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Assessment of the Enterprise Risk Management (ERM) in the Nigerian Banking Industry

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Abstract

This study aimed at evaluating enterprise risk management practice by Deposit Money Banks in Nigeria. Evolving from the research were three specific objectives which were reconstructed into research hypotheses. The hypotheses investigated the relationship between objections and challenges faced by Nigerian banks, government policy, risk and acceptance of enterprise risk management by Nigerian banks. The study utilized an Ex-Post Facto design. A sample of 374 respondents extracted across six geopolitical zones in Nigeria responded to a re-validated 5 points Likert Scale questionnaire. Data extracted from the collection was evaluated using ordinary least square OLS regression analysis. The study revealed that various challenges of practicing banks significantly influences the level of acceptance and implementation of ERM in Nigeria, the government policies on ERM has a direct and significant relationship on the practice of ERM by players in the industry and that the practice of ERM has positively influenced the performance of the Nigerian banks that have accepted and implemented ERM. The study recommended that apex institution should devise a strategic plan and framework to help banks in the implementation of enterprise risk management since it has been adjudged to be the industry best practice in line with Basel III accord.

Keywords: Enterprise risk management, Government policy, Challenges faced by banks adoption of enterprise risk management.

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1. Introduction

Managing risk is important function for business organisations dealing with money, which includes banks and insurance firms. The complications arises from the evaluation of the future outcome of monetary investments and underwriting of such investments over time. These variations must be managed purposely in order to minimize or completely eliminate losses. Theories relating to management of risk in corporate firm advocates value addition to firms, through risk management practices (Klimczak, 2007). Again, devastating economic and financial crises in the world has demonstrated the importance of risk management to corporations and financial regulators globally. This can be inferred from the 1772 credit crises triggered from Scotland, spreading across Europe to America resulting in Boston Tea Party protest and a revolution in America. Also devastating was the Wall Street crash of 1929 that ignited the great depression peaking in 1933. Of course, the most recent is the financial crises of 2007 - 2008 that culminated in the collapse of major financial institutions. Recently, risk governance is seen as pivotal to bank management evidently with more emphasis being placed on senior executives and management. It is however, still farfetched with Banks as new structures are envisaged and processes evaluated in this direction. Again new tools of risk management is advanced and problematic areas is still evident. With the trend of renewed focus, it could have been expected that considerable investments in risk management will yield advanced results. This is not so with the perceived challenges of information gathering and technological advancement.

Some professionals in the discipline of risk management surmise that financial crisis emanated from the failure of the corporate world to embrace ERM globally, suggesting that the acceptance and implementation of ERM may forestall reoccurrence (Senior Supervisors Group, 2009). Recent years has witnessed increasing organizations accepting the concept of ERM as an avenue to strengthen risk management.

While Risk Management is seen as the process which an organization is able to analyses risk inherent in their operations and develop measures to reduce or completely avoid occurrence of such risk (Pyle, 1997); (Nocco and Stulz, 2006) viewed ERM *"as a process that identifies, assesses and manages individual risks (e.g. currency risk, interest rate risk, reputational risk, legal risk, etc.) within a coordinated and strategic framework"*. ERM symbolizes a profound movement from the conventional approach of evaluating risks individually to managing risk holistically. Accordingly, ERM stresses looking at risks collectively and not individually.

Banks are complex financial institutions involve in intermediation process with risk such as credit risk, interest rate risk, market risk, systemic risk, performance risk, operational risk as well as liquidity risk. The need to institutionalize ERM in the banking industry translates to the fact that each components of risk must be treated collectively. Again, the standard measure of portfolio risk (Markowitz, 1952) under portfolio theory evaluates the standard deviation of the different risk components in order to establish risk-return trade off that is acceptable to the organization with their set objectives. ERM proposes that risk management decision cannot be centralized but will entail an integrated framework that incorporate branches. This scientific measure requires business managers in banks to balance their risk appetite and the capital investments as well as anticipate the value of anticipated losses and balance it with the available liquidity at their disposal from customers, investors and regulators. It is this framework or holistic approach to management of banks' risk that forms the premise of this paper.

The article is arranged into four sections. First, the theoretical background and review of relevant literature of ERM has been reviewed. A brief of several banking industry events including their impact have been added. The lack of literature in valuing the performance of ERM is described. The hypotheses of the study are explained. Second, the data evaluated in the study is scrutinized including their scope and the methodology of analysing data is proposed. Third, the analysis of data is recapitulated and the findings discussed succinctly. The fourth section captures the concusion drawn from the study.

1.1. Statement of the Problem

The recent banking reforms in Nigeria that culminated in the increased capitalization equipped them with strong positions to play a vital role in supporting the rapid economic growth. However, there is a great concern as to the level of their readiness in meeting new business and regulatory requirements. Banks still need a readjustment of their internal processes to accommodate the requirement for ERM assessment (Beasley *et al.*, 2010). This involves making adequate provision for training of staff and risk officers which could translate to huge cost for the organization. Again, a good ERM framework requires robust IT structure, and this requires guidance and banks are still struggling with implementation. The complexity of banking transactions is also a critical problem confronting effective implementation of risk management in an enterprise wide approach. Kerstin *et al.* (2014) describe this complexity in terms of dynamic changes or volatility, ambiguity of cause and effects of risks, uncertainty and disarrays surrounding banking institutions. Hence, it is envisaged that it will take longer for Nigerian banks completely integrate with the current international trend in risk management.

1.2. Research Hypothesis

In the investigation, the following hypothesis will be tested;

H_1: Challenges of ERM has no significant impact on the adoption of ERM in Nigerian Banking Industry

H_2: Government policy has no significant relationship with the adoption of ERM by Nigerian Banks

H_3: The impact of ERM on Nigerian banks has no relationship with banks adoption of ERM

2. Literature Review

2.1. Concept of Enterprise Risk Management (ERM)

Neo-classical theory of finance (NCFT) opines that an organization's specific risk has no impact on the firm and that only the firm's asset returns co-varies with the combination of assets. Under the capital asset pricing model (CAPM), this covariance measured by beta is said to be important. This suggests that adoption of ERM adds no value to firms and stakeholders. However, this perception contradicts the increased acceptance of ERM in the banking industry. Nevertheless, impact of ERM on the value of banking firms and shareholders has rarely been empirically evaluated (Lai *et al.*, 2011).

In the perfect and complete market condition, the Neo-classicalist holds that there is full disclosure of facts regarding risks that investors are exposed to with regards to the operations of the firm. This means that corporate and individual investors can mitigate the organization specific risk just like individual organizations with their asset combinations. As a result, management of risks by the firm will not differ in terms of value creation with respect to what investors are able to do for themselves. Again, this assertion is clearly opposed to the concept of corporate risk management (Lai *et al*., 2011).

To disprove this proposition of NCFT, researchers in corporate risk management delve into compartmental cost that is associated with mitigation of corporate risk structure. For example (Doherty, 2000) while evaluating integrated risk revealed that risk gravitate towards increase taxes and of course could be potential costs of financial distress.

Moreover, considering evaluating an organization with a risky cash flows, creditors and shareholders have divest interest and seems to be in contention. Lai *et al.* (2011) considers what constitute determinants for organizations engaging in risk management, adding that such determinants are in line with the firm's value maximization hypothesis. This we could therefore consider as fundamental of value maximization hypothesis supporting application of ERM in corporate organizations globally.

Few financial propositions supporting the implementation of ERM in an organization includes Financial Distress Cost Hypothesis, Lower Tax Burden Hypothesis, Costly External Financing Hypothesis and Agency Problem Hypothesis.

2.1.1. Financial Distress Cost Hypothesis

In as much as there are many justification for risk management, one key motive is to hedge against financial distress cost. While there exist evidences to support the proposition that organizations engage in evaluation and control of risk in their likelihood of suffering some kind of losses in distress, [Cummins, Phillips and Smith] insisted that the corroboration is not convincing for firms other than financial institutions. Again, a study by [Wall and JPringle] supported evidence that organizations with low leverage would rather consider derivative options as alternative risk management swap than organizations with higher credit rating. Opler and Titman (1994) using debt ratio of organizations established also that a companies' financial leverage is related to possibility of financial distress. [Andrade and Kaplan] supported the work of Opler and Titman (1994); Jensen (1989); Wruck (1990) and Ofek (1993) reported that financial leverage can be utilized to advantage of distress cost.

2.1.2. Lower Tax Burdens Hypothesis

Empirical research by Nance *et al.* (1993) revealed that non-financial firms recording investment tax that were considerable high contracted derivative transactions – a form of risk evaluation and control. The study by [Cummins, Phillips and Smith] presented another convincing argument in support of the tax hypothesis. They maintained that taxes burdens was a factor that determine the organizations decision to utilize derivative options as a measure of risk management.

2.1.3. Costly External Financing Hypothesis

Studies reveals that firms involves in risk management by adopting derivatives as a means of achieving stability of internal financing mechanism in order to reduce differences in the firm's income. Myers (1984) and Hubbard (1998) in the study of capital market imperfection and capital structure, stressed that financial models relating to capital market analysis shows that financing an organization from external sources is more expensive than internal financing options. This ensures adequate availability of internal funds within the organisation for more attractive and comparatively high yielding transactions. Internal financing, therefore stands out as a more veritable option over the external sources because of its relative pricing. The investigation as in [Gay and Nam] showed evidences that firms other than financial institutions with low liquidity rating and relatively high expansion propositions, expressed by the ratio of the market value and replacement value adopts derivatives options hedging. In their study, Nance *et al.* (1993) found that these institutions are highly disposed to use derivative to forestall unwarranted events of giving up transactions with high returns because of lack of internal funding.

2.1.4. Agency Problem Hypothesis

Reference [Cummins, Phillips and Smith] argued that managers had an economic incentive to ensure the firm continued to do well in that they had disproportionately large investments in the forms of their skills or human capital in the firm. It would be costly to transfer these skills should they need to seek other work. As such, managers were concerned about any negative shocks to profits which might result in putting the firm into financial distress or the edge of bankruptcy. Bankruptcy and times of financial distress often led to the replacement of current management. This posed a huge personal risk that could not be easily diversified away like what shareholders could.

2.2. Review of Related Literature

The risk prevalent in business organization portents that the organization face business losses or events that are injurious to their performance (Udoka *et al*., 2014). These risks are endemic to the achievement of the business overall objectives and furthermore the existence of organization. While operational risk covers the internal strength and weakness of the organization, strategic risks evaluates and mitigates the opportunities and threat confronting the organization, in this case Nigerian banks considering the level of completion.

"Enterprise Risk Management (ERM) is the process of planning, organizing, leading and controlling the activities of an organization in order to minimize the effects of risk on an organisation's capital and performance" (Stulz, 2004). ERM is a means of ensuring the efficient itemization, analysis and evaluation of all meaningful risks of an organization. It takes into consideration all the conventional areas of risk, and also strategic and operational risk (Head, 1978).

ERM and internal control system (ICS) works hand-in-hand in organizations since ICS is integral structure of controls in an organization put in place by the board to ensure that transactions are conducted in line with established policy to forestall loss of assets, integrity and completeness of documentations (Ozor, 2010). Again, ICS is established within the framework of management policies to ensure that manipulations and errors are easily and quickly detected from the system (Barnes, 2004). ERM implements systematic and organized means of managing the totality of risks in an organization (Koontz and Bradspies, 2002). Risk management therefore can be seen as an integral and important framework that will help in increased revenue and profit. This is so because every undetected avenue of revenue losses are prevented with implementation of holistic risk evaluating system in the organization. It also connects operations conforming with operational policies that invariably translates to better performance and performance leads to sustainable profitability and growth.

The advocacy of ERM in banks centers on managing the objectives of the banking business. These include firstly achievement of the level of capital that will sustain the current businesses as well as future expansion opportunities, secondly maximization of the returns for investors given the risk inherent in every transactions; and finally, sustaining capital adequacy and statutory risk governance as established by authorities and rating agencies (Acharyya, 2009).

Few literature on risk management relates to characteristic of ERM (Liebenberg and Hoyt, 2003; Beasley *et al.*, 2005). There is however, very narrow empirical evidence to substantiate the impact of implementation of ERM in banking. Lai *et al.* (2011) proposed ERM framework consists of fourteen implementation elements deemed to be relevant and important to define the intensity, maturity, and penetration level of ERM practices. The fourteen elements cover seven aspects of the very essence of ERM implementation namely, (i) ERM definition, (ii) effective communication of risk and responsibilities, (iii) philosophy of ERM, (iv) risk identification and response, (v) compliance, (vi) risk quantification, and (vii) performance measurement.

Empirical evidence also shows that risk management enhances shareholder value (Allayannis and Weston (2001)); Carter (Mayers and Smith (1982); Smith and Stulz (1985) and Froot *et al.* (1993); Hoyt and Liebenberg (2011); and Phillips *et al.* (1998).

Ernst and Young (2010) undertook an evaluation of risk management internationally using key Senior Executives of about 40 banks. In their findings, just fourteen percent respondents confirmed that their organizations have fully adopted the proposition of ERM across their departments and similar components. They maintained that most of the banks have not completely implemented bank-wide risk management.

Dabari and Saidin (2015) evaluated the present position of ERM by Nigerian banks utilizing a data from 722 respondents, found that risk components threatening banks impacted significantly on present disposition of banks to ERM practice, and few banks in Nigeria abided incompletely with ERM framework established by Central Bank of Nigeria. Other studies include (Donwa and Garuba, 2011; Owojori *et al.*, 2011; Kolapo *et al.*, 2012; Njogo, 2012; Fadun, 2013; Ajibo, 2015).

3. Research Methodology

The research design to be adopted for this study is Ex-post facto approach or causal comparative design. According to Kerlinger (1973) Ex-post facto is a systematic empirical enquiry in which the scientist does not have direct control of independent variables because they are inherently not manipulable. In effect, there will be no manipulation of the independent variables used in this study. The population of this study consisted of credit risk managers and operational risk managers in Commercial Banks in Nigeria. Information from the Central Bank of Nigerian reviewed that there are a total of 20 commercial banks with a total of 5692 branches.

Stratified random sampling technique was used to select the required sample of the study. Firstly, Nigeria was stratified into six geopolitical zones. Three of the six geopolitical zones were randomly selected and used for the study.

3.1. Model Specification

The model specification involves the determination of the dependent and explanatory variables based on a specific theoretical expectation of the sign and the size of the parameters. The functional relationship between the variables can be expressed thus:

$Ad = f(CH)$
$Ad = f(GP)$
$Imp = f(AD)$

Transforming into mathematical equation we have

$Ad = a_o + a_1 CH + U,$
$Ad = b_o + b_1 GP + U$
$Imp = c_o + c_1 AD + U$

Where
Ad= adoption
CH= challenges
GP= Government policies
Imp= Impact

4. Data Presentation and Data Analysis

This section is concern with the presentation of data gathered for the study as well as analysis and discussion of

4.1. Data Analysis

In this section each hypothesis will be restated in the null form and the variables identified

Hypothesis One

Challenges of ERM has no significant impact on the adoption of ERM in Nigerian Banking Industry

The dependent variable in this hypothesis is adoption of enterprise risk management while the independent variable is the challenges faced by the banks. Linear regression was used to evaluate the hypothesis and result presented in Table 1.

The result in Table 1 shows an R^2 value of 0.91 which implies that about 91 percent changes in adoption of enterprises risk management could be caused by challenges faced by banks. The Adjusted R^2 value of .0876 means that the model is 87 per cent goodness fit. The F-value of 64.8 which is greater than the critical F-value of 3.14 at 1 and 371 degrees of freedom indicates that relationship between challenges faced by banks and the adoption of enterprise risk management by banks is significant. Again, the estimated coefficient for Challenges is positive, and can be interpreted that there exist a direct relationship between challenges face by banks and the adoption of enterprise risk management by banks. This result is in order with economic a priori condition. The result is statistically significant at both 5 and 10 percent level of significant.

Table-1. Regression results of the relationship between challenges face by banks and adoption of enterprise risk management
DEPENDENT VARIABLE: Adoption of enterprise risk management (ERM)

Variable	Estimated Coefficients	Standard Error	T-Statistic	P- Value
Constant	22.118	.798	27.732	.000
CH	.018	.004	4.50	.072
R	= 0.964			
R-Square	= 0.911			
Adjusted R-Square	= 0.876			
F – Statistic	= 64.828			
Durbin Watson Statistic	= 2.781			

Source: Author computations

Hypothesis Two

Government policy has no significant relationship with the adoption of ERM by Nigerian Banks

The dependent variable in this hypothesis is adoption of enterprise risk management while the independent variable is government policy. Linear regression statistical technique was used to test the hypothesis. The result is as presented in Table 2.

Table 2 shows an R^2 value of 0.813 which indicates that about 81 percent changes in the adoption of enterprise risk management could be caused by government policy. This means that the remaining 19 percent changes in the dependent variable adoption of enterprise risk management could be caused by other variables not found in the equation represented by the error term. The Adjusted R^2 value of .79 means that the model is 78 per cent well fitted.

The F-value of 16.8 which is greater than the critical F-value of 3.14 at 1 and 371 degrees of freedom confirms that the three exist a significant relationship between government policies and the adoption of enterprise risk management by banks.

The estimated coefficient for GP is positive, meaning that there exist a direct relationship between government policies and the adoption of enterprise risk management by banks. This result is in order with economic a priori condition. The result is statistical significant at 10 percent level of significant.

Table-2. Regression results of the relationship between government policy and the adoption of enterprise risk management by banks
DEPENDENT VARIABLE: Adoption of enterprise risk management

Variable	Estimated Coefficients	Standard Error	T-Statistic	P- Value
Constant	20.016	.937	21.357	.000
MRAL	.152	.059	2.598	.042
R	= 0.867			
R-Square	= 0.813			
Adjusted R-Square	= 0.794			
F – Statistic	= 16.89			
Durbin Watson Statistic	= 1.681			

Source: Author computations

Hypothesis Three

The impact of ERM on Nigerian banks has no relationship with banks adoption of ERM.

The dependent variable in this hypothesis is the impact on bank performance while the independent variable is adoption of enterprise risk management. Linear regression statistical technique was used to test the hypothesis. The result is as presented in Table 4.

Table 3 shows an R^2 value of 0.783 which indicates that about 78 percent changes in bank performance could be caused by adoption of enterprise risk management. This means that the remaining 22 percent changes in the dependent variable bank performance could be caused by other variables not found in the equation represented by the error term. The Adjusted R^2 value of .76 means that the model is 76 per cent well fitted. The F-value of 12.56 which is greater than the critical F-value of 3.14 at 1 and 371 degrees of freedom confirms that the three exist a significant relationship between adoption of enterprise risk management and the performance of banks.

The estimated coefficient for Ad is positive, meaning that there exist a direct relationship between adoption and bank performance. This result is in order with economic a priori condition. The result is statistical significant at 5 percent level of significant.

Table-3. Regression results of the relationship between adoption of enterprise risk management and its impact on bank performance
DEPENDENT VARIABLE: Bank Performance

Variable	Estimated Coefficients	Standard Error	T-Statistic	P- Value
Constant	20.246	.500	40.521	.000
Ad	.138	.031	4.446	.000
R	= 0.817			
R-Square	= 0.783			
Adjusted R-Square	= 0.764			
F – Statistic	= 12.56			
Durbin Watson Statistic	= 1.262			

Source: Author computations

5. Summary of Finding, Conclusion and Recommendations

5.1. Summary of the Study

This study investigated enterprise risk management in Nigerian Banking industry. Three research objectives were formulated and transformed into hypotheses. The hypotheses investigated the relationship between challenges faced by banks, government policy, risk and adoption of enterprise risk management by Nigerian banks. Ex-post fact research design was adopted for this study. A sample of 374 respondents were selected and used for the study. A well validated structured questionnaire was used for data collection. Data collected was analyzed using ordinary least square regression. Result of the findings revealed that.

1. That various challenges faced by practicing banks significantly influences the level of adoption of ERM in Nigeria.
2. The government policies on Enterprise wide risk management has a direct relationship on the adoption of ERM by players the industry
3. That the adoption of Enterprise wide risk management practice has positively impacted with the performance of the Nigerian banks that have adopted ERM.

5.2. Conclusion and Recommendations

We can conclude from the discussion on Enterprise Wide Risk Management (ERM) which centred on proposition of the modern financial theory (neo-classical finance theory) on the efficiency of ERM. While NCFT repudiates the proposition of Strategy theory, their argument equally differs from the classical theory (i.e. Markowitz) in this respect. Nevertheless, as Bettis (1983) put it approproately: "To alter either result is to disrupt significantly the logical structure of the underlying discipline". But then, how can an absolute interpretation be made to justify the difference and possible to show a point of convergence?

It is important therefore to seek theoretical association among the schools of thoughts, viz the classical finance theory, neo-classical finance theory, and strategy theory. Our ERM framework, hence, endeavours to provide such linkage having shown the positive influence of ERM on the performance of banking in support of the NCFT. The research shows that such impact results from the government effort in policy formulation that supports ERM. Again the challenges experienced by industry participants validates the position of the Classical theory.

In view of the above assertion, the study recommended that:

1. Apex institution should come up with a strategic plan for banks to help banks in the implementation of enterprise risk management since enterprise risk management framework has been adjudged to be the industry best practice in line with Basel III accord.
2. Supervisory framework should be involved in the building of enterprise wide risk management implementation by banks in order to reduce the attendant cost and encourage banks as a measure to forestall future financial crisis.
3. Finally, the directors of banks and policy makers should be on the forefront of the adoption or ERM in order to strengthen the enforcement framework and strengthen individual banks.

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