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RISK KNOWLEDGE SHARING AND ENTERPRISE RISK MANAGEMENT IMPLEMENTATION IN THE NIGERIAN FINANCIAL INDUSTRY

Idris Ahmed*[1] and Abdullahi Yusuf[2]
[1]Department of Business Administration, Ahmadu Bello University Zaria, Nigeria
[2]Department of Business Administration, Ahmadu Bello University Zaria, Nigeria
iahmedng@gmail.com*,

Abstract

This study has investigated the Influence of risk knowledge sharing on Enterprise risk management (ERM) framework implementation among 47 financial institutions in Nigeria. Questionnaires were administered to those in charge with risk management practices (i.e. chief risk officers and other senior level managers) of the sampled firms. The study utilized PLS-SEM causal modelling with the aid of SmartPLS 2.0 M3 program software to test the hypothesized relationship. The results of the analysis indicated that risk knowledge sharing have significant positive effect on ERM framework implementation in the Nigerian financial industry. The study recommends the need for firms in the financial industry to deploy more resources to engage in risk knowledge sharing as a knowledge management strategy to improve ERM practices.

Key word: Risk knowledge Sharing and Enterprise Risk Management Implementation

1. Introduction

Enterprise risk management (ERM) has been viewed as an instrument that provide reasonable assurance for organisations to achieve business objectives. It is a concept that conceives risk as a phenomenon associated with both threats and opportunities. In 2004, Committee of Sponsoring Organizations of the Treadway Commission COSO (2004, P. 2) defined ERM as a "process, effected by entity's board of directors, management and personnel, applied in a strategy setting and

across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives". COSO framework has identified eight interrelated components that may lead to the entrenchment of effective risk management practices at all level of business organisations (Arena, Arnaboldi, & Azzone, 2011). The components include the internal business environment, setting business objective, identification of risky events, risk evaluation, risk treatment, control efforts, effective communication and monitoring. The development of COSO framework had encouraged both regulators and rating agencies to consider ERM as a mechanism that will lead to sound corporate governance practices (Power, 2004). Also, it has encouraged different organisations to embrace the concept of 'ERM philosophy' as a solution to some of the recurrent problems that lead to business failure. The ERM implementation framework essentially provides a conduit for managing firm's idiosyncratic risks apart from those of systematic risks. (Lai & Samad, 2011).

In the context of Nigeria, prior to the 2008/2009 financial crisis, the financial industry had experienced a monumental growth due to a series of initiatives in reforming the economy (SEC, 2012). The market capitalization of the financial institutions increased from $22.73 billion in 2005 to $110 billion in 2008 (National Bureau of Statistics, 2013).

Lamentably, risk management mechanisms did not progress commensurately to sustain the quick market growth (SEC, 2012). The banking and insurance companies were the most affected by the crisis because they accounted for 18 out the top 20 firm by turnover volume being the most capitalised subsector. From 2008 to 2009, the Nigerian stock market experienced a loss of about 70 percent of its value (IMF, 2013). Studies have linked some of these inefficiencies to poor risk management practices (IMF, 2013; SEC, 2012). A qualitative study conducted by Deloitte (2014) revealed that the risk management practices of the majority of financial firms in Nigeria is situated between initial and comprehensive stages of implementation. While there is clear provisions for firms to implement ERM from the regulatory agencies, the implementation of ERM for some financial institution is still at its partial stage.

It is important to note the dynamics of the current global business environment has rendered traditional risk management approaches inefficient to manage risk exposures. Traditional Risk Management (TRM) does not consider the interconnectedness of several risks types (Ghazali & Manab, 2013). In fact, scholars have argued that TRM is a *silo-based"* risk management approach that

does not give firms the opportunity to view risk exposures across the entire business enterprise (Moeller, 2011). The ineffectiveness associated with this traditional conception of risk has served as a catalyst to the evolution of Enterprise Risk Management (ERM) as an alternative risk management mechanism. It is an approach that gives firms the opportunity to have a clear view of the interactions of different classes of risks (PricewaterhouseCoopers [PWC], 2008). Enterprise risk management concurrently considers all forms of risks and develops mechanisms to ensure holistic management of risks and uncertainties. However, global failure in corporate governance practices and the emergence of new regulations have stressed the importance of ERM in preventing fraudulent business practices (Desender, 2011). Unlike silo-based risk management approach where several classes of risks are managed in a disaggregated forms, ERM suggests an integration of risks in a portfolio basis (Sekerci, 2011).

As such studies have continued to examine some important factors that are likely to influence effective ERM implimentation in organisations. For example, some of the ERM determinants that have been studied include business reputations, remuneration, trust (Carey, 2001); top management support, communication, technology (Grabowski & Roberts, 1999); organisational culture, leadership factors (Manab & Kassim, 2012; Ranong & Phuenngam, 2009; Yaraghi & Langhe, 2011); cross-functional staff, risk management base (Manab, Othman, & Kassim, 2012), corporate governance (Hudin, Hamid, & Huddin, 2014; Manab, Kassim, & Hussin, 2010), CRO appointment and quality of board of directors (Yazid, Hussin, & Daud, 2011) among others.

In fact, there has been relatively little empirical studies on the relationships between risk knowledge sharing and enterprise risk management practices (Rodriguez & Edwards, 2010). Risk knowledge sharing as an aspect of knowledge management is an important tool to improving the efficiency of risk management practices in organisations. Given the series of financial crises experienced over the years, organisations can gain a lot if they incorporate lessons learned from these series of crises in their risk management framework (Rodriguez & Edwards, 2010). As such, improvement in knowledge sharing develops capacities inside the organization. Equally, knowledge acquisition (Dickinson 2001) is a major factor to consider in risk control and sound business strategy formulation. Horton-Bentley, (2006) argued that ability of firms to share risk knowledge is negatively affected by fragmented risk management practices.

However, to the best of the resaerchers knowledge, the role of risk knowledge sharing as a knowledge management technique in the area of ERM has not

received much empirical attention except in the works of Rodriguez and Edwards (2009). Hence, the objective of this article is to examine the role of risk knowledge sharing as knowledge management technique on ERM implementation intensity in the Nigerian financial industry. The paper proceeds as follows. Section 2 reviews the study variables. Section 3 explains the methodology while section 4 discusses the findings. Finally, the paper was concluded in section 5.

2. Concept of Enterprise Risk Management

The dynamic nature of business environments and the alarming reports of corporate frauds around the globe have triggered world business leaders to examine the effectiveness of risk management programmes on organisational success (Dafikpaku, 2011). This development has brought risk management issues to the forefront in both developed and the developing economies. Similarly, following the various corporate scandals and bankruptcies of leading business firms, the United States of America (USA) introduced the Sarbanes-Oxley regulations in 2002 to prevent further firm's failure. Dionne (2013) affirmed that these regulations have not been able to prevent the 2008 global financial crisis. For example in 2008, a US firm, Merrill Lynch lost about $30 billion on the back of soured mortgage investments due to risk management failure (Fadun, 2013). It is in this view that organisations saw the need to search for a more comprehensive approach to organisational risk called enterprise risk management (ERM).

Miller (1992) is among the first leading scholars to examine the theoretical benefits of ERM. He is among those who provided an alternative approach that best handle the inefficiencies of traditional risk management by proposing an integrated risk management approach. Miller further argued that the segregated treatment of risks (traditional approach), as it exists in management literature, does not provide a sufficient foundation for examining the implications of strategic decisions. Explaining the benefits of ERM to organisations, Nocco and Stulz (2006) reported that ERM creates value to organisations in two ways. Firstly, at the macro level, ERM creates value through the efforts of senior management to measure and establish a risk-return trade-off in the entire organisation. It allows firms to put in place the necessary capital and resources for implementing effective business strategies. At the micro level, ERM instills a risk culture across the entire firms. It becomes a way of life for managers and employees at all levels of the company to ensure that all material risks are assessed, and risk-return tradeoffs carefully appraised.

The risk management function has become a central issue for business firms having the objective to identify, analyse and manage the sources and effects of

uncertainty and risks in a company (Ciocoiu & Dobrea, 2010). At present, organizations have come to the conclusion that no matter how insignificant, business risk can cause considerable damage to organisations due to the interaction of risk with other events, (Ciocoiu & Dobrea, 2010).

In fact, despite the ambiguities associated with ERM concept, there seem to be convergence of opinion concerning the core attributes of ERM. Bromiley, McShane, and Rustambekov (2014) identified three main positions. Firstly, the assumption that holistic management of risk is more effective and efficient than fragmented approach. Secondly, the assumption that ERM emphasizes both traditional risk (such as product liability) and strategic risk (such as obsolescence and competitor action). Some of the most prone risks that business organisations encounter lie in the area of strategic risk. Inability of firms to focus on business strategic risks may prevent accurate estimation of contingent events (Bromiley *et al.*, 2014). Finally, ERM views risk as something that provides opportunity for development for firms with sound risk management capabilities. Thus, it is possible to believe that for ERM to achieve the objective of increasing performance level, it involves the use of a well-designed methodology that will encourage sharing of risk knowledge among the various business units and organisations with similar product lines.

2.2 Risk Knowledge Sharing and ERM Framework Implementation

Knowledge sharing simply refers to the avenues through which an organization has access to new knowledge. Knowledge sharing is one of the areas that requires the attention of scholars and professionals within the overall domain of knowledge management (Jain, Sandhu, & Sidhu, 2007). Ramayah, Yeap, and Ignatius (2013) viewed knowledge sharing as the exchange of knowledge between one person and another or between groups in a reciprocal process that allows knowledge to be reshaped and new knowledge to be created. Knowledge sharing can be seen as a process designed to influence the exchange of knowledge within societies or within organisations so as to improve their competitive advantage, intelligence and intellectual wealth (Rodriguez & Edwards, 2009a). Improvement in knowledge sharing increases the organisational abilities to manage fortuities.

There is a general conception that sharing and acquiring of new knowledge is fundamental for firms to achieve higher performance (Ritala, Olander, Michailova, & Husted, 2014). Dickinson (2001) asserted that knowledge play a role in reducing uncertainties and contributing effectively to formulating sound business strategies and underwriting processes. As such, for organisations to effectively manage risks, risk knowledge sharing as a knowledge management

strategy is crucial to organisational success (Anthropopoulou, 2005). In support of this view, Rodriguez and Edwards (2008) saw enterprise risk management as a process that relies on the application of specific knowledge in an attempt to control possible deviations from strategic objectives, shareholders' values, and stakeholders' relationships. Risk knowledge dissemination typically enhances risk management capabilities and improve firm operating efficiency (Bayer & Maier, 2007; Horton-Bentley, 2006b). Knowledge sharing is a strategy that serves as a conduit for competitive advantage (Mentzas, Apostolou, & Young, 2003). Knowledge is one of the specific resources that is indispensable to value creation for firms (Nonaka, Toyama, & Konno, 2000). For the knowledge to influence firms' performance, it must be shared among employees. However, the shared knowledge has to be understood and integrated collectively in the organisational system (Spender & Grant, 1996). Hampton (2006) asserted that for organisations to succeed in its risk management initiative, it needs to focus on skills and knowledge sharing.

The fundamental problem faced by organizations relates to lack of desire from employees to share their knowledge with other members of the organization (Casimir, Lee, & Loon, 2012). Information availability may either decrease or increase risk exposures. Sometimes information are used as avenues for overcoming business challenges. Information sharing internally is crucial in any financial institution and it helps firms to achieve business success. Risks knowledge sharing among employees, customers, and the media may help firms to control the large scale of risks that may huge severity to its operations. Following Rodriguez and Edwards (2009b), the paper conceptualizes risk knowledge sharing as a strategy that facilitates the exchange of knowledge relating to the management of fortuities in the organisation. It encompasses all activities through which organisation exchange risk knowledge among business units. Base on the above reviews, the following hypotheses were formulated:

Figure. 1 Conceptual model with hypotheses

Statement of Hypothesis

H1: Risk knowledge sharing positively influence ERM framework implementation

3. Methods

The study used questionnaires as instruments for data collection. We collected the data from Chief Risk Officers, Chief Financial Officers of the sampled firms. Hence, the unit of analysis for this study is organisation. Seventy four questionnaires were distributed to 74 financial institutions comprising banks, insurance and microfinance institutions. Out of the 74 distributed questionnaires, 47 questionnaires were retrieved and used for the analysis, making a total response rate of 63.51percent.The study utilized PLS-SEM path modelling with the help of SmartPLS 2.0 software due to it

The dependent variable (ERM framework implementation) was measured based on 14 ERM framework elements developed by Lai (2014). The measurement items were developed based on ERM definition, risk communication and responsibilities, ERM philosophy, risk identification and response, compliance cost, risk quantification as well as performance measurement system. These seven items were captured in terms of 14 measurement items for ERM framework implementation. Similarly, measures for risk knowledge sharing were adapted from Rodriguez and Edwards (2009). All the items were measured on 5 points Likert scale and are certified to be valid and reliable with high Cronbach alpha.

4. Findings

The model was assessed based on two criteria as suggested by Hair, Hult, Ringle and Sarstedt (2014). First, we used average variance extracted (AVE), composite reliability (CR) to gauge the reliabilities of the items used to measure the latent construct. The loadings of the items range between 0.894 and 0.636 (see Table 1). The AVE for each of the constructs is greater than 0.5 while CR exceeded the threshold of 0.7 (Henseler, Ringle, & Sinkovics, 2009). Hence, the model has met the threshold of the two measures of internal consistency reliability (see Table 1 below). Secondly, following the suggestion of Fornell and Larcker (1981), a discriminant validity analysis was carried out to ensure that the constructs are distinct (see Table 2). As shown in Table 2, the square root of each of the construct's AVE is greater than its highest correlation with any other construct. Consequently, the measurement model provides satisfactory evidence of reliability, consistency, and validity of the measurement scales. Hence, the assessment of the measurement model confirms that the survey items are reliable and valid.

Table 1
Loadings, Average Variance Extracted and Internal Consistency Reliabilities

Constructs	Items	Loadings	AVE	Composite Reliability
RKS	RKS1	**.761**	**.554**	**.788**
	RKS3	**.784**		
	RKS4	**.685**		
RMF	RMF1	**.716**	**.574**	**.890**
	RMF2	**.809**		
	RMF3	**.766**		
	RMF4	**.729**		
	RMF5	**.696**		
	RMF6	**.820**		

Table 2
Latent Variable Correlations and Square Roots of Average Variance Extracted

Constructs	**RKS**	**RMF**
RKS	.744	
RMF	.186	.758

Additionally, after establishing the reliability of the observed variables, we then assessed the structural model using four criteria. The model structural assessment explains how best the data support the theoretical assumptions. As such, to do that we used multicollinearity diagnostic test, the path coefficients, the coefficient of determination, the effect size and finally the prognostic relevance to assessing the structural model.

Table 3
Tolerance and Variance Inflation Factors (VIF)

Constructs	**Tolerance**	**VIF**
RKS	.831	1.203
RMF	.806	1.241

Also, the study conducted collinearity diagnostic test available in SPSS to examine respectively. As recommended, the tolerance and the VIF values are among the most relevant and reliable test of multicollinearity (Hair Jr. *et al.*, 2010). From Table 3, it is apparent that the tolerance is substantially greater than 0.2 and the VIF range from 1.203 to 1,241. The results indicated that multicollinearity problem does not exist in this study.

Table 4
Results of Hypothesis Testing (Full Result)

Hypotheses	Beta Value	Standard Error	T Statistics	P Value
RKS -> RMF	.174	.047	3.716***	.000

Note: RMF=ERM Framework implementation, RKS= Risk Knowledge Sharing

Based on the bootstrapping result indicated in Table 4, the relationship between risk knowledge sharing and ERM framework implementation is significant (β .174; t= 3.716; p<.01). As such, the results provided evidence to support the hypothesized relationship. Additionally, the study used coefficient of determination (R^2), as another parameter for assessing the structural model fit. The R^2 value represents the proportion of variation in the dependent variable(s) that is explained by one or more predictor variable. Hair *et al.* (2014) contended that R^2 value of .2 is considered high in some social science related disciplines. Likewise, Murphy, Myors and Wolach (2014) reported that the R-square value of .01, .10 and .25 as small, medium and substantial respectively. The R^2 value for this present study is 0.061 as such it falls into the small category.

Table 5
Construct Cross-Validated Redundancy

Total	SSO	SSE	1-SSE/SSO
Risk Management Framework	978	957.863	0.021

Also, the study applied Stone and Geisser test to ascertain the predictive relevance of the research model by using blindfolding criteria (Geisser, 1974; Stone, 1974). In PLS-SEM, the Stone-Geisser test is usually utilized as a complementary assessment of the model goodness-of-fit (Hair *et al.*, 2014). The blindfolding procedure applies only to the independent variable that has reflective measures (Sattler, Völckner, Riediger, & Ringle, 2010). As shown in Table 5, the construct cross-validated redundancy measure is 0.02 which is greater than zero, confirming the predictive relevance of the model.

5. Discussion

Findings from this study indicated that the independent variable (risk knowledge sharing) has a positive and significant effect on the ERM framework implementation thereby supporting the hypothesized relationship. The result is in agreement with a study conducted by Rodriguez and Edwards (2009b). The results of this study portray that the more an organisation is willing and open to knowledge sharing, the better for the organisation is likely to strengthen its risk

management practices. In fact, the sharing of relevant information related to risk is one of the primary purposes of risk management systems (Kirsch, Hine, & Maybury, 2015). As such, this study has some practical implications for both theory and practice. The significant influence of risk knowledge sharing as a knowledge management technique to ERM implies that financial institutions should pay attention to knowledge management to improve risk management efficiency. Moreover, ERM sees management of risk as everybody's business, it means having a supportive risk management methodology may help in strengthening ERM strategies. Finally, the study is not without some limitations. The fact that the study used self-reported measures portend the possibility of common method bias. Hence, future study should consider the opinion of regulatory agencies in examining other determinants of ERM. Also, future studies should consider increasing the study sample to increase the effect size and to come up with more coherent and better inferences. Similarly, the study focused only on the financial sector; future study should consider other industries such as manufacturing and construction.

Conclusion

This research effort has examined the influence of risk knowledge sharing on ERM framework implementation. Based on the conception that one of the area of emphasis in ERM is in strategic risk assessment, the study concluded that the ability of financial institutions to precisely estimate probabilities of contingencies depends on effective risk knowledge management strategies.

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