RISK MANAGEMENT AND PERFORMANCE OF SELECTED DEPOSIT MONEY BANKS ON THE NIGERIAN STOCK EXCHANGE

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Abstract

The banking system provides financial services that involve intrinsic and extrinsic risk. The risk in the banking sector cannot be eliminated nor avoided; rather, the risk can be managed by controlling the degree and direction of how the risk affects the way banks are performing. It is in the light of this that this study evaluated how the management of risk influences the way deposit money banks in Nigeria are performing. The annual reports of the selected deposit money banks were the source of data for the study covering the period of 2006 to 2020. Performance of banks as the variable dependent on risk was proxied by (ROA) while risk management which is the variable influencing performance was proxied by liquidity ratio, debt to equity ratio and capital adequacy ratio. For the purpose of analyzing data, the study used Ordinary Least Square regression (OLS). It was discovered that liquidity ratio and capital adequacy ratio have positively affected performance of the selected deposit money banks in a significant way. On the contrary, debt to equity ratio is negatively insignificant on bank's performance. The study recommended Federal Government of Nigeria and Monetary Authorities ought to implement policies aimed at enhancing the effectiveness and toughness of banks in Nigeria to resist shocks from the economy, such as a potential worldwide pandemic.

Keywords: Banks, Capital Adequacy Ratio, Debt to Equity Ratio, Liquidity Ratio, Performance Risk.

Introduction

Most people believe that the financial system is the foundation of every economy, so it needs to be given great consideration because its failure could prevent the growth of the national economy. Activities carried out by banks are not only affected by external factors but also have inherent risks and these risks cannot be eliminated or avoided. They can only be controlled to limit how much and in what ways they affect how banks perform (Soyemi, Ogunleye & Ashogbon, 2014). As a result, risk management is crucial to the industry. In some emerging nations, like Nigeria, where the consumer confidence index is low, the risk in the banking industry is higher than usual (Alajekwu, Okoro, Obialor & Ibenta, 2019). Some of the challenges in the banking industry among others includes default of credit facilities, liquidity related problems, guidelines on how to balance bank policy, regulatory issues, problems related with how the bank operates.. During the early 1990's as well as bank consolidation in 2005, new techniques for managing risk in the banking industry emerged. It was posited that, to management risk effectively, there is need to first identify the various risks involved and to also define them before taking steps on how to manage such risks.

Since 1999, several reforms have taken place in the quest to ameliorate capability and the health of Nigerian deposit money banks. Pathetically, the Nigerian banking sector is still suffering high rate of various risk problems (Abdullahi, 2013).

Existing empirical studies have made different assertions as regards the direction of the effect that risks have on bank performance. Akindele, (2012) and Ofosu-Hene & Amoh, (2016) adopted all the risks in one study and discovered that the management of risk is positively related with the performance of banks. On the other hand, Olusanmi, Uwuigbe & Uwuigbe (2015) discovered that these risks have a negative significant effect on bank performance. Other studies that concentrated only on credit risk such as Kayode, Obamuyi & Owoputi (2015) and Ogbulu & Eze (2016) found that credit risk had impact on performance but did not indicate the direction. Other several related studies that have been carried out on the research such as (Sisay, 2017; Wanjiku, 2016; Arif and Showket, 2015; Adrian, 2014) found out that some practices that help in managing risk have a greater significance on financial performance while studies such as (Jessie et al, 2019; Kioko, Olweny & Ochieng, 2019; Kyule, 2019; Mukino, 2018) opined that management of risk does not affect financial performance. This makes the study and inconclusive one. As

a result, the study aimed to close the information gap about the potential existence of whether or not techniques of managing risk affects financial performance of listed deposits money banks in Nigeria that have been in operation for at least 15 years (that is, between 2006 and 2020). Noteworthy is that, all these divergent findings can help generate meaningful policies as well as managerial decisions towards effective risk management.

LITERATURE REVIEW

Concept of Risk

Risk, in general, has a very old history because it may be stated that it predates human existence. Risk is a natural aspect of life. There are numerous risk kinds that might arise in business. Some of them can be managed, while others cannot. Some are foreseen, while others are unexpected. Some have a negligible effect on the business, while others put its survival in jeopardy. Due to the fact that every author's endeavor reveals a particular orientation, it has contaminated a general definition. Risk is defined by the Oxford Dictionary as the likelihood that something unpleasant or undesired will occur, as well as the possibility of suffering financial loss. Risk is the likelihood of experiencing an unanticipated or unfavorable consequence (Banks, 2014).

As a result, risk can be applied to any behavior or activity that results in a loss of any kind. Risk is characterized as the degree of ambiguity revolves around a potential result or event. Additionally, the concept of risk refers to the possibility of the harm that an asset or a quality of value may suffer by a current process or a future occurrence (Douglas & Wildavsky, 2012).

Concept of Risk Management

"Risk management" can also be used to describe management techniques used to locate, measure, and evaluate risks. The efficient and well-planned deployment of resources comes next. As posited by Berg (2010), evaluating potential risks and creating policies and procedures that increase an organization's ability to avoid or mitigate the impacts of risk processes, risk management is a proactive system. Managing risk is the process by which an organization may identify risks, evaluate them, and develop measures to minimize or maintain them. According to Rejda (2008) opined that management of risk is the process by which companies evaluates how exposed they tend to be to losses they are likely to be confronted with and how they select the most practical solutions for resolving those exposures.

Kimball (2015) also agrees that management of risk is an activity carried out by combining the identification of risk, assessment of risk, creation of strategies that can help manage risk, and mitigation of risk via managerial resources. Basically, strategy that helps to ensure that risk is managed in an effective way enables a business to lower its risk exposure and get ready to pull through amidst any disasters that may not be speculated. Risk identification, assessment of risk, risk treatment (management), and monitoring of events or activities that may result in losses—in the majority of situations, financial losses—are all included in risk management.

This indicates that risk management is an active activity that necessitates continual dedication and attentiointo the iss ues. However, in most circumstances, the data and knowledge as regards dangers that may be precisely defined are inadequate. This impedes the process and hence calls for more care. As a result, identifying them as the first step in good risk management is crucial for enhancing financial performance (Azende, 2011).

Concept of Financial Performance

Financial performance, however, is a challenging notion to define and quantify. A company's financial performance can be summed up as how well it extracts value from its resources. Additionally, it demonstrates a company's long-term financial health and aids in comparing various deposit money bank policies across the banking sector. The idea relates to the general health of numerous businesses, including financial profitability, output levels, and market levels. Performance of the company suggests "an expansion that is both reasonable and profitable for future advantages" (Mukherjee, 2019).

Risk Management and Financial Performance

The importance of risk management as a management activity increases as markets grow more global and competitive. The process of managing risk consists of a series of phases that establish the context, define, assess,

process, control, and continuously improve decision-making. The onus is on the owner to recognize the risk predominant in operation of the business and to try as much as possible to start using effective management strategies to preserve its performance because the type of risk depends on the industry in question. Risk can be avoided in the strictest meaning by refraining from the actions that are most likely to result in it. This should be carried out when there are no simple measures available or when the controls are insufficiently effective to reduce the situation to a bearable level (Inang & Ukpong, 2012).

Effective risk management may have a significant positive impact on all organizations, regardless of size, sector, or public or private. Instead of improving financial performance, management of risk has mostly focused on compliance to controls and regulations (Banks, 2014). However, as risk management helps the firm control expenses and comply with regulations, it frequently results in improved financial performance. He goes on to say that by controlling risks, the management may raise the company's worth by ensuring its ongoing profitability.

THEORETICAL REVIEW

Stakeholder Theory

The theory emphasizes equilibrium of stakeholder interests (beyond shareholders, managers and other individuals or institutions that are related with the firm) and this serves as the core determinant of corporate policy. More interesting is the fact that the theory extends beyond employment to other contracts and thus forming an important contribution to how risk can be managed (Cornell & Shapiro, 2007). In some industries especially the high-tech and services companies, clients so much believe the company will continue to exist into a foreseeable future and which implies continued rendering of their services which in turn improves the company's value. Nonetheless, this is sensitive to financial distress and bankruptcy that are expected to occur.

Aabo (2012) looks into the connection between business goals and risk management tactics used by the businesses. The analysis reveals a clear distinction between the two categories of businesses in terms of the actual risk management choices made, which in turn affects whether those choices will result in value creation for the business or value retention. This study comes to the conclusion that corporate factors cannot account for this variation in risk management behavior. Instead, the study discovers a special connection between the managerial attention on stakeholders and choosing a risk management strategy that was more heavily weighted toward value preservation and value enhancement. Thus, the theory guarantees a comprehension of actual risk management choices, which in turn helps assess whether the choices influence company's ability to add value or retain value. The theory is appropriate for the study because the interrelationship of the financial risk management team is required in both short- and long-term profitability estimation, which will ultimately increase profitability levels in an organization and reduce risk exposure in listed commercial banks in Nigeria.

Empirical Review

Numerous empirical researches have been conducted on how the management of risk affects financial performance of organizations in Nigeria and throughout the world. Some have researched the factors that affect risk management, while others have looked at how risk management affects an organization's performance. However, the measure of how the management of risk as well as how organizations' performance are represented varies from one researcher to another.

Focusing on commercial banks, Henry, Bello, and Eseosa (2020) studied how management of risk affects financial performance of Nigerian banks with the aim of determining how risk asset management has affected Nigerian commercial banks' best possible financial results. The study's findings demonstrated that credit risk, capital adequacy risk, leverage risk, and liquidity risk all have a significant impact on a bank's profitability over the long and short terms, respectively. Additionally, it was discovered that profitability as defined by ROA was favorably correlated with liquidity risk but negatively correlated with credit risk. According to the results, good risk management is required to increase banks' profitability, particularly with regard to credit, capital adequacy, leverage, and liquidity issues. Risk management will assist in lowering layoffs and unemployment by assisting in enhancing the going concern of banks, hence assisting in preventing the associated social vices.

The extent to which the performance of listed insurance companies (in terms of finance) is affected by financial risk in Nigeria was investigated by Ibrahim, Terzungwe, and Lateef (2020) covering the period from 2009 to 2018.Twenty-seven (27) listed insurance businesses made up the study's population, and 19 companies were selected

as the sample size. Findings revealed that, solvency risk is positively and substantially related with ROA. Liquidity risk has a slight impact on ROA but in a negative way, while credit risk has a negative but substantial impact on financial performance. The study comes to the conclusion that credit risk has a negative impact on the ROA of Nigerian listed insurance businesses.

METHODOLOGY

The research design applied by the study was an Ex post Facto. Out of the quoted deposit money banks in Nigeria, 15 constituted the population of the study. These banks were all used as sample size. The rationale behind the selected is simply banks that have existed between 2006 and 2020. These banks include "Access Bank Plc, Fidelity Bank Plc, United Bank of Africa (UBA), Zenith Bank Plc, Union Bank Plc, First City Monument Bank, First Bank Plc, Guaranty Trust Bank, Eco Bank, Stanbic IBTC, Standard Chartered Bank, Sterling Bank, Unity Bank, City bank and Wema Bank Plc". The annual reports of the selected deposit money banks for the period 2006 to 2020 were used as source of data. The choice of this period is strictly based on availability of data.

Multiple regressions technique was used to scrutinize the direction of relationship that exists amongst the variables of management of risk and the variables performance of the selected deposit money banks in Nigeria. In the course of data analysis, some tests were carried out. These include: serial correlation test which was carried out with the use of Breusch-Godfrey Serial Correlation LM technique to check the stability of the models, stationary test was conducted using the ADF (Augmenting–Dickey Fuller) test and co integration test was conducted, which could invalidate statistical test of significance assuming that the modeling errors are uncorrelated and uniform. The F-test was also adopted know how significant the regression model is holistically. T-test procedure is used to test for the exact level of how statistically significant the coefficients are.

Model Specification

The model is specified as follows:

$Y = f(X)$

Functionally form as:

$Y = f(X_1, X_2, X_3 \ldots\ldots\ldots\ldots Xn)$

Mathematically form as:

$ROA = f\ (LR, DER, CAR)$

Econometrically, it can be written as:

$ROA_t = \beta_0 + \beta_1 LR_t + \beta_2 DER_t + \beta_3 CAR_t + \mu_t$

Where:

ROA = Return on Asset

LR = Liquidity Ratio

DER = Debt Equity Ratio

CAR = Capital Adequacy Ratio

μ= Error term

β_0= Constant

β_1-β_3= Slope coefficients between the dependent and independent variables.

RESULT AND DISCUSSION

Table 1: Descriptive Statistics

	ROA	LR	DER	CAR
Mean	1.688048	41.38895	0.389667	18.27257
Median	1.600000	39.75000	0.375000	18.10000
Maximum	4.100000	66.20000	0.910000	27.20000
Minimum	-5.700000	30.10000	0.130000	10.40000
Std. Dev.	1.058421	7.437169	0.122640	3.966608
Skewness	-1.538551	0.926465	1.081097	0.056647
Kurtosis	13.66906	3.515809	5.150629	2.171739
Jarque-Bera	1078.852	32.36982	81.37751	6.114959
Probability	0.000000	0.000000	0.000000	0.047006
Sum	354.4900	8691.680	81.83000	3837.240
Sum Sq. Dev.	234.1331	11560.10	3.143477	3288.401
Observations	210	210	210	210

Source: *Extracted from E-views 9.0 Output*

The summary of the variables of measurements was presented in table 1. The result indicates the variables were found to be normally distributed over time with p-value < 0.05. The averages for **ROA, LR, DER and CAR** were 1.688048, 41.48895, 0.389667 and 18.27257 respectively. The standard deviation for ROA is 1.058421, 7.437169 for LR, 0.122640 for DER and 3.966608 for CAR. The minimum and maximum values of the respective variables were also captured likewise the variability over time.

Table 2: Correlation coefficients

Correlation t-Statistic Probability	ROA	LR	DER	CAR
ROA	1.000000 ----- -----			
LR	0.537240 9.186528 0.0000	1.000000 ----- -----		
DER	0.001377 0.019863 0.9842	-0.107299 -1.556475 0.1211	1.000000 ----- -----	
CAR	0.310862 4.717027 0.0000	0.499900 8.324444 0.0000	0.211965 3.128076 0.0020	1.000000 ----- -----

Source: *Extracted from E-views 9.0 Output*

The result in table 2 shows the interrelationship between the dependent variable (ROA) and the independent variables (LR, DER and CAR).

The result of the output as presented in the table indicates strong positive relationship between ROA and LR (r=0.537240) with p-value less than the 5% significance level.
In addition, there is a very weak positive relationship between ROA and DER with correlation coefficient of 0.001377 and the p-value (0.9842) is greater than the 5% significance level.
Lastly, there is a weak positive relationship between ROA and CAR with correlation coefficient of 0.310862 and p-value less than the 5% significance level.

The summary of the result indicates that there is significant relationship between LR, CAR and ROA while there is no significant relationship between DER and ROA.

Table 3: Hausman Test for Random Effect model (Dependent ≡ ROA)

Tests	Fixed Effect	Random Effect
R-squared	0.599403	0.046696
Adj. R-squared	0.566193	0.032813
SE of Regression	0.697119	0.717902
F-Statistic	18.04880 (p-value= 0.000000)	3.363513 (p-value= 0.019659)
Durbin Watson	1.789260	1.587208
Hausman Test Statistic		p-value = 0.019659

Source: *Extracted from E-views 9.0 Output*

The result as indicated in table 3 gives the Hausman test statistics with p-value which is less than the 5% significance level. Hence the alternative hypothesis is accepted and we conclude that the fixed effects model is most suitable for the test.

The analysis showed from the R-squared that about 60% of the variation in ROA can be largely explained for by the joint effect of the independent variables (LR, DER and CAR) for the examined time period. The remaining 30% could be traced to unexplained variation. Similarly, adjusted R-square indicates that about 56.5% variation in ROA can be accounted for when other variables are added to the model as it reveal the validity of the multiple coefficient of determination R-squared.

Furthermore, the F-statistic 18.04880 with p-value of 0.0000 < 0.05 indicates that the overall regression model is statistically significant and the model fitted has provided a goodness of fit. Hence, the three predictor variables of LR, DER and CAR do jointly account for the variation of ROA and can also be concluded that the model is adequate for the research study.

Durbin Watson statistic of 1.587208 showed that there is no presence of serial correlation in the residual of the fitted model. Hence the model may be efficient enough in predicting ROA of the firms under investigation.

Table 4: Random Effect Regression Result (Dependent = ROA)

Variable	Parameters	Coefficient	Std. Error	t-Statistic	Prob.
LR	β_3	0.011376	0.012203	0.932166	0.0024
DER	β_2	-0.709065	0.610396	-1.161648	0.2468
CAR	β_1	0.009090	0.022030	0.412605	0.0004
C	β_0	1.327426	0.580735	2.285769	0.0234

Source: *Extracted from E-views 9.0 Output*

$$ROA_{it} = 1.327426 + 0.009090 * (CAR_{it}) - 0.709065 * (DER_{it}) + 0.011376*(LR_{it}) \quad (4.1)$$

In the model 1, the intercept (Constant) value is 1.327426 shows the autonomous of ROA when the predictor variables are held constant. The influence of the constant can be adjudged to be a situation where the selected firms experienced a upturn in the absence of the independent variables.

In addition, a unit increase in CAR resulted in 0.9% increase in ROA provided other independent variables remain constant. The standard error is 0.02203 with t-statistic of 0.412605 and the p-value is 0.0004 which is less than the 5% significance level.

Furthermore, a unit increase in DER will result in 70.9% reduction in ROA with standard error of 0.610396. the t-statistic is -1.161648 with p-value of 0.2468 which is greater than the 5% significance level. Similarly, a unit increase in LR will result in 1.13% increase in ROA with standard error of 0.012203. The t-statistic is 0.932166 and p-value of 0.0024 which is greater than the 5% significance level. In summary, the result of the hypotheses indicates that:

CAR and LR have significant positive effect on ROA while DER have negative insignificant effect on ROA.

Table 5: Cross-Sectional Dependence Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	132.5130	91	0.0830
Pesaran scaled LM	2.039402		0.3414
Pesaran CD	0.305056		0.7603

Source: *Extracted from E-views 9.0 Output*

From the Breusch Pagan Lagrange Multiplier LM test for cross-sectional dependence in table 5 above, confirmatory analysis shows that, we accept the null hypothesis of no contemporaneous correlation among the residuals across firms based on higher p-values > 1%, 5% and 10% level of significance. Hence, the fitted models were adjudged the best fit.

Hypotheses Testing

Decision rule: Reject H_0 if α=0.05 level of significance is greater than the probability value (p-value) generated for the t-statistics value. Otherwise, fail to reject H_0. For the purpose of this research work, the hypotheses was tested at 95% confidence level i.e. α=0.05.

Hypothesis One

H_{01}: Liquidity risk management does not have any significant effect on financial performance of listed deposit money banks in Nigeria.

Table 6: Liquidity Ratio test of model significance

Variable	Coefficient	t-value	Pr(>|t|)
Liquidity Ratio	0.011376	0.932166	0.0024

Source*: Extracted from E-views, Version 9*

On the significance of the parameter estimate of liquidity ratio in table 6, result findings indicated t-value of 0.932166 with associated p-value 0.0024 < 5% level of significance resulted to rejection of null hypothesis H_{01}, and accepts alternate hypothesis which thereby implies that liquidity risk management measured by liquidity ratio has positive and significant effect on financial performance of listed deposit money banks in Nigeria.

Hypothesis Two

H_{02}: There is no significant influence of credit risk management on financial performance of listed deposit money banks in Nigeria.

Table 7: Debt to Equity Ratio test of model significance

Variable	Coefficient	t-value	Pr(>|t|)
Debt to Equity Ratio	-0.709065	-1.161648	0.2468

***Source**: Extracted from E-views, Version*

On the significance of the parameter estimate of debt to equity ratio in table 7, analysis of result findings in showed that t-value of -1.161648 with associated p-value 0.2468 < 5% level of significance resulted to rejection of null hypothesis H_0, which thereby implies that there is significant influence of credit risk management measured by debt to equity ratio on financial performance of listed deposit money banks in Nigeria.

Hypothesis Three

H_{03}: Capital adequacy risk management has no effect on financial performance of listed deposit money banks in Nigeria.

Table 8: Capital Adequacy Ratio test of model significance

Variable	Coefficient	t-value	Pr(>|t|)
Capital Adequacy Ratio	0.009090	0.412605	0.0004

***Source**: Extracted from E-views, Version 9*

On the significance of the parameter estimate of capital adequacy ratio in table 8, analysis of result findings indicated t-value of 0.412605 with associated p-value 0.0004 > 5% level of significance in table 8 resulted to failure in rejecting the null hypothesis H_0, which thereby implies that capital adequacy risk management measured by capital adequacy ratio has positive and significant impact on financial performance of listed deposit money banks in Nigeria

CONCLUSION

The study concludes that:

- Liquidity ratio is positively and significantly related with financial performance;
- Debt to equity ratio is negatively and insignificantly related financial performance;
- Capital adequacy ratio is positively and significantly related with financial performance;
- The study finds that there is a substantial and positive association between risk management and banks' return on assets based on the overall conclusion of the findings, which shows that the F-statistic 18.04880 with a p-value of 0.0000 0.05. This shows that a successful and efficient risk management approach is a key factor in the financial performance of Nigeria's deposit money institutions.

RECOMMENDATIONS

Based on the outcome of this study, the following recommendations have been prtoposed to address some of the problems discovered:

- The Federal Government of Nigeria and Monetary Authorities ought to implement policies aimed at enhancing the effectiveness and toughness of Nigerian banks to resist economic shocks, such as a potential worldwide pandemic.
- The report advises continuing to monitor non-performing loans because doing so costs banks money and worsens their financial situation. In actuality, it results in an asset base of inferior quality.
- To stop banks from going bankrupt, the liquidity level should be forced to drop from 30% to 25%. To ensure economic stability, it is important to encourage the return to the contemporary method of managing liquidity in the economy. In order to improve the financial performance of Nigerian banks for the coming year, it is crucial that the Central Bank of Nigeria raises the liquidity ratio in the present year.

References

Aabo, T. (2012) Ownership and Risk Management: Shareholder versus stakehoder satisfaction, competitive paper EIBA.

Adrian, R. (2014) The relationship between financial risk and financial performance insurance companies in Kenya. Unpublished Master's Thesis. University of Nairobi.

Akindele, R. I. (2012) Risk management and corporate governance performance – empirical evidence from the Nigerian banking sector. *African journals online*, 21

Alalade, Y., Ogbebor, P., and Akwe, M (2019) Liquidity risk and profitability of listed deposit money banks in Nigeria, *Research journal of finance and accounting*, 11(8); 126-139

Banks, E. (2014) Alternative Risk Transfer: Integrated risk management through insurance, re- insurance and the capital markets, John Wiley & Sons Ltd.

Barton, T., Shenkir, W., & Walker, P. (2002) Making enterprise risk management payoff, FT Press, New York.

Bodie, Z., Kane, A., & Marcus, A. J. (2005) Investments (6th ed.). New York: McGraw-Hill

Boris, B. (2012) Enterprise risk management and firm performance: A Dutch perspective. Unpublished Ph.D. thesis, Department of Finance, University of Amsterdam, Netherland

Casualty Actuarial Society, (2003) Enterprise risk management committee. Overview of enterprise risk management

Ching, K. W., Tan, J. S. and Chi Ching, R. G. (2016) Corporate governance in East Asia, The Road Ahead. London: Prentice Hall.

Crouhy, M.; Galai, D. & Mark, E. (2016) Evaluation of risk management policies and practices in a Vietnamese Joint-Stock Commercial Banks Transaction Office. *Business economics and tourism,* 4(3); 57-68

Daniel, B. E. (2016) Liquidity management and performance of deposit money banks in Nigeria, *International journal of economics, finance and management sciences*, 5(3); 146-161

Erkens, D. H., Hung, M., & Matos, P. (2012) Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide. *Journal of corporate finance,* 18(2); 389-411.

Fanen, A., Avanenge, F. and Alematu, A. (2020) Determinants of bank financial performance: A Study of Nigerian Deposit Money Banks, *China-USA Business Review,* 19(4); 103-114

Gold, G. (2009) The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *Review of economics and statistics,* 47(1); 13-37.

Harcourt, E. E. (2017) Credit risk management and performance of deposit money banks in Nigeria, *International journal of managerial studies and research (IJMSR),* 5(8); 47-57

Kanu, C., & Isu, I. (2016) Security challenge, bank fraud and deposit money bank performance in Nigeria: An Evaluation. *Journal of business and management,* 5(2); 1-21

Kioko, C. M., Olweny, T., & Ochieng, L. (2019) Effect of financial risk on the financial performance of commercial banks in Kenya listed of the Nairobi Stock Exchange. *The strategic journal of business & change management*. 6(2), 1936-1952.

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