IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 24, Issue 1. Ser. III (January. 2022), PP 28-36
www.iosrjournals.org

Assessing the Effect of Internal Control System on Risk Management of Financial Services Firms in Nigeria

Joseph OGWIJI, PhD
Economic and Financial Crimes Commission Academy,
Karu, Abuja, FCT

Isiaka Olalekan LASISI
Department of Accounting, Faculty of Social and Management Sciences
Air Force Institute of Technology, Nigeria Air Force, Kaduna

Abstract
Risk management is an important tool for managing business activities in financial institutions and it is widely use in the corporate world to manage business crisis. Risk management in financial institution has greater impact not only on the financial institution but also on the economic growth and sustainable development. Thus, internal control system is use manage risk and to mitigate against business losses and liquidation of business. On this basis, the study seeks to assess the effect of internal control system on risk management of firms in Nigeria. The population is thirty seven (37) listed financial services firms and sample size are twenty nine (29) deposit money banks and listed insurance firms in Nigeria and twenty (20) were administered to each of the sample size firms. The cluster sampling techniques was adopted for the study. Primary data was sources through the administered questionnaire to the respondents through the use of five point Liker scale system, and the SMART-PLS-3-SEM was used to analyse the data fitness and test of research hypothesis. Constructive reliability and validity and the discriminant validity measure were used to test the fitness of the model. Path coefficient, predictive relevance of exogenous. Findings from the study revealed that control environment and monitoring are positive and significant effect on risk management, while the information and communication has a negative and significant effect on risk management. Risk assessment show an insignificant positive effect on risk management while the control activities is negative and insignificant effect on risk management of the listed financial services firms in Nigeria. In conclusion, the study found that internal control system has a significant influence on risk management. It is recommended among others that the management of financial services firms should maintain the used in control environment, monitoring system because they play a greater in effect on risk management while critically look the measure on to restructure their ICT system and improve on disclosure and reporting system.
Key words: *Internal control, Risk Management, Financial services, Nigeria*

Date of Submission: 06-01-2022 Date of Acceptance: 18-01-2022

I. Introduction

Risk management is an important tool for managing business activities in financial institutions and this risk management is use in the corporate world. Risk management in financial institution has greater impact not only on the financial institution but also on the economic growth and sustainable development. Thus, risk management is the process of managing the potential business risks by identifying, analyzing and addressing them. Internal control is a management tool that brings solutions to managerial problems, increases efficiency, effectiveness, abuse prevention and institutionalization in organizations and integrates management functions in a holistic way. Rae et al., (2017) state that an effective and efficient internal control system requires identifying and understanding the dimensions of the controls and their importance in achieving the objectives of the company.

According to COSO framework (2013) internal controls pays attention to five components control environment, risk assessment, control activities, information and communication and monitoring. Control environment is the foundation for all other elements of internal control; it provides discipline and structure for the company. this include integrity, ethical values and competence of the management's and board of directors provide direction for the company (Joseph et al., 2015). The risk assessment is seen as a process of detecting, analyzing, and responding to threats from both external and internal sources that will jeopardize the attainment of firm objectives (Agang & Njoka, 2020).

Control activities are policies and procedures that help to reduce firm risk in order to achieve the set objectives. Monitoring activities is a process of evaluating the quality and effectiveness of internal control systems over a period (Thuan et al., 2020). Information and communication are important element of internal control system as company staff receive clear information from the board of directors to management staff that control responsibilities should be taken seriously (Mbilla et al., 2020).

Due to recent financial scandals in the financial services firms and global economic crisis, banking and insurance firm sector across the globe has become vulnerable to the fraudulent actions. There have been several developments in the financial services firm industry emanating from policies from Central bank of Nigeria and National insurance commission which have affected the demand and supply of finance. Furthermore, CBN (2021) ban the issuance of foreign currencies to BDC due to risk pose to the economic and financial crisis. These financial crises have led to reduction in economic activities, loss of public confidence, volatile financial system and increased bank and insurance risk activities like the credit profile and liquidity position of the banking sector and high risk associated with loss of property which has negatively affected the financial services firm in Nigeria.

Review of literature indicates that majority of past empirical studies have analyzed the effect of internal control system on risk management based on different indicators. To my knowledge no study focusses on insurance sector. It has been established that most studies are conducted mostly in banking sector. Among them are Zandi and Hui, (2020), Mbilla et al., (2020), Temile et al., (2019), Tamimi, (2021), Zandi and Hui, (2020), Akumbo et al., (2020), Akwaa-Sekyi and Gené, (2017), Akwaa-Sekyi and Gené, (2016), Ayagre et al., (2014), Adeleke et al., (2020), Bayyoud, (2015), Bayyoud and Sayyad, (2015), Cho and Chung, (2016), Thuan et al., (2020)used banks as a case study. Therefore, this study focusses on banking sector and insurance firm sector in Nigeria.

Furthermore, empirical studies in Nigeria and abroad have attempted to address the different components of internal control and risk management, though most studies proxy risk management by fraud and risk prevention, risk analysis, risk identification. For instance, the study of Pang and Li, (2013) proxy risk management by risk prevention. Lisnawati1 and Apollo, (2020) proxy by risk analysis, Akwaa-Sekyi and Moreno (2016) proxy by operational risk. Bayyoud and Sayyad, (2015) proxy by risk identification and assessment. This study focuses on four risk management attributes (1) sufficient mechanism to react to changes, (2) effective control regarding to financing, accounting principles and practices, (3) Analyzed risk relating to business environment and (4) strong accounting system.

Furthermore, most study were more particular on the relationship between internal control and firm performance, such as Muthusi (2017), Cho and Chung (2016), Oppong et al. (2016), Origa (2015), and Asiligwa (2017). Thus, this study is different due to the fact that risk management is used as dependent variables as performance used by the above studies. From the survey of relevant literature, it has been found that there are no studies specific to Nigeria on the link of internal control system and risk management of banking and insurance firms together. The research is conducted to fill these pertinent gaps in literature by studying the effect of internal control system on risk management of quoted financial services firms in Nigeria. The following research question is answered in the study; what is the effect of internal control system on risk management of quoted financial service firms in Nigeria? The objective of the study is to examine the effect of internal control system on risk management of quoted financial services firms in Nigeria

II. Hypotheses development and literature review

Control Environment and Risk Management

Control environment refers to the efforts and supports given by the management. In most companies, the support from the management determines the efficiencies and effectiveness of the business operation (Zandi & Hui, 2020). The success or failure of a company in governance depends on the strength or weakness of the risk management that the company engaged in its operations (Ishak et al.,2019). The relationship between control environment and risk management has been investigated by various researchers. For example, Wanjala and Riitho, (2020) analysis the relationship between the implementation of internal control and risk management among the savings and credit cooperatives societies (Saccos) in Kenya. OLS regression approach was used for analysis. Results of the study revealed that control environment has a significant positive effect on risk management.

Nyakarimi et al., (2020) examine the effect of internal control system on risk management variables in banking sector in Kenya. The structural equation model was applied in the study. The findings of study shows that control environment has no statistically significant and a negative effect on fraud prevention. Furthermore, Bayyound and Sayyad (2015) examine the impacts of the control environment on risk management among Kenyan processing firms. A census of 189 respondents was employed in the study, which used a survey research approach. The findings of the study revealed that the control environment has a big impact on risk management. Furthermore, Ayagre et al., (2014) evaluated the effectiveness of Internal Control Systems of banks of Ghanaian banks. The study found out that, strong controls exist in the control environment on risk management. The study is supported by the institutional theory. Based on the researcher's arguments and divergent result, the following is hypothesized: $\mathbf{H_{01}}$: Control environment has significant effect on risk management of listed financial service firms in Nigeria.

Risk Assessment and Risk Management

Risk assessment is meant to determine the exact kind of risk a company face, the kind of internal control system that should be put in place to address the risks identified and also to manage the risks that have been identified (Nyakarimi et al., 2020). Risk assessment forms the foundation for defining how risks will be managed and implemented by the company (Owolabi & Amosun, 2020). The relationship between risk assessment and risk management is investigated in many studies. Wanjala and Riitho, (2020) analysis the impact of internal control on risk management among the savings and credit cooperatives societies in Kenya. The OLS regression results revealed that the risk assessment revealed a significant positive effect on risk management.

Nyakarimi et al., (2020) examine the effect of internal control system on fraud prevention as proxy of risk management in banking sector in Kenya. The study involved all the banks where branch managers, operations managers and cash supervisors were sought for the study. The study found that risk assessment has statistically significant and a positive effect on risk management. In addition, Rahim et al., (2018) examine the relationship between internal control system and perceived operational risk management in banks. The study data was analyzed using multiple regressions and the findings of study shows that risk assessment is found to have a significant effect on risk management. Akwaa-Sekyi and Gené, (2017) examine the effectiveness of internal control mechanisms on risk. Panel data from 91 banks from 23 European Union countries were studied from 2008-2014. Finding of the study revealed that risk assessment have a significant determinant on risk management.

Akwaa-Sekyi and Gené, (2016) examines the effect of internal control on risk among listed banks in Spain from 2004-2013. Findings of the study revealed that control environment has positive and significant effect on risk management. The study is supported by institutional theory. Based on the researcher's arguments and divergent result, the following is hypothesized: $\mathbf{H_{02}}$: Risk Assessment has significant effect on risk management of listed financial service firms in Nigeria.

Control Activities and Risk Management

Control activities refer to the policies and procedures designed by a company to ensure management directives are carried out (Victor & Linda, 2016). Zandi and Hui, (2020) opinion that control activities are basically the activities and procedures implemented help to identify and detect the uncertainties and risks involved in the banking operation and insurance business decision. For instance, the research of Wanjala and Riitho, (2020) examine the impact of control activities on risk management of the savings and credit cooperatives societies in Kenya. Results of the findings show that the control activities have a significant positive effect on risk management.

Nyakarimi et al., (2020) established that control activities have a positive and no significant effect on risk management. In the same vein, Babatunde (2017) assessed the effectiveness of control activities in the context of risk management's internal control system. Data was analyzed using descriptive statistics, correlation matrix and multiple regressions. The study find that control activities efforts have a favourable and significant impact on risk management.

Akwaa-Sekyi and Gené, (2016) examines the effect of internal control on risk among listed banks in Spain from 2004-2013. Findings of the study revealed that control activities have a negative and significant effect on risk management. In addition, Bharadwaj (2014) examined effect of internal control system on risk management using a sample of 15 Turkish banks and three major international banks. The found that control activities had a favourable impact on risk management. Also, Ejo and Ejom (2014) investigated the relationship between Nigerian banks' control activities and risk management. The study found that control activities have a favourable and considerable influence on risk management. The study adopted institutional theory. Based on the researcher's arguments and divergent result, the following is hypothesized: $\mathbf{H_{03}}$: Control activities have significant effect on risk management of listed financial service firms in Nigeria.

Monitoring and Risk Management

Monitoring is the assessment of internal control performance over time. it is accomplished by ongoing monitoring activities and by separate evaluations of internal control such as self-assessments, peer reviews, and internal audits (Akumbo et al., 2020). Past studies examine the impact of monitoring on risk management. For instance, the research of Zandi and Hui, (2020) find that monitoring can control the risk internal activities of a firm. Also, Akumbo et al., (2020) investigate the effects of internal control systems on management risk of listed banks in Ghana. The study result shows that monitoring has no significant effect on management risk.

Rahim et al., (2018) examine the relationship between internal control system and perceived operational risk management in banks. Findings of study show that monitoring is a significant factor that influenced risk management in Malaysian local conventional banks. Furthermore, Wisdom et al. (2016) examine the impact of monitoring on risk management. The study's data was gathered from both primary and secondary sources in order to determine the relationship between the two variables. The finding of the study revealed that monitoring was found to be positively impacted on risk management. The study is supported by institutional theory. Based on the researcher's arguments and divergent result, the following is hypothesized: $\mathbf{H_{04}}$: Monitoring have significant effect on risk management of listed financial service firms in Nigeria.

Information and communications and Risk Management

Information and communication component of internal control system enables individual to carry out their responsibilities, which include identifying and capturing information that would influence decisions about the extent of the necessary activities(Rae et al., 2017). Empirical studies review shows the relationship between information and communication and risk management. For examples; Akumbo et al., (2020) investigate the effects of internal control systems on performance of listed banks in Ghana. The study result shows that Information and communication have a weak significant effect on performance.

Eke (2018) analyzed the effects of information and communications on risk management. The questionnaire was given out to three banks that were chosen at random. The findings revealed that information and communications have a negative impact on risk management. Institutional theory is adopted by the study. Based on the researcher's arguments and divergent result, the following is hypothesized: $\mathbf{H_{05:}}$ Information and communication have significant effect on risk management of listed financial service firms in Nigeria.

III. Methodology

A cross sectional survey was used to collect data using self-administered questionnaire. The targeted population constitutes the staff of the financial services firms listed on Nigeria stock exchange. The study focuses deposit money banks and insurance firms as the population of the respondents. The population is the thirty-seven (37) Deposit Money Banks and Quoted Insurance Firms in Nigeria, while sample size is twenty-nine (29) and twenty (20) questionnaire was administer to each of the banks. Therefore, the population is 740 and sample of 580questionnaire was administered to the respondents and 435 valid questionnaires was return, these indicate a response rate at 75%. The cluster sampling technique is adopted for the study because it involve identification of the population base on the subsector in an industry (DMBs and insurance firm). They must have a minimum number of 20 staff in their branch, in order to randomly administer the questionnaire to the respondents, the branch of the study firms must be operating in most state in Nigeria. The regression equation spells out all the variables used in discussion of the findings as shown below.

The study used primary source of data. The structured questionnaire used the 5-Pont Likert Scale system: Strong Agree 1; Agree 2; Undecided 3; Disagree 4; and Strongly Disagree 1. Furthermore, the study uses SPSS statistical package (IBM statistic 20) to analyze the demographic variables while Smart PLS 3 (Smart PLS 3-SEM) was used to analysis the data and measure the fitness of the research model and interpretation of the research hypotheses. The study Smart PLS 3 was used to measure the two stage approach for assessing the measurement model and the structural model respectively.

$RMI_i = \alpha + \beta_1 CE_i + \beta_2 RA_i + \beta_3 CA_i + \beta_4 MT_i + \beta_5 IC_i + \mathcal{E}_i$

Whereas: RMI_i = Risk Management, CE_i = Control Environment, RA_i = Risk Assessment, CA_i= Control Activities, MT_i= Monitoring, IC_i = Information and Communication, $\mathcal{E}$ = Error term, a = intercept (constant), $\beta 1\text{-}6$ = Coefficient Parameters.

The study used a structured open-ended questionnaire to seek for information from the respondents. The questionnaires were adapted from various previous researchers work for this study. Items that measure the construct dimensions (control environment, risk assessment, control activities, information and communication and monitoring on risk management) in questionnaire were adapted from past researches: (Zandi & Hui, 2020), (Ayagre et al., 2014), (Bayyoud, 2015), (Nandom et al., 2019), (Nyakarimi et al., 2020).

Table 1 Variables Measurement

Variables	Acronym	Measurement	Sources
Dependent Variable			
Risk Management			
(RM1) Mechanisms of identifying potential risk(Nyakarimi et al., 2020)			
(RM2) Strong accounting system(Nandom et al., 2019)			

(RM3) Firm to detect and prevent fraud
(RM4) Profit of the branch reached the target objectives

Dependent Variable

1) Control Environment

(CE1) Board of directors promptly handle violation (Thuan et al., 2020),
(CE2) Competency & integrity checks are performed during staff recruitment & remuneration (Wanjala & Riitho, 2020)
(CE3) A clear chain of command is reflected in firm structure
(CE4) Management & employee integrity & ethical values

2) Risk Assessment

(RA1) Mechanisms of classifying potential risks
(RA2) Response to potential risk
(RA3) Periodic reconciliation for transactions
(RA4) Mechanisms for mitigation of risk (Nyakarimi et al., 2020)

3) Control Activities

(CA1) Firms are effective in controlling its activities(Wanjala & Riitho, 2020)
(CA2) Firm verifies and reconciles claims of resource application
(CA3) Policies & procedure are implemented& supervises its operations
(CA4) Clearly defined duties are assigned to each staff(Zandi & Hui, 2020)

4) Information & Communication

(IC1) Effective & quality dissemination of information(Nandom et al., 2019),
(IC2) Effective reporting procedures in communicating to public (Tunji, 2013)
(IC3) Regular follow-ups are done on delegated responsibilities
(IC4) Computers are locked with password & authorization such as signature (Zandi & Hui, 2020) (Wanjala & Riitho, 2020)

5) Monitoring

(M1) Management has a strict supervisory role over operations(Akumbo et al., 2020)
(M2) Effective internal audit systems to aid monitoring ‘’
(M3) Periodic evaluation mechanisms reflect properly employee’s productivity
(M4) Physical inventory counts reflect accurately the recorded in books of accounts (Wanjala & Riitho, 2020)

Sources: Compilation from Various Past Author Research Work

IV. Results and discussion

The Measurement Model

The measurement model was used to assess the rate at which observed latent variables are loaded on their underlying constructs using individual items reliability, internal consistency and reliability (Cronbach’s alpha coefficient or composite reliability coefficient.), convergent validity and discriminant validity.

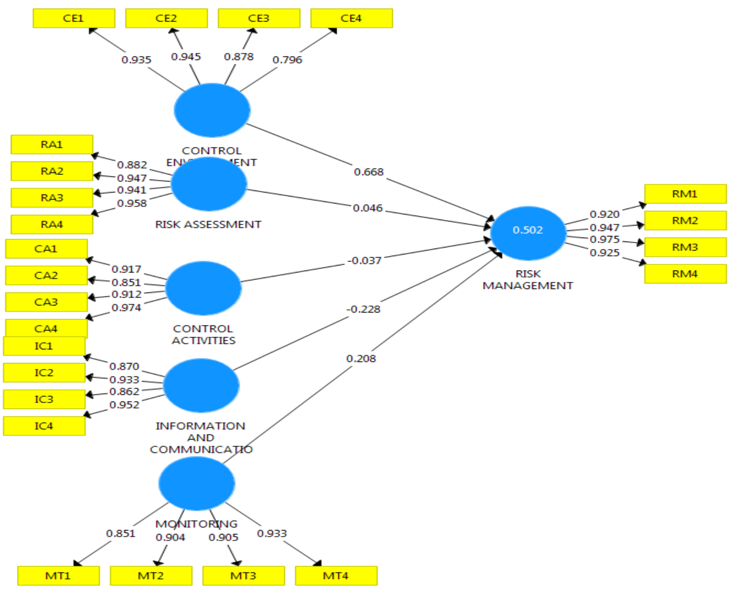

Figure 1: Measurement Model

Construct Reliability and Validity

Table 2 indicates that the composite reliability coefficients of the latent constructs fall within 953 to 969 and Cronbach alpha coefficient of 937 to 958, this signifying that the model has good internal consistency and reliability. Similarly the convergent validity is regarded as the rate at which all items in the model correlate with other measures of the same latent construct. It is measured by examining the Average Variance Extracted (AVE) of each latent construct, (Fornell& Locker, 1981). In line with Chin (1998), it indicates that all the latent constructs exhibited high loading (> 0.50) signified adequate convergent validity model.

Table 2 Construct Reliability and Validity

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted AVE)
Control Activities (CA)	0.937	0.935	0.936
Control Environment (CE)	0.912	0.938	0.793
Information & Com (IC)	0.927	0.948	0.819
Monitoring (MT)	0.920	0.944	0.807
Risk Assessment (RA)	0.950	0.964	0.870
Risk Management (RM)	0.958	0.969	0.888

Sources: PLS SEM-3 RESULT OUT

Model 3 Summary (R Square)

Variable	R Square	Adjusted R Square
Risk Management	0.502	0.496

Sources: PLS SEM-3 RESULT OUT

The model summary in table 3 showed the extent to which internal control system influence risk management of listed financial services firms in Nigeria. The coefficient of determinant (0.502) showed that 50.2% of the variation in risk management was accounted for by internal control system significantly.

Test of Hypothesis on Structural Equation Model

The structural model was used to fist test the direct effect and relationship between the independent and dependent variable of the study. See the SEM in Figure 3 and table.

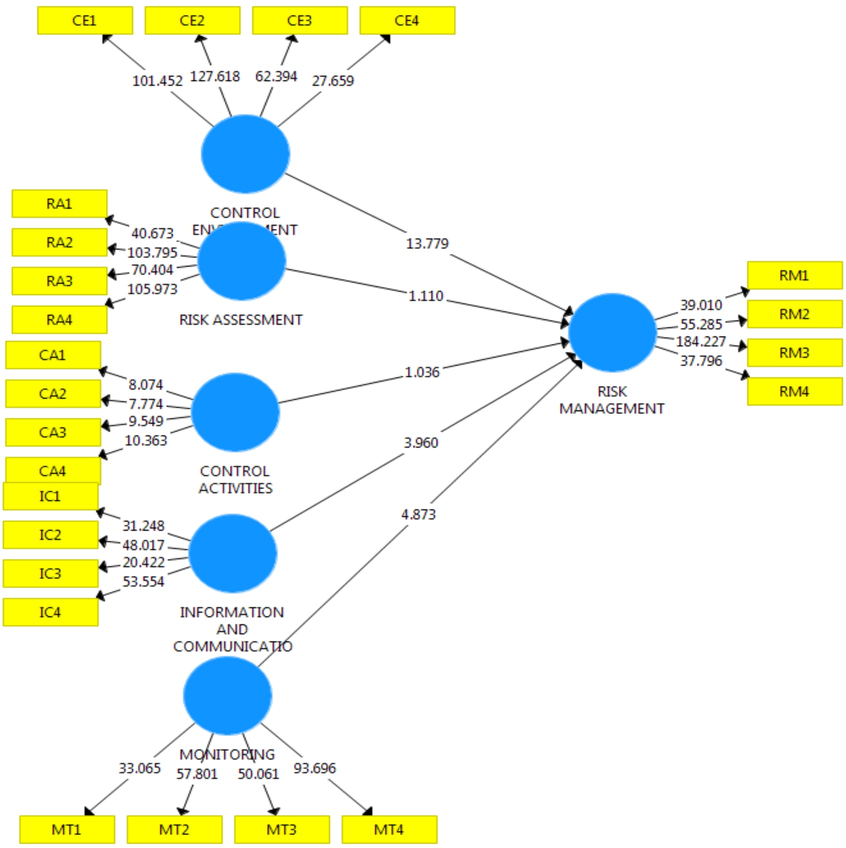

Figure 2: The Structural Equation Model

Path Coefficient

That is the path coefficient was used to test the relationship between the Control Activities -> Risk Management (CA-> RM), Control Environment -> Risk Management (CE -> RM), Information & Communication -> Risk Management (IC -> RM), Monitoring -> Risk Management (MT -> RM) and Risk Assessment -> Risk Management (RA -> RM). This is done through the process of standard bootstrapping with 5000 bootstrap samples on SMART-PLS 3.

Table 3: Path Coefficient Statistics

Variables	Beta Coeff Value	Standard Error	T-Stat	P-Value	Findings
CE -> RM	0.668	0.665	13.779	0.000	Supported
(RA -> RM)	0.046	0.049	1.110	0.267	Not Supported
CA -> RM	-0.037	-0.032	1.036	0.300	Not Supported
(MT -> RM)	0.208	0.210	4.873	0.000	Supported
IC -> RM	-0.228	-0.231	3.960	0.000	Supported

Sources: PLS SEM-3 RESULT OUT

Hypothesis

Table 3, revealed that control environment the coefficient value (β) of 0.668 and t-value of 13.779 with a corresponding p-value of 0.000. This indicates that control environment have a positive and significant effect on risk management at 5% level of significance. This suggests that a 1% increase or improvement in control environment will bring about 66.6% rise on risk management. This implies that the firm board of directors and competency staff with integrity has significant role on risk management, and this will reduced the firm potential risk and reduce fraud with increase in profitability by 66.8%. The finding of the study is in conformity with the work of by Nandom et al., (2019), Ellis and Jordi (2016), Zandi & Hui, (2020).

Secondly, the result from the table 3 shows that the coefficient value of risk assessment is 0.046 with the corresponding t-value of 1.110 and p-value of 0.267 which is insignificant at 5% level of significance. This implies that a 1% increase in risk assessment will bring about 4.6% improvements on risk management effectiveness. This suggests that the financial services firm should sustain and improve on the system mitigation risk. This study is supported by the research work of Nandom et al., (2019), (Agang & Njoka, 2020) (Bayyoud, 2015). Though contradict the study of Akwaa-Sekyi & Gené, (2017).

Thirdly, the result from the table 3 revealed that the coefficient value of control activities to be -0.037 with the corresponding t-value of 1.036 and p-value of 0.300 which is not significant at 5% level of significance. This implies that a 1% increase in control activities will bring about 3.7% reductions on risk management effectiveness. This suggest that the financial services firm is poorly performing in terms of policies and procedural implementation, poor management supervision and no clear responsibilities to staff. This contradict the study of Thuan et al., (2020) Wanjala & Riitho, (2020).

Fourthly, the result shows that monitoring has a coefficient value of 0.208 with the corresponding t-value of 4.873 and p-value of 0.000 which is significant at 5% significance level. This suggests that a 1% increase in firm monitoring activities will bring about an effective risk management by 20.8%. This implies that the financial services firm has an effective internal audit system that aid efficiency supervisory with high level of inventory management. Thus, the finding is in conformity with the work of by Nandom et al., (2019) Joseph et al., (2015). However, it contradict by the study of Victor and Linda, (2016).

Finally, the finding of result shows that the coefficient value of information and communication is -0.228 with the corresponding t-value of 3.960 and p-value of 0.000 which is significant at 5% level of significance. This implies that a 1% increase information and communication will bring about 22.87% reductions on risk management effectiveness. This implies that there is inefficiency of ICT in the financial services firm and this are attributed to poorly dissemination of information from the upper manger to the lower manager, poor reporting produce to the general public and lack of strong cyber security to reduce fraud are attributed to strong negatively effect on risk management. This study is supported by research work of Nyakarimi et al., (2020), on the other hand, contradict the study of Wanjala & Riitho, (2020).

V. Conclusion and Recommendations

The study examined the effect of internal control system on risk management of listed financial services firms in Nigeria. Based on the findings of this research work, the following conclusions were reached. The study found positive and significant effect of control environment on risk management. Also, the study also found a positive and statistically insignificant effect of risk assessment on risk management. In addition, control activities have a negative and statistically insignificant effect on risk management. Furthermore, information and communication is negative and significant effect on risk management. Monitoring is established to have a positive and statistically significant effect on risk management.

In line with conclusions made above, the study recommends that management of listed financial services firms in Nigeria should ensure the board of directors has clear firm structure that reflect the chain of command for easy dissemination of information to managers and subordinate in the business environment. Also, management of the study firms should maintain the present or current monitoring strategy such has strict supervision role over operations, effective internal audit system to reduce fraud, period of evaluation employee to determine the productivity level and the management should also sustained the physical inventory management. Also, they firm should restructure and redesigned their ICT facilitates so as to protect shareholders funds and customer saving. They should improve on the quality of dissemination of information. Also, they should ensure full disclosures and reporting of financial statement to the public.

Reference

[1]. Adeleke, O. K., Segun, iLUGBUSI B., & Olaoye, A. C. (2020). Impact of internal control on fraud prevention in deposit money banks. *Nigerian Studies in Economics and Management Sciences*, *2*(1), 42–51.

[2]. Asiligwa, G. R. (2017).The effect of internal controls on the financial performance of commercial banks in Kenya.*IOSR Journal of Economics and Finance, 8*(3), 92-105

[3]. Agang, J. O., & Njoka, C. (2020). Internal Controls and Credit Risk in Commercial Banks Listed At Nairobi Securities Exchange, Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, *2*(2), 77–92.

[4]. Akumbo, S., Mbilla, E., Dery, J., Gbegble, M. K., & Nyaaba, R. (2020). Assessing the impact of monitoring , information and communication on banks performance in Ghana. *Asian Journal of Economics, Business and Accounting*, *14*(3), 58–71.

[5]. Akwaa-Sekyi, E. K., & Gené, J. M. (2016). Effect of internal controls on credit risk among listed Spanish banks. *Intangible Capital*, *12*(1), 357–389. https://doi.org/10.3926/ic.703

[6]. Akwaa-Sekyi, E. K., & Gené, J. M. (2017). Internal controls and credit risk relationship among banks in Europe. *Intangible Capital*, *13*(1), 25–50.

[7]. Ayagre, P., Appiah-Gyamerah, I., & Nartey, J. (2014). The effectiveness of internal control systems of banks. The Case of Ghanaian Banks. *International Journal of Accounting and Financial Reporting*, *4*(2), 377. https://doi.org/10.5296/ijafr.v4i2.6432

[8]. Bayyoud, M., & Sayyad, N. A. (2015). The Impact of Internal Control and Risk Management on Banks in Palestine. *International Journal of Economics, Finance and Management Sciences*, *3*(3), 156.

[9]. Cho, M., & Chung, K. H. (2016). The effect of commercial banks' internal control weaknesses on loan loss reserves and provisions. *Journal of Contemporary Accounting and Economics*, *12*(1), 61–72.

[10]. Ishak, S., Naimi, M., Nor, M., Shuib, M. S., Al, R., & Saad, J. (2019). Corporate governance practice , risk management and internal control at kedah state zakat board (LZNK). *International Journal of Innovation, Creativity and Change.*, *6*(2), 389–404.

[11]. Joseph, O. N., Albert, O., & Byaruhanga, J. (2015). Effect of Internal control on fraud detection and prevention in district treasuries of Kakamega County. *International Journal of Business and Management Invention*, *4*(1), 47–57.

[12]. Lisnawati1, E., & Apollo. (2020). The relationship between internal control, regulation and fraud with risk management as a moderating variable. *Dinasti International Journal of Education Management and Social Science: https://dinastipub.org/DIJEMSS*, *1*(6), 968–

[13]. Mbilla, S. A. E., Nyeadi, J. D., Gbegble, M. K., & Ayimpoya, R. N. (2020). Assessing the impact of monitoring, information and communication on banks performance in Ghana. *Asian Journal of Economics, Business and Accounting*, *14*(3), 58–71.

[14]. Muthusi, D. M, (2017). Internal control and financial performance of commercial banks in Kenya. A Thesis submitted to Post-Graduate School in Partial Fulfillment of the Requirement for the Conferment of Master of Science Degree in Finance of Kenyatta University.

[15]. Nandom, I., Mubarik, M., Alhassan, N., & Rahman, M. (2019). The effectiveness of internal control system in safeguarding assets in the ghanaian banking industry. *International Journal of Management and Commerce Innovations*, *5*(95116), 544–557.

[16]. Nyakarimi, S. N., Kariuki, S. N., & Kariuki, P. W. (2020). Application of internal control system in fraud prevention in banking sector. *International Journal of Scientific and Technology Research*, *9*(3), 6524–6536.

[17]. Owolabi, S. A., & Amosun, O. O. (2020). Internal Control Systems and Quality of Financial Reporting in Insurance Industry in Nigeria. *Journal of Finance and Accounting*, *8*(5), 218.

[18]. Oppong, M., Owiredu, A., Abedana, V., & Asante, E. (2016).The impact of internal control on the performance of faith-based NGOs in Accra.

[19]. Origa, P. O. (2015). Effect of internal controls on the financial performance of manufacturing firms in Kenya. A Research Project Submitted in Partial Fulfillment of the requirements for the Award of the Degree of Master of Science in Finance, University of Nairobi

[20]. Pang, Y., & Li, Q. (2013). Game Analysis of Internal Control and Risk Management. *International Journal of Business and Management*, *8*(17), 103–111.

[21]. Rae, K., Sands, J., & Subramaniam, N. (2017). Associations among the five components within coso internal control-integrated framework as the underpinning of quality corporate governance. *Australasian Accounting, Business and Finance Journal*, *11*(1), 28–54.

[22]. Rahim, N. F. A., Ahmed, E. R., & Faeeq, M. K. (2018). Internal Control System and Perceived Operational Risk Management in Malaysian Conventional Banking Industry. *Global Business and Management Research: An International Journal*, *10*(1), 135–149.

[23]. Tamimi, O. (2021). The Role of Internal Audit in Risk Management from the Perspective of Risk Managers in the Banking Sector. *Australasian Accounting Business and Finance Journal*, *15*(2), 114–129.

[24]. Temile, S. O., Enakirerhi, L., & Felix, I. E. (2019). Risk management and internal control system of nigeria ' s banking sector. *Humanities & Social Sciences Reviews*, *7*(4), 943–949.

[25]. Thuan, P. Q., Thuy, H. X., Quyen, P. T. H., Truc, T. T. T., & Hien, N. T. D. (2020). Impact the Internal control of the credit operations on the credit effectiveness of commercial banks: A Case of HCMC and Dong NAI Province. *Academy of Strategic Management Journal*, *19*(6), 1–11.

[26]. Tunji, S. T. (2013). Distress in the Banking Industry in Nigeria. *Journal of Economics and International Business Research*, *1*(5), 106–121.

[27]. Victor, O. I., & Linda, E. N. (2016). Internal control techniques and fraud mitigation in nigerian banks. *Journal of Economics and Finance*, *7*(5), 37–46.

[28]. Wanjala, K., & Riitho, D. (2020). Internal control systems implementation and fraud mitigation nexus among deposit taking saccos

in Kenya. *Finance & Economics Review*, *2*(1), 11–29. https://doi.org/10.38157/finance-economics-review.v2i1.59

[29]. Zandi, G., & Hui, Y. (2020). How Internal Control System Affects Risk Management : The Case of Commercial banking in Malaysia. *See Discussions, Stats, and Author Profiles for This Publication at: https://www.researchgate.net/publication/33021515*, *April*, 1–11.

Joseph OGWIJI, PhD, et. al. "Assessing the Effect of Internal Control System on Risk Management of Financial Services Firms in Nigeria." *IOSR Journal of Business and Management (IOSR-JBM)*, 24(01), 2022, pp. 28-36.