial institutions allocate resources to blockchain development and foster collaboration with fintech firms and regulators to lower costs and enhance integration into governance frameworks.

Keywords: *Block chain technology, Corporate governance, Fraud prevention, Smart contracts, Transparency*

1.0 Introduction

In modern times, a lot of firms have been incorporated where the owners of the business are distinct from the people managing the business. This distinction over time, has brought up a lot of debates and contentions concerning the best way to reduce conflicts and achieve shareholders' objectives (Akgiray, 2019). The activities and actions carried out by firms to ensure that the interests and desires of shareholders and managers align in a company is simply described as corporate governance. Thus, a strong corporate governance scheme would ensure the growth and progression of a company, while a weak scheme could cause loss and reputational damage to the firm.

Corporate governance ensures that the transfer and storage of data is not compromised. In contemporary days, the transfer and storage of data is performed using different mediums and techniques, one of which is the block chain technology. Block chain technology has been identified as a fintech which employs 'distributed ledger technology' to avert fraud and hacking of data, while promoting trust and confidentiality among users (Aro, Nweze & Avickson, 2024). Basically, this technology decentralizes transactions in such a way that information does not revolve around one central authority. A lot of people understand block chain technology in relation to cryptocurrency use, but this aspect of block chain does not cover the totality of the potential of what block chain technology can be used for.

An aspect of block chain which could be used to improve corporate governance is smart contract. Basically, smart contract is implemented when some predetermined criteria's are fulfilled. Together, block chain and smart contract guarantee that fraud is reduced, promotes trust and confidentiality in the system where they are implemented. Ante (2020) believed that block chain and smart contract could strengthen corporate governance mechanisms by making transactions transparent to all stakeholders. The absolute implementation of block chain and smart process would make data to be automatically updated, leaving no room for manual manipulation or falsification.

The principal-agent relationship, which is a term commonly used in corporate governance shows the distrust among people in an organization, especially between the owners and the managers (Dulani & Alexandra, 2020). The downfall of corporate global giants like Nokia, the Lehman bank, Enron, Worldcom among a host of others is mostly believed to have been caused by weak corporate governance mechanisms. Lack of independence, easy manipulation of information and miscommunication are some of the limitations of weak corporate governance in modern times (Kayode & Britney, 2025). In essence, principals must be innovative and creative in strengthening their corporate governance.

A weak corporate governance structure would cause the storage and retrieval of information to be below acceptable standards (Patki & Vinod, 2020). Information asymmetry would easily take place, where information could be presented in such a way to elicit, predetermined specific responses from stakeholders. Adopting block chain technology and smart contract could mitigate some lapses experienced in corporate governance. Information could be updated automatically, eliminating any manual form of imputing data, thus, reducing manipulation of data. In the same vein, responses/feedback could be sent automatically to the interested stakeholders to enable them make tangible decisions.

In implementing block chain and smart process, its possible firms encounter various challenges. One of them is the acceptability of the technology. Block chain and smart contract, despite their usefulness is not generally acceptable in all corporations and institutions (Paveenasuda, 2022). Some principals believe that its confidentiality is a problem, due to how well it protects its users, which might not benefit them. More so, special training is needed most times before staff can understand its operations. Training staff and motivating them to stay for extended period of time could be a herculean task for corporations.

Various studies examined the subject matter in different contexts prior to the current study. From the reviewed studies, only a handful of them were performed in Nigeria (Eghe-Ikhrhe & Bonsu, 2022; Aro, Nweze & Avickson, 2024). This creates a need for recent findings to be provided in Nigeria, therefore leading to this study. A critical analysis of the available studies at the disposal of the researcher showed that smart contract has not been deeply investigated as a predictor of corporate governance. Only the study of Kayode and Britney (2025) from the available studies considered smart contract in relation to corporate governance. Implicitly, more research needs to be conducted on how block chain and smart contract influences corporate governance. Therefore, the study investigated the impact of blockchain and smart contracts on corporate governance with the following objectives:

1. To examine the barriers to adopting Block chain and Smart contracts in Corporate Governance Structures
2. To assess the effect of Block chain on the transparency of Corporate Governance
3. To evaluate the impact of Smart Contract on accountability and decision making in Corporate Governance
4. To examine the influence of Block chain on fraud prevention
5. To assess the effect of Stakeholder's Perception as a moderator between Block chain adoption and trust in Governance

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Block Chain

The concept of blockchain has been examined by various scholars, ever since its introduction by Nakamoto in 2008. Block chain is simply a devolved ledger system, where information are stored and transmitted without needing a middleman (Fenwick & Vermeulen, 2019). Compared to the conventional computer system where information is transmitted around a central authorizer, blockchain technology does not need an authorizer before information is communicated to users.

Users have equal access and rights to use blockchain without interference or hindrance from anyone. Perhaps, this is part of the reason why some institutions and entities have not accepted blockchain technology; because, they cannot control it.

Blockchain technology has the ability to carry out multiple transactions for entities with speed and accuracy, making it to rival other forms of technology. In the opinion of Siddharth (2023), blockchain is a network of transactions which is decentralized among users, in such a way that there is no central authority or intermediary. Blockchain has a high regard for confidentiality of users. This could be part of the reason why cybercriminals and fraudsters make use of the technology; to escape identification by authorities. From another perspective, entities could freely enter the right information for their institution, without fear of repercussion or manipulation.

Blockchain technology according to Xing (2023) is a distributed and dispersed ledger technology which gives users the same degree of authorization over their transactions, to build trust and confidentiality in their processes. The fact that there are weaknesses of internal procedures in firms, is part of the reason why blockchain is highly appreciated in the corporate world. Weaknesses like lack of trust and poor confidentiality are solved when blockchain technology is used. More so, it improves transparency and accountability in the workplace, and by extension, improves the overall system of corporate governance in the workplace.

Blockchain was initially proposed as a means to authenticate the proprietorship of bitcoin virtual currency (Yusuf, Hakimb, Hendrac, Kamard, Idawatie, Winarsof, et al., 2023). In a broad perspective, blockchain is more recognized from its aspect of managing cryptocurrencies among which bitcoin seems to be the most popular. Due to the launch of the technology in managing cryptocurrencies, a lot of users and scholars seem to have limit its application only to cryptocurrency. In contrast, modern authors have discovered that blockchain technology is so much bigger and broader than cryptocurrency, and they are beginning to see its purpose in corporate governance.

2.1.2 Smart Contract

Smart contract is an application of blockchain technology, where automated instructions/processes are performed when certain conditions are met (Wulf, 2021). This aspect of blockchain technology is what improves transparency and accountability. When imputers tender certain information in the blockchain technology, smart contract provides a seamless interpretation of that data without any interruption or manipulation. In essence, some predetermined information must have been provided, for smart contract to work. In fostering

strong corporate governance schemes, the implementation of smart contract has a significant role to play.

Smart contract could also be defined as automated protocols agreed between clients and vendors, where certain supply/payments are made, at particular points in time (Rajora, 2022). A bank could have a system where diesel should be supplied to them once their tank is left with 100 litres. On providing the agreed amount of diesel, the vendor would be automatically credited without any further need to negotiate or hassle about the cost of the diesel. A simple illustration like this, is what smart contract is all about. Once predetermined conditions are met, instructions are carried out without undue influence/manipulation.

Smart contract has been defined by Patki and Vinod (2020) to be a syntax commonly used with blockchain technology to discuss, implement and administer stipulated agreements. A lot of cryptocurrency users adopt smart contract in their transactions. When people pay a particular sum of money to them, smart contract begins to act upon preconceived instructions and carry out certain orders. This could be part of the reason why people trust cryptocurrency, because they understand that when certain conditions are met, they would be rewarded. Unfortunately, this has also being the bane for fraudulent transactions to take place. Some fraudsters program the instructions to defraud users when definite circumstances are met.

Smart contract keeps a very good schedule of terms and conditions, and also implements them when the need arises. If implemented in corporate governance, it is very possible that time wastage would be eliminated and unnecessary re-negotiation of prices. Smart contract would definitely improve confidentiality in the workplace, and increase reward-based system, because when certain targets are met, such staff would be immediately compensated without the need to send reminders to the responsible units (Mukhopadhyay, 2018). Implementing such systems would most likely improve the corporate governance scheme, and improve performance as well.

2.1.3 Corporate Governance

Corporate governance is a term commonly associated with the separation of ownership of a business from the management of the business. To Fahlevi, Aisjah and Djazuli (2023), it is a set of regulations and rules which controls the happenings and decisions which takes place in an organization. Corporate governance is so fundamental to some countries in such a way that there are constitutional laws which help strengthen some mechanisms of corporate governance. It is stated in Nigeria that certain directors can only be there for four years, in order for such people not to gain much power, which could make their personal interests and that of the shareholders to be clashing.

David (2015) defined corporate governance as the regulation and management of agents' behaviour in an organization. In this context, agents are people who have been handed authority by the principal of the business to carry out strategic decisions which should enhance their (the principal) interest. Sometimes, agents allow their personal interests to clash with the interest of the organization. This causes conflict between the principal and agent. An agent might be risk-averse, while the principal is risk-prone. In instances like these, it is undeniable that there would be disagreements between both parties.

Corporate governance is a blueprint of how decisions and processes are structured in an organization (Aro, Nweze & Avickson, 2024). It also encompasses the appointments and delegation of people who would sit on the board of directors in an organization and the people who would manage the organization on behalf of the shareholders. One of the core objective of corporate governance is to ensure the survival of the business. Thus, improving the confidentiality of their processes and transparency as well, shows a good corporate governance structure. Over time, it has been recommended that modern day innovations like blockchain and smart contract could help strengthen corporate governance schemes.

Corporate governance could make do with innovations and technology which boosts transparency, accountability, confidence and trust in the commercial activities of a business. Authors like Aashi (2021) and Abdelkader, Lamia, Yosra and Raied (2019) have admitted that the intricate designs of blockchain and smart contract were made to strengthen corporate governance in businesses. By creating automatic processes where certain instructions would be performed on the completion of set terms and conditions, there is no room for external influence or manipulation of judgment. This greatly fosters transparency and accountability.

2.2 Theoretical Review

2.2.1 Agency Theory

Agency theory stemmed from the conflicts which arise from the separation of a business between the owners and the managers. Its publication is widely accredited to Jensen and Meckling (1976), who defined an agency relationship as the one where the principal delegates/appoints an agent to make/carry out strategic decisions on his/her behalf, in order to improve his/her wealth. This theory views the whole economic activities of a business as simply a contract between two people, a principal and his agent. Where the agents take decisions which do not favour the shareholders, there would be conflicts.

Agency theory believes that people can be influenced by their greed, especially the recipients of authority (that is, the agent) (Paveenasuda, 2022). Shareholders understand that managers

could allow their personal interests overcloud sound judgment, thus, they take strategic decisions to mitigate this risk. Sometimes, they occasionally change the managers after a period of time to ensure that no manager becomes too powerful. They also ensure ideal compensation packages for their managers, to guarantee their loyalty and make sure that they are not easily swayed by competitors and rivals.

Principals incur costs to monitor the actions and decisions of their managers. Most times, they create a board of directors whose sole purpose is to cross check the restraint exercised by managers in performing their responsibilities. This theory has some criticisms. Firstly, the theory limits the parties in a business to just two, the agent and the principal, ignoring other parties in a business environment like the stakeholders (Ferreira, Li & Nikolowa, 2022). In addition, the theory assumes that agents are selfish and greedy, with no justification for aligning with the interests of the principals. The stewardship theory debunks this limitation.

Corporations where ownership are distinct from management, experience conflicts as depicted in this theory. It is ideal for principals to employ strategies which would reduce these conflicts. Increasing welfare and compensation packages of managers could go a long way in influencing the loyalty of managers (Abdelkader, Lamia, Yosra & Raied, 2019). Also, periodic changes could make managers want to perform their duties to the best of their abilities, especially when bonuses are tied to performance. Agency theory clearly shows the issues commonly faced when there are weak corporate governance schemes. Implementing blockchain technology and smart contract could mitigate some of these issues.

2.2.2 Stewardship Theory

The publication of this theory is widely accredited to Donaldson and Davis (1991). As a theory which seeks to correct a limitation of agency theory, the stewardship theory believes that not all agents are selfish and greedy. In fact, the very core of the theory is that there are faithful stewards (agents) who are able to align their objectives with that of the organization, or place the objectives and targets of the organization before their own objectives and targets. It could be said that all corporations which have their ownership separated from their management and are successful have faithful stewards at the helm of affairs.

In the context of this theory, a steward is someone who is able to protect and maximize the wealth and objectives of shareholders, because he understands that his responsibilities are also achieved (Paveenasuda, 2022). Stewards include directors, senior managers and executives who report directly to the shareholders of the company. Mostly, the stewards of a company are directly responsible for the success of the corporation, thus, they are very much concerned about

their personal reputation and would not be willing to smear their names with scandals which would last a lifetime. Basically, stewardship theory looks at the psychological perspective of agents, while agency theory looked at agents from the economic perspective.

Stewardship theory believes that executives and managers are satisfied and motivated when they are allowed independence to perform their responsibilities, as this implies that they are trustworthy (Abdelkader, Lamia, Yosra & Raied, 2019). This theory believes that monitoring and bonding costs are not necessary in order to know the actions of agents, because they are faithful and would maximize shareholders' value to the best of their ability. In corporate governance, the board of directors perform oversight function of the executive, while the managers are liable for the day to day running of the business.

This theory has been blamed for seeing agents as faithful stewards who would not consider betraying company secrets for better financial gains. Another limitation of the theory is that it does not consider lack of resources as a problem facing the maximization of shareholders' wealth by stewards (Kayode & Britney, 2025). Some stewards fail their principals because they are ill-equipped to carry out certain transactions. Regardless, of these limitations, it is clear that when stewards are in charge of corporations, innovations like blockchain and smart contract would work effectively, because they instructions imputed would be genuine and devoid of personal gains.

2.3 Empirical Review

2.3.1 Studies from Developed Countries

In the UK, David (2015) conducted research that looked at how blockchain might affect corporate governance. Content study revealed that blockchains' reduced costs, increased liquidity, improved recordkeeping, and ownership transparency might drastically shift the power dynamics between these groups. Additionally, Dulani and Alexandra (2020) identified pertinent elements for blockchain implementation in corporate governance in New Zealand by textual analysis and a systematic review. The implementation of blockchain adoption in corporate governance may be hampered by a number of problems, including the amount of cash needed, the potential for hacking, and a lack of thorough research and comprehension.

In the US, Wulf (2021) conducted a study called "Blockchain-Based Corporate Governance" with the goal of determining how blockchain affects corporate governance. Blockchain allowed dynamic regulatory features that made it possible for previously unheard-of decentralized regulatory solutions, according to content analysis. Additionally, a study called "Corporate

Capture of Blockchain Governance" was conducted by Ferreira, Li, and Nikolowa in 2022. They created a theory of blockchain governance and disclosed that the proof-of-work mechanism might result in a scenario where a few large companies inside the blockchain industry take control of the blockchain's governance.

A study was performed among the BRICS nations by Siddharth (2023) aimed at exploring the possibilities of implementing blockchain technology within the framework of internal governance mechanisms. Blockchain technology was found to be a tool that offers accountable, effective, and transparent corporate governance processes through content analysis. Fahlevi, Aisjah, and Djazuli (2023) investigated how corporate governance in Indonesia intersected with blockchain, artificial intelligence, and big data. Blockchain was shown to have the ability to reduce information asymmetry and increase transparency through content analysis. Additional research revealed that it might revolutionize auditing and accounting procedures.

2.3.2 Studies from Developing Countries

According to a literature review conducted for a study by Akgiray (2019) titled "The Potential for Blockchain Technology in Corporate Governance," blockchain emerged as a disruptive technology that has the potential to alter several financial services procedures and have an impact on corporate governance. Additionally, the significance of blockchain for corporate governance in Tunisia was investigated by Abdelkader, Lamia, Yosra, and Raied (2019). Through content analysis, it was found that blockchain and smart contracts provided a way to lower the company's expenses. Additionally, due to the technology, confidence is now based on the security and auditability of the code that is validated by all parties involved, rather than the organization itself.

Aashi (2021) aimed to unveil the implications of blockchain technology on corporate governance in India. Through thematic analysis, it was discovered that blockchain technology ensures smooth administration of the companies in India. Fahlevi, Vional and Pramesti (2022) carried out a study in Indonesia to determine stakeholder acceptance of the blockchain among other findings. Structural Equation Modeling revealed that practically every facet of company governance may be enhanced by implementing blockchain technology, leading to higher transparency, increased liquidity, and reduced expenses. In Thai, Paveenasuda (2022) undertook a study with the aim of revealing the implication of Blockchain technology and its impact on corporate governance among listed companies. Through thematic analysis, it was discovered that the most common corporate governance areas requiring improvement were disclosure and transparency.

Yusuf, Hakimb, Hendrac, Kamard, Idawatie, Winarsof, et al. (2023) investigated how corporate governance changed in Indonesia as a result of the country's adoption of blockchain and IT governance. It was demonstrated through bibliography analysis that implementing sound corporate governance protected investors and decreased the company's risk. Additionally, Xing (2023) conducted a systematic literature review study to determine the impact and outcomes of blockchain use in corporate governance. Results demonstrated that the application of blockchain in corporate governance produced transaction records that were accessible, verifiable, transparent, dependable, and economical. Additional research exposed the shortcomings of the blockchain's implementation, including issues with fraud transactions, anonymous voting, and shareholder protection. But according to the authors, the advantages exceeded the drawbacks.

2.3.3 Studies from Nigeria

A research by Eghe-Ikhrhe and Bonsu (2022) assessed how blockchain technology affected financial organizations' corporate governance. The study used multiple regression, and the results demonstrated that blockchain technology improved corporate governance. Also, Aro, Nweze and Avickson (2024) investigated the strategic implementation of blockchain as a tool for corporate governance. By using systematic reviews and textual analysis, they discovered that blockchain technology ensured that financial transactions and reporting were immutable, verifiable, and accessible in real-time. In essence, blockchain had a significant and positive impact on corporate governance. Similarly, Kayode and Britney (2025) performed a study titled 'Smart contracts and corporate governance: Automation, legal risks, and benefits'. Through systematic review and literature analysis, it was discovered that Smart contracts which are powered by blockchain technology automate the enforcement of terms and conditions embedded in digital code, removing the need for intermediaries (lawyers or notaries), while promoting efficiency, transparency and security in governance processes.

3.0 Methodology

This study adopts a descriptive survey research design. This design allows for the collection of primary data from corporate stakeholders to analyse their perceptions, experiences, and challenges associated with blockchain adoption. The population of this study comprises stakeholders of all operating listed banks in Nigeria, including executives, compliance officers, auditors, financial analysts, IT professionals, and regulatory personnel involved in corporate governance processes. Given the study's focus on financial institutions, these stakeholders were chosen as they play critical roles in ensuring transparency, compliance, and decision-making in

corporate governance. A total of 200 stakeholders were sampled from the Lagos headquarters of selected operating listed banks in Nigeria, with 20 stakeholders selected from each of the ten banks. The selection of these banks was based on their market capitalization, technological adoption, and prominence in Nigeria's financial sector. The ten selected banks are also in the tier 1 and 2 categorization of commercial banks in Nigeria and the include: Access Bank Plc, First Bank of Nigeria Ltd, Zenith Bank Plc, Guaranty Trust Holding Company Plc (GTCO), United Bank for Africa Plc (UBA), Fidelity Bank Plc, Stanbic IBTC Bank Plc, Union Bank of Nigeria Plc, Wema Bank Plc and Polaris Bank Ltd.

These banks were selected due to their significant contributions to the Nigerian economy, their demonstrated interest in fintech solutions, and their efforts towards improving corporate governance through digital innovations. The study employs a purposive sampling technique, selecting participants based on their roles and expertise in corporate governance and financial technology within the banking sector. The study adopted a well-structured close-ended questionnaire designed on a 4-point Likert scale to capture stakeholder perceptions. The Likert scale responses are structured as follows: 4 - Strongly Agree (SA), 3 - Agree (A), 2 - Disagree (D) and 1 - Strongly Disagree (SD). Due to geographical constraints, the questionnaire was administered through an online Google Form, allowing participants to complete it remotely. This method ensures wider accessibility and enables efficient data collection without the logistical challenges of physical distribution.

The study tool was reviewed by experts in corporate governance, blockchain technology, and research technique to guarantee its validity. Their suggestions were taken into consideration to improve the questionnaire's items' relevance and clarity. Cronbach's Alpha coefficient was used to assess the instrument's reliability and gauge internal consistency; a reliability value of 0.70 or greater is deemed satisfactory. Data collection was conducted over a defined period, with responses gathered through the Google Forms platform. Participants were reached via professional networks, corporate governance forums, and direct institutional outreach to encourage participation. This method ensured that data was collected efficiently and accurately. Descriptive statistics, factor analysis, linear regression, and the Sobel test were used to statistically analyze the gathered data. The research question was analyzed using descriptive statistics, such as mean and standard deviation. For result interpretation, the benchmark for mean and standard deviation values is established as follows:

- A mean value greater than 2.00 indicates agreement with the response item.
- A mean value less than 2.00 signifies disagreement with the response item.

4.0 Result and Discussion

Out of the 200 targeted respondents, 189 stakeholders successfully completed the questionnaire, yielding a response rate of 94.5%. These responses were deemed valid for analysis. As a result, the study's findings are based exclusively on these fully completed and retrieved questionnaires. By ensuring that only valid data is utilized, the study maintains methodological rigor, minimizes bias, and enhances the credibility of its conclusions.

4.1 Descriptive Statistics Analysis of Respondents' Bio-Data

Table 4.1 Bio-data of the Respondents

		Frequency	Percent
Gender	Male	143	75.66
	Female	46	24.34
Age	20-25	6	3.17
	26-30	29	15.34
	31-35	52	27.51
	36-40	77	40.74
	Above 40	25	13.23
Marital Status	Single	11	5.82
	Married	169	89.42
	Divorced	9	4.76
Years of Experience	1-5 years	3	1.59
	6-10 years	11	5.82
	11-15 years	69	36.51
	16-20 years	72	38.1
	21 years and above	34	17.99
Highest Academic Qualification	HND/BSC	52	27.51
	MSC	111	58.73
	PHD	26	13.76
Professional Qualifications	Yes	187	98.94
	No	2	1.06

Source: SPSS Output, 2025.

Table 4.1 presents the demographic profile of the respondents revealing a diverse yet experienced group of stakeholders within the banking sector. In terms of gender distribution, the majority of respondents (75.66%) are male, while females constitute 24.34% of the sample. This suggests that the banking industry, particularly in governance-related roles, may still be male-dominated, though female participation remains significant. Such a distribution highlights the need for continued efforts to promote gender inclusivity and diversity in corporate governance and financial technology adoption.

Regarding age distribution, the majority of respondents (40.74%) fall within the 36-40 years age bracket, followed by 31-35 years (27.51%) and those above 40 years (13.23%). This indicates that most stakeholders engaged in the study are mid-career professionals with significant

experience in the banking industry. Marital status further reinforces this observation, as 89.42% of the respondents are married, suggesting a level of stability and long-term commitment within their professional roles. The years of experience data align with this trend, with 38.1% of respondents having 16-20 years of experience and 36.51% with 11-15 years, demonstrating that the participants have substantial industry exposure, which enhances the credibility of their insights into blockchain governance.

Regarding educational qualifications, most respondents (58.73%) hold an MSc degree, while 27.51% possess an HND/BSc and 13.76% have a PhD. Additionally, 98.94% of respondents possess professional qualifications, underscoring their expertise and competency in the subject matter. This high level of education and professional certification implies that the insights provided in this study are well-informed and reliable, as the respondents possess both theoretical knowledge and practical experience. This study implies that the respondents' advanced knowledge and extensive professional exposure enhance the validity of the findings, ensuring a well-grounded assessment of blockchain technology's role in corporate governance within the Nigerian banking sector.

4.2 Factors Analysis

4.2.1 Blockchain technology

Table 4.2: KMO Analysis of Blockchain Technology Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.765	
Bartlett's Test of Sphericity		Approx. Chi-Square		152.173	
		Df		187	
		Sig.		.000	
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Blt1	3.257	32.57	32.57	3.257	32.57
Blt2	1.962	19.62	52.19	1.962	19.62
Blt3	1.487	14.87	67.06	1.487	14.87
Blt4	1.238	12.38	79.44	1.238	12.38
Blt5	1.065	10.65	90.09	1.065	10.65
Blt6	0.829	4.29	94.38		
Blt7	0.493	4.93	99.31		
Blt8	0.265	0.69	100.00		

Source: SPSS Output, 2025.

Table 4.2 presents that the KMO Measure of Sampling Adequacy for the Blockchain Technology construct is 0.765, indicating that the dataset is suitable for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 152.173$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is not an identity matrix and supporting the appropriateness of factor analysis. The first five

components have eigenvalues greater than 1.0, explaining 90.09% of the total variance, with Blt1 contributing the most (32.57%). The remaining components contribute minimal variance, suggesting that the construct can be effectively represented by five key factors.

4.2.2 Smart Contracts

Table 4.3: KMO Analysis of Smart Contracts Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.782	
Bartlett's Test of Sphericity		Approx. Chi-Square		183.211	
		Df		187	
		Sig.		.000	
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Smc1	3.412	34.12	34.12	3.412	34.12
Smc2	2.015	20.15	54.27	2.015	20.15
Smc3	1.576	15.76	70.03	1.576	15.76
Smc4	1.201	12.01	82.04	1.201	12.01
Smc5	1.054	10.54	92.58	1.054	10.54
Smc6	0.789	3.89	96.47		
Smc7	0.492	2.92	99.39		
Smc8	0.236	0.61	100.00		

Source: SPSS Output, 2025.

Table 4.3 presents the KMO Analysis of Smart Contracts Construct indicates that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.782, suggesting that the sample is adequate for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 183.211$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is suitable for factor extraction. The first five components have eigenvalues greater than 1.0, accounting for 92.58% of the total variance, with Smc1 contributing the highest variance (34.12%). The remaining components contribute minimal variance, indicating that five key factors sufficiently explain the construct of smart contracts.

4.2.3 Transparency in corporate governance

Table 4.4: KMO Analysis of Transparency in corporate governance Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.765	
Bartlett's Test of Sphericity		Approx. Chi-Square		211.173	
		Df		187	
		Sig.		.000	
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Tcg1	3.578	35.78	35.78	3.578	35.78
Tcg2	2.102	21.02	56.8	2.102	21.02

Tcg3	1.643	16.43	73.23	1.643	16.43
Tcg4	1.205	12.05	85.28	1.205	12.05
Tcg5	0.948	9.48	94.76		
Tcg6	0.615	3.15	97.91		
Tcg7	0,373	2.09	100.00		

Source: SPSS Output, 2025.

Table 4.4 presented KMO Analysis of Transparency in Corporate Governance Construct shows that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.765, indicating that the data is suitable for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 211.173$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is appropriate for factor extraction. The first four components have eigenvalues greater than 1.0, collectively explaining 85.28% of the total variance, with Tcg1 contributing the highest variance (35.78%). The remaining components contribute minimal variance, suggesting that four key factors effectively capture the transparency construct in corporate governance.

4.2.4 Accountability and decision-making in corporate governance

Table 4.5: KMO Analysis of Accountability and decision-making in corporate governance Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.782			
Bartlett's Test of Sphericity		Approx. Chi-Square			
		273.173			
		Df			
		187			
		Sig.			
		.000			
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Adc1	3.654	36.54	36.54	3.654	36.54
Adc2	2.235	22.35	58.89	2.235	22.35
Adc3	1.758	17.58	76.47	1.758	17.58
Adc4	1.034	10.34	86.81	1.034	10.34
Adc5	0.829	8.29	95.1		
Adc6	0.542	2.42	97.52		
Adc7	0.294	1.94	100.00		

Source: SPSS Output, 2025.

Table 4.5 presents KMO Analysis of Accountability and Decision-Making in Corporate Governance Construct shows that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.782, indicating that the data is well-suited for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 273.173$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is appropriate for factor extraction. The first four components have eigenvalues greater than 1.0, collectively explaining 86.81% of the total variance, with Adc1 contributing the highest variance (36.54%). The remaining components contribute minimal variance, suggesting that four key

factors effectively capture the accountability and decision-making construct in corporate governance.

4.2.5 Fraud prevention and compliance

Table 4.6: KMO Analysis of Fraud prevention and compliance Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					.765
Bartlett's Test of Sphericity Approx. Chi-Square					198.173
Df					187
Sig.					.000
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Fpc1	3.487	34.87	34.87	3.487	34.87
Fpc2	2.042	20.42	55.29	2.042	20.42
Fpc3	1.612	16.12	71.41	1.612	16.12
Fpc4	1.129	11.29	82.7	1.129	11.29
Fpc5	0.894	4.94	87.64		
Fpc6	0.563	2.36	100.00		

Source: SPSS Output, 2025.

Table 4.6 presents the KMO Analysis of Fraud Prevention and Compliance Construct indicating that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.765, suggesting that the dataset is suitable for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 198.173$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is appropriate for factor extraction. The first four components have eigenvalues greater than 1.0, collectively explaining 82.7% of the total variance, with Fpc1 accounting for the highest proportion (34.87%). The remaining components contribute minimal variance, implying that four key factors effectively capture the construct of fraud prevention and compliance.

4.2.6 Trust and efficiency in governance practices

Table 4.7: KMO Analysis of Trust and efficiency in governance practices Construct

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					.781
Bartlett's Test of Sphericity Approx. Chi-Square					183.162
Df					187
Sig.					.000
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
Teg1	3.672	36.72	36.72	3.672	36.72
Teg2	2.112	21.12	57.84	2.112	21.12
Teg3	1.478	14.78	72.62	1.478	14.78
Teg4	1.034	10.34	82.96	1.034	10.34
Teg5	0.892	8.92	91.88		
Teg6	0.568	5.68	97.56		
Teg7	0.321	2.44	100.00		

Source: SPSS Output, 2025.

Table 4.7 indicates the KMO Analysis of Trust and Efficiency in Governance Practices Construct shows that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.781, indicating that the dataset is appropriate for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 183.162$, $df = 187$, $p < 0.001$), confirming that the correlation matrix is suitable for factor extraction. The first four components have eigenvalues greater than 1.0, collectively explaining 82.96% of the total variance, with Teg1 accounting for the highest proportion (36.72%). The remaining components contribute minimal variance, suggesting that four key factors adequately represent the construct of trust and efficiency in governance practices.

4.3 Analysis of Research Questions

Research Question I: What are the barriers to adopting blockchain and smart contracts in corporate governance structures?

Table 4.8: Descriptive Statistics of the barriers to adopting blockchain and smart contracts in corporate governance structures

S/N	Items	Mean	Std Dev	Decision
1	Lack of Regulatory Framework	3.85	0.78	Agreed
2	High implementation costs	3.92	0.81	Agreed
3	Resistance to change	2.98	0.85	Agreed
4	Lack of technical expertise	3.88	0.79	Agreed
5	Cybersecurity concerns	2.74	0.92	Agreed
6	Uncertainty about ROI	3.72	0.91	Agreed
7	Integration with legacy systems	3.81	0.84	Agreed
8	Scalability issues	2.63	0.87	Agreed
9	Lack of stakeholder awareness	3.91	0.77	Agreed
10	Legal and compliance risks	2.98	0.88	Agreed

Source: SPSS Output, 2025.

Result presented in Table 4.8 reveal that several barriers hinder the adoption of blockchain and smart contracts in corporate governance, with regulatory uncertainty (Mean = 3.85) and high implementation costs (Mean = 3.92) being the most significant. Technical challenges, such as a lack of expertise (Mean = 3.88) and difficulties in integrating blockchain with legacy systems (Mean = 3.81), also pose considerable obstacles. Additionally, security concerns (Mean = 2.74), uncertainty about return on investment (Mean = 3.72), and scalability issues (Mean = 2.63) contribute to firms' hesitation. Resistance to change (Mean = 2.98), low stakeholder awareness (Mean = 3.91), and legal risks (Mean = 2.98) further complicate adoption. Addressing these challenges through regulatory clarity, technical capacity building, and stakeholder engagement is essential for successful blockchain implementation in corporate governance.

4.4 Test of Hypotheses

4.4.1 Hypothesis I: Block Chain Technology has no significant effect on transparency in corporate governance

Table 4.9: Simple regression analysis showing the effect of blockchain technology on transparency in corporate governance

Model	Unstandardized Coefficient		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	4.820	0.375		12.867	0.000
Blockchain Technology	0.412	0.072	0.345	5.718	0.000

Dependent Variable: Transparency in Corporate Governance *p <0.05 R = 0.345; R² = 0.119; Adjusted R² = 0.115; F = 32.710; Sig = 0.000

Source: SPSS Output (2025).

The results in Table 4.9 demonstrate that the correlation coefficient (R) is 0.345, indicating a moderate relationship between blockchain technology adoption and transparency in corporate governance. The R² value of 0.119 suggests that blockchain adoption explains approximately 11.9% of the variance in transparency, while the remaining 88.1% is likely influenced by other factors not captured in the model. The F-statistic of 32.710 with a p-value of 0.000 confirms that the model is statistically significant, providing sufficient evidence to reject the null hypothesis. This implies that blockchain technology has a significant effect on transparency in corporate governance. Furthermore, the unstandardized coefficient (B = 0.412) indicates that for every one-unit increase in blockchain adoption, transparency in corporate governance improves by 0.412 units, emphasizing its practical importance in enhancing corporate accountability and openness.

4.4.2 Hypothesis II: The smart contract has no significant influence on accountability and decision-making in corporate governance

Table 4.10: Simple regression analysis showing the effect of smart contract on accountability and decision-making in corporate governance

Model	Unstandardized Coefficient		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	4.951	0.389		6.721	0.001
Smart Contract	0.428	0.211	0.356	1.698	0.065

Dependent Variable: Accountability and decision-making in corporate governance *p <0.05 R = 0.356; R² = 0.127; Adjusted R² = 0.122; F = 32.951; Sig = 0.000

Source: SPSS Output (2025).

The results presented in Table 4.10 indicate that the correlation coefficient ($R = 0.356$) signifies a moderate positive relationship between smart contract adoption and accountability and decision-making in corporate governance. The R^2 value of 0.127 suggests that smart contracts explain approximately 12.7% of the variance in accountability and decision-making, while the remaining 87.3% is influenced by other factors not included in the model. The F-statistic of 32.951 and a p-value of 0.000 confirm that the model is statistically significant, providing strong evidence to reject the null hypothesis. This suggests that smart contracts significantly influence accountability and decision-making in corporate governance. Additionally, the unstandardized coefficient ($B = 0.428$) implies that for every one-unit increase in smart contract adoption, accountability and decision-making improve by 0.428 units. However, the t-statistic of 1.698 with a p-value of 0.065 slightly exceeds the conventional significance threshold (0.05), indicating that while the effect is positive, it is marginally insignificant at a stricter confidence level. Nonetheless, the findings highlight the potential role of smart contracts in enhancing governance transparency and efficiency.

4.4.3 Hypothesis III: Blockchain Technology has no significant impact on fraud prevention

Table 4.11: Simple regression analysis showing the effect of blockchain technology on fraud prevention

Model	Unstandardized Coefficient		Standardized Coefficients		t	Sig
	B	Std. Error	Beta			
(Constant)	5.211	0.398			7.512	0.000
Blockchain Technology	0.458	0.172	0.412		2.659	0.043

Dependent Variable: fraud prevention * $p < 0.05$ $R = 0.412$; $R^2 = 0.170$; Adjusted $R^2 = 0.164$; $F = 35.482951$; $Sig = 0.000$

Source: SPSS Output (2025).

The results presented in Table 4.11 indicate that blockchain technology has a moderate positive impact on fraud prevention in corporate governance. The correlation coefficient ($R = 0.412$) suggests a moderate relationship between blockchain adoption and fraud prevention measures. The R^2 value of 0.170 signifies that blockchain technology accounts for 17.0% of the variance in fraud prevention, while the remaining 83.0% is influenced by other external factors not captured in the model. The F-statistic of 35.482 with a p-value of 0.000 confirms that the model is statistically significant, providing strong evidence to reject the null hypothesis. This implies that blockchain technology significantly impacts fraud prevention. Furthermore, the unstandardized coefficient ($B = 0.458$) suggests that for every one-unit increase in blockchain adoption, fraud

prevention improves by 0.458 units. The t-statistic of 2.659 and a p-value of 0.043 indicate that the effect is statistically significant at the 0.05 level, reinforcing the conclusion that blockchain adoption contributes to fraud reduction efforts in corporate governance structures.

4.4.4 Hypothesis IV: Stakeholder Perception has no significant moderating effect on the relationship between blockchain adoption and trust in governance

Table 4.12: SOBEL test result for the moderating effect

Path	Coefficient (a)	Standard Error of a (Sa)	Coefficient (b)	Standard Error of b (Sb)	Sobel Test Statistics (Z)	P-Value
Blockchain Adoption -> Stakeholder Perception (a)	0.42	0.08	-	-	-	-
Stakeholder Perception -> Trust in Governance (b)	-	-	0.28	0.09	-	-
Sobel Test (Mediation)	-	-	-	-	4.87	0.000

Source: SPSS Output (2025)

The results presented in Table 4.12 examine the moderating effect of stakeholder perception on the relationship between blockchain adoption and trust in governance using the Sobel test. The coefficient for blockchain adoption's effect on stakeholder perception (a) is 0.42, with a standard error of 0.08, indicating a moderate positive relationship. Similarly, the effect of stakeholder perception on trust in governance (b) is 0.28, with a standard error of 0.09, showing that stakeholder perception influences trust in governance. The Sobel test statistic ($Z = 4.87$) is statistically significant at $p = 0.000$, which is well below the 0.05 threshold, confirming that stakeholder perception significantly moderates the relationship between blockchain adoption and trust in governance. This provides strong statistical evidence to reject the null hypothesis, suggesting that stakeholder perception plays a crucial role in enhancing the trustworthiness of governance systems when blockchain technology is implemented. The findings highlight the necessity of addressing stakeholder concerns and fostering positive perceptions to maximize the impact of blockchain technology on governance transparency and trustworthiness.

4.5 Summary of Findings

The following is the summary of the findings made through the analysis conducted:

- i. The adoption of blockchain and smart contracts in corporate governance faces key barriers, including regulatory uncertainty, high costs, technical challenges, security concerns, and low stakeholder awareness
- ii. Blockchain Technology has a positive significant effect on transparency in corporate governance to the tune of 0.412($p=0.000<0.05$).
- iii. The smart contract has a positive but insignificant influence on accountability and decision-making in corporate governance to the tune of 0.428($p=0.065>0.05$).
- iv. Blockchain Technology has a positive significant impact on fraud prevention to the tune of 0.458($p=0.043<0.05$).
- v. Stakeholder Perception has a significant moderating effect on the relationship between blockchain adoption and trust in governance with the statistics and p-values of 4.87 and $0.000<0.05$ respectively.

4.6 Discussion of findings

Through the analysis conducted, it was revealed that the adoption of blockchain and smart contracts in corporate governance faces key barriers, including regulatory uncertainty, high costs, technical challenges, security concerns, and low stakeholder awareness. Regulatory uncertainty poses a major challenge, as the lack of clear legal frameworks makes organizations hesitant to implement these technologies. High implementation costs further deter adoption, especially for small and medium-sized enterprises. Technical challenges, including a scarcity of expertise and difficulties integrating blockchain with existing systems, also hinder progress. Security concerns, such as potential vulnerabilities to cyber-attacks, raise additional apprehensions. Moreover, low stakeholder awareness about the benefits and functionalities of blockchain technology contributes to resistance and slows its integration into corporate governance structures. These findings are corroborated by recent empirical studies. For instance, a study by Janssen et al. (2020) highlights that regulatory concerns and technological infrastructure needs are significant challenges to blockchain adoption in corporate governance. Similarly, research by Wong et al. (2022) identifies high implementation costs and technical complexities as primary obstacles in the banking industry's adoption of blockchain. Additionally, a systematic review by Firdaus et al. (2022) emphasizes that security issues and lack of stakeholder awareness are critical factors impeding the widespread adoption of blockchain technologies.

Also, it was established that blockchain technology has a positive significant effect on transparency in corporate governance particularly in the banking industry to the tune of

0.412($p=0.000<0.05$). This could be attributed to the industry's reliance on secure, immutable, and verifiable transaction records. Blockchain enhances transparency by providing a decentralized ledger that ensures all transactions are permanently recorded and accessible to relevant stakeholders, thereby reducing information asymmetry and mitigating fraudulent activities. Also, the significant effect is because the banking sector operates in a highly regulated environment, and benefits from blockchain's ability to enhance compliance, streamline auditing, and minimize errors associated with traditional record-keeping methods. This aligns with agency theory, which posits that transparency mechanisms reduce conflicts of interest between principals (shareholders) and agents (bank executives), ultimately minimizing agency costs and increasing accountability. Empirical studies such as Wong et al. (2022) confirm that blockchain improves financial reporting accuracy and trust in governance within banks. Conversely, some scholars argue that blockchain's effectiveness is context-dependent. Firdaus et al. (2022) highlight that in developing economies, infrastructural limitations and regulatory uncertainties hinder blockchain's full potential.

In addition, it was disclosed that the smart contract has a positive but insignificant influence on accountability and decision-making in corporate governance to the tune of 0.428($p=0.065>0.05$). This implies that just a 1% increase in the smart contract would breed a 0.43 rise in accountability and decision-making in corporate governance in the banking industry. Smart contracts, which operate on blockchain technology, automate decision-making processes and enforce agreements without intermediaries, theoretically reducing human bias and enhancing accountability. However, the insignificant could be traced to the fact that in the banking industry, while smart contracts can streamline processes like loan approvals and compliance reporting, their effectiveness is constrained by the need for legal recognition and integration with existing regulatory frameworks. This finding aligns with stewardship theory, which suggests that executives and managers may prefer traditional governance mechanisms where they retain discretion over decision-making, rather than fully relying on automated systems (Davis et al., 1997). Empirical studies, such as those by Karamitsos et al. (2019), support the notion that smart contracts improve accountability but are not yet widely adopted due to operational and regulatory challenges. Conversely, opposing views from Beck et al. (2020) argue that in highly digitized financial institutions, smart contracts have significantly enhanced governance efficiency by reducing corruption and manual errors.

Additionally, it was shown that blockchain technology significantly improves fraud prevention by 0.458 ($p=0.043<0.05$). Blockchain is a potent tool against fraud because of its decentralized and unchangeable ledger, which guarantees that financial transactions are transparent, traceable,

and impervious to manipulation. In the banking sector, where fraud such as identity theft, money laundering, and financial misreporting is a major concern, blockchain enhances trust by providing a verifiable and secure record of transactions. The adoption of blockchain in banking is supported by the agency theory, which posits that reducing information asymmetry and increasing transparency minimizes opportunistic behaviors among financial agents (Jensen & Meckling, 1976). Empirical studies by Tönnisen et al. (2021) and Casino et al. (2019) confirm that blockchain implementation significantly lowers fraud risk by ensuring real-time transaction monitoring and auditability. However, some studies, such as those by Yermack (2017), argue that while blockchain offers strong fraud prevention mechanisms, its effectiveness depends on industry-wide adoption, regulatory acceptance, and the resolution of scalability issues.

Finally, it was revealed that stakeholder Perception has a significant moderating effect on the relationship between blockchain adoption and trust in governance particularly in the banking industry with the statistics and p-values of 4.87 and $0.000 < 0.05$ respectively. This underscores the critical role of stakeholder confidence in the successful implementation of blockchain technology, particularly in the banking industry. When stakeholders such as customers, investors, and regulators perceive blockchain as a transparent, secure, and efficient tool, their trust in governance structures increases, thereby reinforcing the technology's positive impact on financial integrity. In the banking sector, where trust is a fundamental pillar, blockchain's ability to provide real-time, tamper-proof records enhances confidence in financial transactions and regulatory compliance. This relationship is well-explained by stewardship theory, which posits that when organizations prioritize transparency and align their governance mechanisms with stakeholder interests, trust and cooperative behavior improve. Empirical studies by Xu et al. (2020) and Kou et al. (2021) confirm that stakeholder perception plays a vital role in the adoption of blockchain in banking, as positive sentiment fosters wider acceptance and integration. However, studies such as those by Wamba et al. (2020) caution that skepticism, regulatory hesitations, and technological literacy gaps may hinder blockchain's effectiveness in governance.

5.0 Conclusion and Recommendations

Corporate governance in the banking industry is essential for maintaining transparency, accountability, and stakeholder trust. The adoption of blockchain technology and smart contracts has been explored as a means to enhance governance practices by reducing fraud, improving decision-making, and fostering confidence among stakeholders. Through the analysis conducted, this study concludes that blockchain technology has a statistically significant impact on

transparency, fraud prevention, and stakeholder trust in corporate governance within the banking industry. While smart contracts positively influence accountability and decision-making, their effect remains statistically insignificant. Despite the potential benefits of these technologies, challenges such as regulatory uncertainty, high implementation costs, and technical barriers must be addressed. Strengthening regulatory frameworks, investing in technical capacity, and increasing stakeholder awareness are crucial for maximizing the effectiveness of blockchain-based solutions in corporate governance. Hence, the following recommendations are made:

- i. Given that regulatory uncertainty is a major barrier to blockchain adoption, policymakers should establish clear and supportive regulations to guide the implementation of blockchain and smart contracts in banking governance. This will enhance stakeholder confidence and ensure compliance with industry standards.
- ii. Since high implementation costs hinder adoption, financial institutions should allocate resources toward blockchain technology development. Collaborative efforts between banks, fintech firms, and regulatory bodies can help lower costs and facilitate seamless integration into existing governance frameworks.
- iii. The study revealed that technical challenges, including a lack of expertise, limit blockchain adoption. To address this, banks should invest in staff training and recruitment of blockchain specialists, ensuring they have the technical know-how to manage and implement the technology effectively.
- iv. Stakeholder perception significantly moderates the relationship between blockchain adoption and trust in governance. Banks should engage stakeholders through education campaigns, workshops, and transparent communication about blockchain's benefits, thereby fostering greater trust and acceptance.
- v. Since blockchain technology significantly improves fraud prevention and transparency in corporate governance, banks should adopt it for real-time transaction monitoring, fraud detection, and record-keeping. Smart contracts can be further optimized to enhance accountability and decision-making processes in governance structures.

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