Internal Control Strategies And Corporate Financial Performance: A Study Of Listed Commercial Banks In Nigeria (2000-2018)

Peter E. Ayunku

Banking & Finance Department, Faculty of Management Sciences, Niger Delta University Wilberforce Island, Bayelsa State, Nigeria
Email: peterayunku@yahoo.com

*Tonye Richard Apiri

Banking & Finance Department, Faculty of Management Sciences, Niger Delta University Wilberforce Island, Bayelsa State, Nigeria
Email: apiritonye@yahoo.co.uk

   Abstract: The Nigerian banking sector has its shortfalls traceable majorly on capital inadequacy, huge non-performing loans, lack of transparency, and disheveled internal control strategies. This study is hinged on providing empirically findings on internal control strategies influence on listed commercial banks financial performance in Nigeria within 2000-2018 respectively. Secondary data sourced were analyzed through the error correction mechanism (ECM) for identified long-run co-integrating relationship that exists among variables, and t-statistics output were employed to test formulated hypotheses in the study. The empirical results of study shows that profitability with security of funds control strategies have a non-linear significant influence on financial performance of listed commercial banks in Nigeria, while effectiveness and efficiency control strategy has a linear significant influence on listed commercial banks financial performance in Nigeria for the period under study. The study further drew conclusion premised on empirical findings that internal control strategies are of necessity to corporate financial performance (listed commercial banks in Nigeria) in upholding the going concern concept and recommend to its management to periodically review internal control strategies standard and employ modern sophisticated measures specifically on effectiveness and efficiency control strategy due to its linear significant influence on financial performance of listed commercial banks in Nigeria for the period under study.

1.0 BACKGROUND TO THE STUDY

        Internal control strategy has gain more attention in the wide spectrum of corporate finance specifically the banking sector whose business environment is attributed with enormous risks that must be checked and prevented for optimal performance. The increasing dynamics of global markets and the need for improve returns on investment has spur management of corporate organizations to foster internal control strategies as a routine prescription for competitiveness (Rittenberg & Schwieger, 2005).

        Management over time argued the reason for projecting internal control strategies to be employed to get rid of fraud cases within. It is an internal aspect that is adapting simultaneously to the challenges confronting current banking industry (Wielstra, 2014). This in particular relevant for banks as unchecked internal control system stands a chance of banks performing poorly (Etuk, 2011). Internal control ineffectiveness is a major hiccup in the banking industry, and has allowed investors and customer alike to cause huge financial losses (Ayagre, Appiah-Gyamerah, & Nartey, 2014).

The Nigerian banking sector has its shortfalls traceable majorly on capital inadequacy, huge non-performing loans, lack of transparency, and disheveled internal control strategies that played a very significant role in the sector, especially from early 1990's up till mid-2004 (Adeyemi & Adenugba, 2011).

According to Fadzil et al (2005), an effective internal control strategy paves way for corporate performance. And can be achieved through periodic review of the financial data, guarantees security of assets of the firm, adherence to regulatory specifications and ensuring sound management activities.

Mawanda, (2008) posited that all-encompassing thoughts of institutionalization and proper application of internal control strategy enhances corporate financial performance. It is also the perception of the audience that well-structured internal control strategies tends to improve the process of reporting and consequently reliable reports to enhance management of commercial banks.

Reliable financial information preparations are pivotal to management of financial institutions particularly commercial banks. The professionalism express in managing corporate organizations like commercial banks requires access to timely and accurate information.   Wanjohi (2013) stated that the measurement and assessment of corporate financial performance is the key to going concern concept, and provide answers to questions like; what was the cause, why it occurred and the solution required. Corporate financial performance provides the recipe to the control strategies as management follow up implementation of objectives to last letter by checking the current position of the organization, linking current position, administering priorities and success records. This chain can therefore be considered as: means of an internal control is an end to corporate financial performance.

To enable banks in attaining its intermediation function, there are regulatory guidelines set out by CBN (Central Bank of Nigeria) in line with existing standards as a result of numerous cases of banks poor financial performance traceably to lack of predetermined internal control strategies (Sanusi, 2012).

 Thus, the place of Nigerian commercial banks to continually operate optimally in attaining set desired objectives is questioned by many, hence this study aim at investigating the impact of internal control strategies on financial performance of listed commercial banks in Nigeria from 2000-2018 respectively, and specifically raised questions as follows:

- ➢ To what extent has profitability control strategy affects financial performance of listed commercial banks in Nigeria?
- ➢ To what extent has effectiveness and efficiency control strategy affects financial performance of listed commercial banks in Nigeria?
- ➢ To what extent has security of funds control strategy affects financial performance of listed commercial banks in Nigeria?

RESEARCH OUTLINED HYPOTHESES

Based on outlined research questions, this study will formulate hypotheses in the null form for clarity of purpose.

H0₁: Profitability control strategy does not influence financial performance of listed commercial   banks in Nigeria significantly.

H0₂: Effectiveness and efficiency control strategy has no influence on financial performance of   listed commercial banks in Nigeria.

H0₂: Security of funds control strategy effect is not significant on financial performance of listed   commercial banks in Nigeria.

The study is subdivided into: (a) Related literatures review (b) Methodology (c) Analyses and interpretation of data (d) summary, concluding remarks and recommendations.

1.0 RELATED LITERATURES REVIEW

CONCEPTUALIZATION

INTERNAL CONTROL

Internal control are basically methods established by corporate institutions for various operating units to promote effectiveness and efficiency, profitability, encourage acceptance of managerial procedures and policies, and check line validity of managerial data and security of assets. The ultimate purpose is to strengthen the overall control of management operations and to reduce risks to enable them at all levels to realize reasonable assurance that set objectives are met.

Institute of Chartered Accountants of England and Wales (ICAEW) defined Internal Control as a controls strategy of financial management, established by the management to carry on the business of the company in an orderly manner, safeguard its assets as possible with accuracy and reliability in the company's records.

Internal control in the context of accounting and auditing profession is regarded as a process affected by corporate organizations structured works and authority flows, people and management information systems designed to accomplish specific goals.

 Ogunbunka (2002), citing the American Institute of Certified Public Accountant, defined internal control as an organization plans and co-ordinate strategies adopted to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency and encourage adherence to prescribed policies and procedures.

Ubani (2013) argued that, internal control is the process and structure used by management of firm under the supervision of board of Directors to manage risks inherent which are not limited to operational, market, credit, legal, regulatory and compliance.

Internal control in almost every corporate organization particularly commercial banks, has a two tailed pattern, which is: The First Order Control, otherwise known as: the Line Control and the Second Order Control, also known as the Central Controls, or Internal Audit, while the line control is the internal control, as it runs through the responsibilities of every unit or department of the corporate organization management, measuring and ascertaining level of compliance with the operational policies put in place. The central control, as internal audit, on the other hand, ascertains, verifies, and oversees the efficiency, propriety, compliance and adequacy of internal control strategies.

Price (2005) stated that the accountability and corporate governance practices by banks are geared towards the protection of the shareholders interest. This presents that an effective internal control strategy can foster performance of banks by reducing the level of frauds and losses. In same vain, Sarens and De Beelde (2006) stated that proper checks and balances within an organization assist management to reduce inherent loss of resources.

Rittenberg et al. (2005) posited that recent under taking operations by commercial banks as corporate organization, the importance of internal control are categorized in six. These include:

➢ Fraud and error detection.

➢ Improvement of competence within an entity.

➢ Elimination of perceived illegal conduct.

➢ Improvement of quality financial information

➢ To establish an organizational infrastructure and

➢ Vast reduction of fees with use of an external auditor.

Recent developments in financial accounting systems have increased the value of management strategies for evaluation of internal control. Bank managers are therefore required to ensure accuracy of these strategies. Stratton (2007) also in addition stated that the process of evaluation of strategies of internal control by both management and external auditors is judgmental in nature.

IDENTIFIED INTERNAL CONTROL COMPONENTS

Hayes et al. (2005) identified component of internal control to consist of: The control activities, control environment, entity's risk assessment process, information and communication systems and monitoring of controls. These components are independently discussed as follows:

CONTROL ACTIVITIES: Control activities are generated differently either manual or automated that aid to reduce the risks that can impede accomplishment of the organization's objectives. Management establishes control activities to effectively and efficiently accomplish the organization's objectives. Nevertheless, control activities that are relevant to audit include: Performance review, information processing, physical control and assigned duties.

THE CONTROL ENVIRONMENT: Control environment refers to all factors that are use to determine either increasing or decreasing effectiveness of policies specific to a process. Control environment stands out with the basic understanding adopted by the senior management of the organization to control its attitude toward problems and approach to solve them and their perspective of importance of moral values (Hayali et al., 2013). Element of control environment includes communication, enforcement of integrity and ethical values.

THE ENTITY'S ASSESSMENT OF RISK PROCESS: Entity's assessment of risk is the process of responding to identified business risks and the results after then. (Mary *et al.,* 2014). Assessment of risks can also be defined as identification of potential mistakes and to implement strategies, policies, and control to pinpoint those mistakes and possibly prevent them. Assessment of risk can also be the identification and analysis of risks relevant to the achievement of objectives (Frazer, 2012). In order words, assessment of risks is the process of detecting, assessing and determining how to succeed those things deemed fit for the overall corporate performance.

THE INFORMATION AND COMMUNICATION SYSTEMS: This internal control component is to enable management to filter information both horizontally and vertically to facilitate communication between staff. This is possible if the management information system and subsystems are designed accurately with disciplined for responsiveness (Hayali *et al.,* 2013).

Communication that is cordial and effective should exist among staff at all levels. The focus of information and communication is on the nature and quality of information needed for effective control that the systems employed to develop and reports when necessary. Information systems produce reports of operational, financial, and compliance related information that make it possible to run and control the business (COSO, 1992).

MONITORING OF CONTROL: Dynamics of internal control strategies are determined by monitoring over time and separate evaluations. Internal control strategies and its application change overtime. This occur as a result of new personnel thus, varying effectiveness of implementing the procedures or supervision time and resource constraints or changes in the circumstances for which the internal control strategies were originally designed (Gamage *et. al.,* 2014).

FINANCIAL PERFORMANCE OF COMMERCIAL BANKS

Financial performance of banks entails the general assessment by customers and potential customers alike in respect to the level with which banks met their financial obligations within specified period. It determines the extent to which commercial banks operational decisions are considered effective. That is the overall well-being of banks in general. Thus, serves as ayard stick for investor appraisal.

In measuring banks financial performance, existing literatures relies on both accounting and market measures (Seelanatha, 2007). Market performance reflects expectations of firm's prospects and its ability to adapt to potential changes (Belkhaoui, Lakhal, Lakhal, & Slaheddine Hellara, 2014). It includes the present value of expected future profits valued by financial market. However, the market measure fits only on listed firms like banks and is appropriate if the market is efficient.

THEORETICAL FRAMEWORK OF THE STUDY

This study is pegged on reliability and agency theories

THEORY OF RELIABILITY

Theory of reliability stipulates that internal control strategies are primarily designed for assessment and prevention of risks. The theory further argued that weak internal control strategies spurs in more substantive work and hence greater cost (Kinney, 2000). The reliability theory is based on the notion that an implemented internal control strategy should be able to meet its expected function. The reliability theory is relevant to this study based on the outlined research questions. The theory focuses on the effect of risk assessment on financial performance of firms, in this case, listed commercial banks in Nigeria.

Gavrilov and Gavrilova (2001) explained the determination of the weakness of any internal control measure to be primarily non-discretional. The process of arrangement of various steps involve accuracy estimation, financial data comparison from organization's performances in previous years tends to give good insight to internal control measures on the financial risks of such organizations.

 An important fact embedded in the theory of reliability is the cordial relationship needs of an organization in respect to the understanding of internal control strategy and risk assessment. (Austen and Messier Jr 2000)

THE THEORY OF AGENCY

The theory of agency was built on the premises corporate institutions are owned by the shareholders (ordinary shareholders) and managed by an agent (Jensen & Meckling, 1976). The agent who performs the day to day running of operation in the corporate institution tends to have good number of information than the shareholders (the owners) which normally result to lack of information at the owners disposals that affects the ability of the them to monitor specifically whether their interests are being protected by those managers..

To strike a balance between the two parties involve, the theory of agency posited that an unbiased contract agreement must be explicitly under-taken to guarantee interest of the owner.   Furthermore, the theory of agency also acknowledged the fact that, when contract terms and conditions are not properly followed as agreed may hinder cordial relationship and work performance of the agent and thus leads to problem of rejection.

The agency theory, therefore, works on the assumption that owners and the managers act rationally and use contracting measures to maximize profit.s (Jensen and Meckling, 1976). This theory is pragmatically essential to this study since internal control strategies are employed to ensure optimal performance of banks and to maximize shareholders welfare.

EMPIRICAL REVIEW

The following are empirical account of the studied phenomenon that have been established and credited to different scholars and academies.

Ondieki (2013) examined internal audit effect on financial performance of commercial banks. His study employed control environment, assessment of risk, control activities with monitoring mechanisms and financial performance, expressed as independent and dependent variables respectively. The study found internal control to have features built into them capable of preventing fraudulent activities. The study further reveals that internal control audit provide measures that are workable but they do not necessarily detect fraud.

Mwachiro (2013) carried out an empirical study on Kenya's revenue authority for their operations of internal controls specified basically to ascertain internal controls influence on revenue realization. The study adopts the use of risk assessment, control activities, control environment, Information and communication with monitoring as components of internal control.

Analytical descriptive method was used to analyze data using both statistical and narrative approach and correlation as means of determining internal control impact on revenue collection. The study found basic components employed, to have a combine influence on revenue collection to succeed greatly. However, not properly structured internal control systems, especially poor organizational ethical values have encouraged fraud, loss of revenue and pocketing of collected revenues.

Similar to the study of Mwachiro is Muio (2012) who critically examine internal control systems in Kenya's private hospitals in and their financial performance. His study chooses monitoring, control activities, assessment of risks, information and communication and control environment as explanatory variables.

The target population was analysed using descriptive and inferential statistics consisting of selected accredited private hospitals within the country. Multiple regression analysis was used to determine the relationship between employed variables. The study evidenced that all the selected five components must be present for an internal control system to be considered effective. The findings also indicated that Monitoring had the highest influence on the financial performance of selected private hospitals in the country.

Magara (2013) determine internal controls impact on the financial performance of Kenya's deposit taking, savings and credit cooperative societies. The study fund a positive correlation between internal control and the deposit taking, savings and credit cooperative societies with the aid of multiply regression employed in his analysis.

Inanga and Amudo (2009) carried out an empirical study on Internal Control Systems in the regional member countries of African Development bank group whose focus base was Uganda. Addition of modern technological measures of internal control systems in the projects was established in the findings of the study.

The study of Jones (2008) on internal controls, accountability and corporate governance in the medieval and modern Britain, using inferential statistics as a method to determine their internal controls in the twelfth Century royal exchequer and other medieval institutions. The study identified most of the internal control systems found today to be present in medieval England. Stewardship and personal accountability were also identified as relevant measures of medieval internal control.

Olatunji (2009) carried out an empirical study on internal control system and Nigerian banking sector. The study categorized controls into three major classifications: Preventive controls, detective controls and corrective controls. Data were collected from fifty Wema bank Plc branches nationwide. The study employed both primary and secondary data.

The study finds the lack of an effective internal control system to be major cause of bank frauds in Nigeria with concluding remarks of management of every bank to create and establish a standard internal control system to enable them stand against fraud in order to promote continuity of operations.

Mawanda (2008) sought to determine the relationship between internal control systems and financial performance on institution of higher learning in Uganda. Internal controls were looked at from the perspective of control environment, internal audit and control activities, while liquidity, accountability and reporting as measures for financial performance. The study established a significant relationship between internal control system and financial performance.

Studies reviewed globally on the topic have not considered independently profitability, effectiveness and efficiency and security of funds with major financial performance indicators as measures for control strategies encompassing control activities, control environment, risk assessment, information and communication and monitoring. Thus, this study therefore aimed at bridging this obvious gap in existing literature with a study range of 2000-2018 respectively.

3.0 THE STUDY METHODOLOGY

The *ex-post facto* design is adopted in this study. This design is appropriate due to variables employed in the study.

REQUIRED DATA/SOURCES

Data required in this study is to enable us carried out analysis with basic econometric tools such as: Stationarity test with the use of Augmented Dickey-Fuller (ADF), a co-integration test using Johansen approach, and a multiple regression model to be

analyzed and estimated with Error Correction Mechanism (ECM). After tax profit margin as measure of profitability control strategy (PRCS), gross earnings rate as measure of effectiveness and efficiency control strategy (EFCS) and dividend yield as measure of security of funds control strategy (SFCS) as proxies for internal control strategies (explanatory variables) while return on equity (ROE) of listed commercial banks in Nigeria as proxy for financial performance of banks, (explained variable) within the given study rage.

Secondary source of data (time series) are employed for this study. The data were sourced from Central Bank of Nigeria (CBN) annual statistical bulletin, 2018.

Table 1.1 VARIABLES JUSTIFICATION

Variable	Description	Measurement
Return on Equity (ROE) of listed commercial banks.	How well banks use investment to generate earnings growth.	Listed commercial banks financial performance in Nigeria.
After Tax Profit margin of listed commercial banks	The ability of the management shown on the returns obtained on sales and capital invested.	Profitability control strategy (PRCS) of listed commercial banks in Nigeria.
Gross Earnings Rate of listed commercial banks.	Investment and asset appreciation.	Effectiveness and efficiency control strategy (EFCS) of listed commercial banks in Nigeria.
Dividend Yield.	Banks' ability in meeting its obligation (shareholders welfare) when they fall due.	Security of funds control strategy (SFCS) of listed commercial banks in Nigeria.

Source: Author's conceived idea

SPECIFICATION OF EMPIRICAL MODEL

In accordance with formulated hypotheses, the model of this study will be built as: Return on equity (ROE) as determinant for financial performance of listed commercial banks in Nigeria, After tax profit margin as measure of profitability control strategy (PRCS), gross earnings rate as measure of effectiveness and efficiency control strategy (EFCS) and dividend yield as measure of security of funds control strategy (SFCS) as proxies for internal control strategies employed in the study.

Specification of the empirical econometric model is based on economic theory relating to the studied subject that requires basically:

1. Specification of the explained and explanatory variables.

2. Apriori expectation of parameter signs and its individual functional relationships.

3. Mathematical specification of the empirical model (Gujarati, 2004).

In analyzing the studied subject, the empirical model is built to reflect the functional relationship of the variables employed as follows:

ROE= f (PRCS, EFCS, SFCS,)……………………………………………………………………Eqn(1)

Where,

ROE = Return on equity of listed commercial banks in Nigeria.

PRCS = Profitability control strategy

EFCS = Effectiveness and efficiency control strategy

SFCS = Security of funds control strategy.

From the functional mathematical expression in eqn(1) we derived the explicit econometric multiple regression model as:

$$ROE_t = b_0 + \beta_1 PFCS_t + \beta_2 EFCS_t + \beta_3 SFCS_t + \varepsilon_t ....Eqn(2)$$

Where:

b_0 = intercept

$\beta_1…..\beta_3$ = Coefficients of the explanatory variables to be estimated. They measure the influence of a unit change of financial performance of listed commercial banks in Nigeria.

ε_t = Error term of the variables employed.

Decision Rule: Inference about the hypotheses is made by considering the t-statistics outcome in absolute values and the critical values (probabilities) associated with individual variables. In this study the decision rule is to reject the null hypotheses (H0) if the t-statistics outcome is greater than critical values (probabilities) at 5% level of significance.

4.0 ANALYSIS AND DATA INTERPRETATION

Table 1.2 Unit Root Test Results for Variables Employed

Variables	ADF t-Statistics	Critical Value @5%	Order of Integration
ROE	-5.906529	-3.052169	1(1)
PRCS	-6.729841	-3.052169	1(1)
EFCS	-3.109249	-1.968430	1(1)
SFCS	-4.783408	-3.052169	1(1)

Source: E-view 9 output

Table 1.2 shows unit root test results for selected variables in the study. The results revealed stationarity of data (integrated) at first difference, identified as: 1(1) at 5% significant level. This implies that variables have no unit root problem. Note, a data is said to have no unit root problem if the test statistics is greater than the critical value in absolute terms. This reveals that variables employed can be used for meaningful decision making.

Table 1.3 Co-integration Test Results (Johansen Approach)

Date: 12/03/19   Time: 13:02

Sample (adjusted): 2002 2018

Included observations: 17 after adjustments

Trend assumption: Linear deterministic trend (restricted)

Series: EFCS PRCS ROE SFCS

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.925712	75.85717	63.87610	0.0036
At most 1	0.589635	31.66038	42.91525	0.4069
At most 2	0.479503	16.51833	25.87211	0.4516
At most 3	0.272903	5.417826	12.51798	0.5375

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: E-view 9 output

This table 1.3 shows the co-integration test results that indicates the existence of one cointegrating long run relationship among variables employed in this study. We arrive at this conclusion by comparing the trace statistic against the Critical values at 5%

significant level. Therefore the error correction mechanism is relevant to test and estimate parameters in order to capture the short run

shocks not captured in the previous year.

Table 1.4 The Error Correction Mechanism (ECM) Test Results

Dependent Variable: D(ROE)

Method: Least Squares

Date: 12/03/19   Time: 13:25

Sample (adjusted): 2001 2018

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.114247	4.115841	1.738503	0.0497
D(PRCS)	-0.182448	0.073603	-2.478812	0.0087
D(EFCS)	0.956921	0.399349	2.396217	0.0143
D(SFCS)	-48.95227	22.48859	-2.176760	0.0223
ECM(-1)	-0.516607	0.235506	-2.193606	0.0370

R-squared	0.691000	Mean dependent var		-4.233333
Adjusted R-squared	0.525923	S.D. dependent var		35.75656
S.E. of regression	27.09200	Akaike info criterion		9.666487
Sum squared resid	9541.692	Schwarz criterion		9.913812
Log likelihood	-81.99838	Hannan-Quinn criter.		9.700590
F-statistic	4.153182	Durbin-Watson stat		2.065547
Prob(F-statistic)	0.022037			

Source: E-view 9 output

Table 1.4 empirically evidenced internal control strategies influence on listed commercial banks financial performance in

Nigeria from 2000-2018 respectively. The t-statistics output will be used to test the hypotheses formulated in the study. The error

correction term depicts how the model adjusts to equilibrium following short run fluctuations not captured in the co-integration test

(Johansen approach).

The ECM coefficient of -0.516607 implies that ECM is correctly specified and the diagnostic statistics are appropriate. The

non-linear sign represents the short run adjustment of the explanatory variables to the explained variable. The ECM term also shows

approximately 52% speed of adjustment towards equilibrium. This implies that 52% of disequilibrium caused by exogenous shocks in

the previous period is corrected in the current year.

Using the a priori criteria of estimating the parameters, all individual variables met a priori expectations hence fulfilling the economic criterion of the model. The results also show that profitability control strategy (PRCS) and security of funds control strategy (SFCS) is non-linear (negative) and statistically significant to return on equity (ROE) of listed commercial banks in Nigeria, while effectiveness and efficiency control strategy is linear (positive) and statistically significant to return on equity (ROE) of listed commercial banks in Nigeria. Furthermore, the results of the test of the overall significance of the model using F-statistics shows that the entire model is statistically significant. We arrive at this conclusion because the F-statistics of 4.153182 is greater than the F-probability of 0.022037. Coefficients of determination (R^2) indicates approximately 70% of total variation of financial performance of listed commercial banks in Nigeria is explained by profitability control strategy, effectiveness and efficiency control strategy and security of funds control strategy in the model. This means that the model is of good fit. And the Durbin-Watson statistics of 2.065547 is within the acceptance region thus, indicating the absence of first order autocorrelation.

TEST OF HYPOTHESES:

The t-statistics output in table 1.4 reveals that profitability control strategy (PRCS), effectiveness and efficiency control strategy (EFCS) and security of funds control strategy (SFCS) have t-statistic of: -2.478812, 2.396217 and -2.176760 with an associated probabilities value of: 0.0087, 0.0143 and 0.0223 respectively, which is less than 5% significant level. Hence the null hypotheses are rejected. This implies that profitability control strategy, effectiveness and efficiency control strategy and security of funds control strategy have a significant influence on financial performance of listed commercial banks in Nigeria for the period under study.

DISCUSSION OF FINDINGS

Empirically obtained results from the error correction mechanism (ECM) reveals that internal control strategies with study range of 2000-2018 has a significant influence on financial performance of listed commercial banks in Nigeria. Thus, internal control strategies proxies (profitability control strategy, effectiveness and efficiency control strategy and security of funds control strategy) had a collective significant influence on financial performance of listed commercial banks proxy (return on equity) in Nigeria for the period under study.

Furthermore, profitability and security of funds control strategies have a non-linear significant relationship with return on equity of listed commercial banks in Nigeria. This depicts that a more strengthened profitability and security of funds control strategies will decline financial performance of listed commercial banks in Nigeria by 18% and 48% respectively, while an enhanced

effectiveness and efficiency control strategy will boost financial performance of listed commercial banks in Nigeria by 95% due to its linear and significant relationship with return on equity of listed commercial banks in Nigeria.

These findings do conform to apriori expectations and that of Mawanda (2008) whose study established a significant relationship between internal control system and financial performance. The study findings are also intoned with the findings of Muio (2012) who critically examine internal control systems in Kenya's private hospitals and their financial performances, and identified monitoring component as having the highest influence on the financial performances of private hospitals in Kenya.

5.0 SUMMARY, CONCLUDING REMARK AND RECOMMENDATIONS

The study findings are summarized as follows:

➢ Profitability control strategy has a non-linear significant influence on listed commercial banks financial performance in Nigeria for the period under study.

➢ Effectiveness and efficiency control strategy has a linear significant influence on listed commercial banks financial performance in Nigeria for the period under study.

➢ Security of funds control strategy has a non-linear significant influence on listed commercial banks financial performance in Nigeria for the period under study.

This study concludes on the empirical evidence that internal control strategies are of necessity to corporate financial performance (listed commercial banks in Nigeria) in upholding the going concern concept. Therefore, we recommends to management of listed commercial banks in Nigeria to periodically review its internal control strategies and to employ modern sophisticated measures specifically on effectiveness and efficiency control strategy due to its linear significant influence on financial performance of listed commercial banks in Nigeria for the period under study.

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APPENDIX

DATA EMPLOYED IN THE STUDY

YEARS	ROE(LCBFP)	ATPM(PRCS)	GER(EFCS)	DY(SFCS)
2000	99.5	42.2	42.9	0.00
2001	114.3	48.5	60.9	0.01
2002	41.6	33.1	73.3	0.15
2003	29.1	43.1	72.9	0.00

2004	27.2	40.2	76.6	0.00
2005	4.8	46.8	74.4	0.01
2006	17.4	431	54.6	0.78
2007	36.8	44.1	51	0.57
2008	24.1	52.9	65.6	0.61
2009	-64.7	52.45	62.8	0.04
2010	16.0	50.9	61.9	0.71
2011	-0.3	50.47	68.6	0.83
2012	22.2	50.17	70.8	0.55
2013	24.1	43.6	55.7	0.32
2014	21.7	37.8	48.75	0.04
2015	19.2	27.9	44.26	0.02
2016	18.9	25.7	30.7	0.01
2017	21.1	24.2	30.425	0.00
2018	23.3	32.8	42	0.36

Source: Central Bank of Nigeria (CBN) Statistical bulletin, 2018

Note: ATPM(PRCS)=After tax profit margin as measure of profitability control strategy, GER(EFCS)=Gross earnings rate as measure of effectiveness and efficiency control strategy, DY(SFCS)=Dividend yield as measure of security of funds control strategy and ROE= Return on Equity as measure of listed commercial banks financial performance in Nigeria.

Unit Root Test Results for ROE

Null Hypothesis: D(ROE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.906529	0.0002
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
    and may not be accurate for a sample size of 17

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ROE,2)
Method: Least Squares
Date: 12/03/19   Time: 10:40
Sample (adjusted): 2002 2018
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ROE(-1))	-1.390766	0.235462	-5.906529	0.0000
C	-7.155062	8.480646	-0.843693	0.4121

R-squared	0.699321	Mean dependent var	-0.741176
Adjusted R-squared	0.679276	S.D. dependent var	61.23472
S.E. of regression	34.67877	Akaike info criterion	10.04026
Sum squared resid	18039.26	Schwarz criterion	10.13829
Log likelihood	-83.34224	Hannan-Quinn criter.	10.05001
F-statistic	34.88709	Durbin-Watson stat	1.810708

Prob(F-statistic)	0.000029	

Unit Root Test Results for PRCS

Null Hypothesis: D(PRCS) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.729841	0.0000
Test critical values: 1% level	-3.886751	
5% level	-3.052169	
10% level	-2.666593	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 17
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PRCS,2)
Method: Least Squares
Date: 12/03/19   Time: 10:46
Sample (adjusted): 2002 2018
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PRCS(-1))	-1.502477	0.223256	-6.729841	0.0000
C	-1.455563	29.55840	-0.049244	0.9614

R-squared	0.751206	Mean dependent var	0.135294
Adjusted R-squared	0.734619	S.D. dependent var	236.5685
S.E. of regression	121.8685	Akaike info criterion	12.55389
Sum squared resid	222779.0	Schwarz criterion	12.65192
Log likelihood	-104.7081	Hannan-Quinn criter.	12.56364
F-statistic	45.29077	Durbin-Watson stat	2.337187
Prob(F-statistic)	0.000007		

Unit Root Test Results for EFCS

Null Hypothesis: D(EFCS) has a unit root
Exogenous: None
Lag Length: 3 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.109249	0.0045
Test critical values: 1% level	-2.740613	
5% level	-1.968430	
10% level	-1.604392	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 14

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EFCS,2)
Method: Least Squares
Date: 12/03/19   Time: 12:42
Sample (adjusted): 2005 2018

Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EFCS(-1))	-1.159233	0.372834	-3.109249	0.0111
D(EFCS(-1),2)	0.771099	0.339188	2.273368	0.0463
D(EFCS(-2),2)	-0.000599	0.247814	-0.002418	0.9981
D(EFCS(-3),2)	0.637984	0.219574	2.905556	0.0157

R-squared	0.762608	Mean dependent var		0.562500
Adjusted R-squared	0.691390	S.D. dependent var		12.67688
S.E. of regression	7.042344	Akaike info criterion		6.976716
Sum squared resid	495.9461	Schwarz criterion		7.159303
Log likelihood	-44.83701	Hannan-Quinn criter.		6.959814
Durbin-Watson stat	2.512701			

Unit Root Test Results for SFCS

Null Hypothesis: D(SFCS) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.783408	0.0017
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
      and may not be accurate for a sample size of 17

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SFCS,2)
Method: Least Squares
Date: 12/03/19   Time: 12:46
Sample (adjusted): 2002 2018
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SFCS(-1))	-1.243420	0.259944	-4.783408	0.0002
C	0.020588	0.081702	0.251992	0.8045

R-squared	0.604023	Mean dependent var		0.020588
Adjusted R-squared	0.577625	S.D. dependent var		0.518332
S.E. of regression	0.336866	Akaike info criterion		0.771870
Sum squared resid	1.702184	Schwarz criterion		0.869895
Log likelihood	-4.560894	Hannan-Quinn criter.		0.781614
F-statistic	22.88099	Durbin-Watson stat		1.959615
Prob(F-statistic)	0.000242			

Johansen co-integration test results

Date: 12/03/19   Time: 13:02
Sample (adjusted): 2002 2018
Included observations: 17 after adjustments
Trend assumption: Linear deterministic trend (restricted)

Series: EFCS PRCS ROE SFCS
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.925712	75.85717	63.87610	0.0036
At most 1	0.589635	31.66038	42.91525	0.4069
At most 2	0.479503	16.51833	25.87211	0.4516
At most 3	0.272903	5.417826	12.51798	0.5375

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.925712	44.19679	32.11832	0.0011
At most 1	0.589635	15.14205	25.82321	0.6217
At most 2	0.479503	11.10051	19.38704	0.5030
At most 3	0.272903	5.417826	12.51798	0.5375

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

EFCS	PRCS	ROE	SFCS	@TREND(01)
-0.111539	0.003528	-0.021896	-1.282824	-0.318261
-0.126899	-0.026002	0.023989	6.663622	-0.371463
-0.074327	-0.029546	-0.013399	1.584211	-0.353170
-0.131067	-0.013018	-0.046751	3.697291	-0.397954

Unrestricted Adjustment Coefficients (alpha):

D(EFCS)	4.803345	3.188995	-0.111505	2.388075
D(PRCS)	-24.00740	-41.97926	58.64468	-17.71255
D(ROE)	-4.769319	-10.14045	0.612843	9.786252
D(SFCS)	0.140807	-0.165769	0.103679	0.033758

1 Cointegrating Equation(s):   Log likelihood   -209.7648

Normalized cointegrating coefficients (standard error in parentheses)

EFCS	PRCS	ROE	SFCS	@TREND(01)
1.000000	-0.031631	0.196309	11.50116	2.853366
	(0.02296)	(0.03900)	(4.40480)	(0.24871)

Adjustment coefficients (standard error in parentheses)
D(EFCS)	-0.535759
	(0.21275)
D(PRCS)	2.677753

	(3.58394)
D(ROE)	0.531963
	(0.77272)
D(SFCS)	-0.015705
	(0.00920)

2 Cointegrating Equation(s):	Log likelihood	-202.1938

Normalized cointegrating coefficients (standard error in parentheses)

EFCS	PRCS	ROE	SFCS	@TREND(01)
1.000000	0.000000	0.144779	2.941120	2.863245
		(0.03399)	(3.02785)	(0.19461)
0.000000	1.000000	-1.629113	-270.6231	0.312307
		(0.42739)	(38.0769)	(2.44728)

Adjustment coefficients (standard error in parentheses)

D(EFCS)	-0.940438	-0.065975
	(0.27832)	(0.04323)
D(PRCS)	8.004864	1.006861
	(4.98976)	(0.77499)
D(ROE)	1.818773	0.246849
	(1.05029)	(0.16313)
D(SFCS)	0.005330	0.004807
	(0.01108)	(0.00172)

3 Cointegrating Equation(s):	Log likelihood	-196.6436

Normalized cointegrating coefficients (standard error in parentheses)

EFCS	PRCS	ROE	SFCS	@TREND(01)
1.000000	0.000000	0.000000	-14.71867	2.489330
			(5.62185)	(0.37105)
0.000000	1.000000	0.000000	-71.90776	4.519754
			(39.3245)	(2.59550)
0.000000	0.000000	1.000000	121.9777	2.582662
			(31.4177)	(2.07364)

Adjustment coefficients (standard error in parentheses)

D(EFCS)	-0.932150	-0.062680	-0.027181
	(0.30400)	(0.06508)	(0.05787)
D(PRCS)	3.645959	-0.725845	-1.267128
	(4.36632)	(0.93479)	(0.83113)
D(ROE)	1.773222	0.228742	-0.147037
	(1.14693)	(0.24555)	(0.21832)
D(SFCS)	-0.002376	0.001744	-0.008449
	(0.01064)	(0.00228)	(0.00203)