



ENTERPRISE RISK MANAGEMENT AND STAKEHOLDERS' VALUE: EVIDENCE FROM NIGERIAN INSURANCE COMPANIES

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Abstract

The increasing shareholders' exposure to various kinds of risks requires more monitoring from the companies in order to maximize and preserve their values. Stakeholders' value is believed to positively increase if Enterprise Risk Management (ERM) is implemented. This study empirically examined the extent in which ERM adoption and implementation affect stakeholders' value among selected insurance companies in Lagos Metropolis, Nigeria. The specific objectives of the study are: to determine the impact of ERM drivers and framework on implementation strategy in selected insurance companies; and to determine the effect of ERM awareness and implementation on stakeholders' value. Top 15 insurance companies in operation between 2018 and 2019 were investigated through purposive sampling technique. Data collected were analysed using Monte Carlo test and multiple regressions. The findings show that both ERM drivers and framework have positive and significant effect on implementation. However, despite both ERM awareness and implementation contributed up to 70.1% to stakeholders' value, the effect is not significant for ERM awareness whereas that of implementation move at the speed of 84.3%. Hence, the study concluded that ERM drivers and framework have positive and significant effect on implementation. Also, ERM implementation has strong and significant effect on stakeholders' value while that of awareness is not significant. In line the positive effect of ERM implementation on stakeholders' value, we recommend that the existing drivers and framework for implementation should be sustained among the selected insurance companies in order to improve the stakeholders' value among the selected insurance companies.

Keywords: *ERM, drivers, framework, adoption challenges, stakeholders' value*

1. Introduction and Background

Enterprise Risk Management (ERM) has continued has gained significant acceptance among the industry practitioners in recent years due to its holistic approach to risk management in an integrated, enterprise-wide fashion. Its implementation process requires a broad range of tools and methodologies, which helps to explain the link between risk profile and its impact on shareholder value (Hoyt & Liebenberg, 2008). It is widely accepted that effective risk management is the core factor of successful companies, regardless of size or industry sector (Manab & Ghazali, 2013).

Risk as an integral component of the companies' environment can either be internal or external (Hrifa & Bamousse, 2018). The former emanates from the company including human errors, frauds, systems' failures and disruption in production's capacity while the latter comes from the



regulatory bodies and government policies. Due to increasing shareholders' exposure to various kinds of risks, they require more risks monitoring from the companies in order to maximize and preserve stakeholders' values (Walker, Shenkir & Barton, 2002; Kleffner, Lee & McGannon, 2003). Any manager that ignores or fails to implement sound risk management risks the support of the company's shareholders. To avoid losing the shareholders' support, many managers are forced to implement ERM to manage their risks at all levels in a structured approach (Kerraous, 2018).

In the insurance industry, ERM has become a high-priority and interesting topic area of investment (DiSerafino, 2016). In many cases, the effort has been guided primarily by the need to meet new regulatory standards. Meeting minimum requirements for Own Risk and Solvency Assessment (ORSA), stress-testing programmes and concerns about being designated as a Systemically Important Financial Institution (SIFI) were the key considerations. Also, good governance is crucial to business survival because it assists organisations to efficiently implement strategy and making better decisions in the face of risk and uncertainty affecting companies (Deloitte, 2015).

As with internal audit, it is important for the ERM function to be able to provide independent advice to management if it is to work effectively. However, unlike internal audit there is no established principle of independence for the function. Nevertheless, it is essential that line managers be prepared to listen to and take advice from ERM specialists, and it has been assumed that an organisational culture exists which permits risk practitioners to operate freely, and to have their opinions and advice listened to by line managers (DiSerafino, 2016).

Even though, ERM is of recent origin in actuarial science, bulk of studies have been undertaken as regards its adoption (COSO, 2004), implementation (McShane et al. 2011; Majdalawieh & Gammack, 2017), and its impact on financial performances (Hoyt & Liebenberg, 2008). Specifically, COSO (2004) provides a detailed description of the essential components, and seeks to provide direction and guidance for ERM. McShane *et al.* (2011) specifies that although ERM has emerged as a framework that supposedly overcomes limitations of silo-based traditional risk management, yet little is known about its effectiveness on the firm's performance.

Majdalawieh and Gammack (2017) propose framework and solutions on how ERM should be adopted. The propose framework remains a theoretical contribution, and has not yet been implemented in real world applications. It presents a conceptual framework based on a design science approach but does not include a fuller empirical validation of the framework on stakeholders' value. The two prime objectives of this study are: (i) to advance empirical analysis of impact of ERM drivers and framework on implementation; and to investigate the effect of ERM adoption and implementation on stakeholders' values in Lagos Metropolis, Nigeria.

Lagos as the foremost commercial centre in Nigeria and former Federal Capital attracts people from all walks of life especially businessmen and women. The population density and commercial activities in Lagos pose some insurable risks which require the insurance mechanism to transfer those risks from both individual and group to insurance companies. Consequently, the choice of Lagos Metropolis for this study was informed by this consideration and the preponderance of insurance companies' headquarters located in the area. Over 70% have their headquarters in Lagos. Of the 58 registered insurance companies as reported on the NAICOM official website, 42 are in



Lagos. Hence, it is believe the choice of Lagos metropolis for insurance companies in Nigeria is appropriate for this study. The study will no doubt provide impetus to how ERM drivers and framework jointly interact with implementation and how the latter increases the stakeholders' value in insurance companies.

2. Underpinning theories and Empirical literature

There is a longstanding and largely understandable perception that any type of risk management is equivalent to “playing defense,” or protecting the business from a range of threats. This is a myth that very much needs to be retired within insurance, and strategic risk management may be the most effective means for doing that (DiSerafino, 2016). That is, the effective practice of strategic risk management may lead companies to determine that they are not taking enough risk to meet their growth goals, expand their customer base or otherwise improve performance (DiSerafino, 2016).

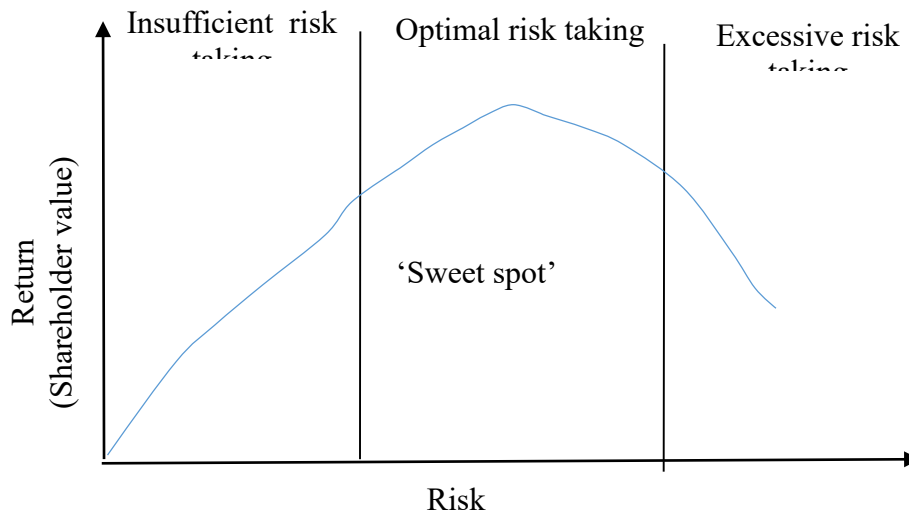
More than ever before, the Chief Executive Officers of organisations across the globe are now facing diversity and severity of risks. In order to manage these diversity and severity, they turn to senior risk management leaders as trusted advisers when key business decisions are to be made. Even as the impacts of the global financial crisis further recede, more stakeholders are seeking the next horizon, where risk management is truly and deeply integrated into the business. That is where ERM comes in and is gaining traction in a range of industries largely because it is delivering results.

Makomaski (2008) refers to ERM as a tool for decision-making in cases of companies holding varied business goals. Therefore, Walker *et al.* (2003) defines ERM as an integrated and a disciplined method which exists in organizations and facilitates systematic managing of firm related risks in an organization and helps in achieving the objectives of an enterprise.

In 2014, the Financial Reporting Council of Nigeria issued a new iteration of corporate governance code aimed at strengthening the focus of companies and investors on long term sustainable value creation which according to Deloitte (2015) is faced with the following key challenges (see figure 1 for example):

- i. Risk identification - organisations will have to ensure they have a robust process to identify ‘principal’ risks. For many companies this will involve a significant evaluation of their risk management process, and how these risks are identified and managed;
- ii. On-going monitoring –an increased focused on monitoring an organisation’s system of risk management and internal control will encourage to challenge themselves as how effective their current monitoring process are; and
- iii. Long term viability statement – the directors should explain in the annual report how they have assessed the prospects of the company, over what period they have done so and why they consider that period to be appropriate.

Figure 1: Levels of risk taking in an organisation



Source: Adopted from Deloitte (2015)

Management should consider a number of aspects of their internal control monitoring process: from the management information they collate, to effectiveness and co-ordination of the various assurance functions within their business to the opportunities improved technology can bring in real time understanding of the control environment (Deloitte, 2015).

In developing its ERM framework, COSO (2004) recognizes that the appropriate ERM system will likely vary from firm to firm. In essence, COSO suggests a contingency perspective toward the appropriate ERM system for a particular organization. ERM also emphasizes that the organizational benefits of risk management can create value for firms (Nocco & Stulz, 2006).

A further source of value from ERM programs arises due to improved information about the firm's risk profile. Outsiders are more likely to have difficulty in assessing the financial strength and risk profile of firms that are highly financially and operationally complex. By improving risk management disclosure, ERM is likely to reduce the expected costs of regulatory scrutiny and external capital (Meulbroek, 2002).

Additionally, for insurers, the major rating agencies have put increasing focus on risk management and ERM specifically as part of their financial review. This is likely to provide additional incentives for insurers to consider ERM programs, and also suggests a potential value implication to the existence of ERM programs in insurers. A more theoretical approach may also help address the demarcation problem of ERM (Jankensgård, 2019). At first glance there appears to be a broad consensus that ERM is about taking an integrated approach to improve stakeholders' value. The quality of contributions of every stakeholder to the system determines the overall value created in the system (Susniene & Vanagas, 2006).

Sachs and Rühli (2011) cited in Harrison and Wicks (2013) argue that it is not possible to separate the interest of stakeholder from a system of value creation in which each stakeholder provides resources or influence in exchange for some combination of tangible and/or intangible goods.



Stakeholder theory attempts to identify the overriding interests of stakeholder in generating value and describes the operations of a firm as a medium through which all the stakeholders become better off over time (Freeman, Harrison & Wicks, 2007). Harrison and Wicks (2013) buttress this argument by supporting the idea that stakeholders depend on the firm and its other stakeholders to satisfy their own interests.

Francis, LaFond and Olsson (2004) observe that increased value relevance is associated with lower cost of equity. This is attributed to investors perceiving value relevance as contributing to lower information risk. Lower information risk decreases imprecision in the estimates of the pay-off structure to investors based on available information. Simply put, lower risk means lower company cost of equity. Aboody, Hughes and Liu (2002) do, however, combined both value relevance and market efficiency in their study but found that adoption of ERM may not completely efficient in its processing of public information. The purpose of their study is to analyse how possible market inefficiencies may influence conclusions drawn from value relevance research.

In review of empirical studies on the value-relevance of risk management, many scholars used Tobin's Q to proxy for firm value (Smithson & Simkins, 2005; Cummins, Lewis & Wei, 2006). Cummins et al. (2006) contend that this approximation of Tobin's Q is appropriate for insurance companies because the book value of their assets is a much closer approximation of replacement costs than would be the case for non-financial firms. Hoyt and Liebenberg (2011) attest that Tobin's Q is particularly useful as a value measure because it is a prospective performance measure.

McShane *et al.* (2012) found insurance companies coordinated risk management by hedging investment risk to take on more underwriting risk (core business risk). Adeyele, Isimoya and Adelakun (2019) investigated the events that have led to adoption of ERM among service firms in Nigeria. They provided insights into how the increasing number of fold ups as well as mergers and acquisitions in service sector has led to adoption of ERM to risk management in critical areas of business rather than relying on a silo-based risk management perspective. They found significant description for how ERM influence service firms' performance.

ERM implementation also provides a rich setting for management scholars. Studies of ERM implementation may consider two very different questions: adoption and implementation (Bromiley, McShane, Nair & Rustambekov, 2015). In this study, we listed four criteria useful for ERM adoption. The adoption of other business practices has been shown to depend on factors that include regulatory pressures, industry norms, the practices of firms on which the firm's board members serve (Plambeck & Weber, 2010). At least part of the impetus to implement risk management comes from external actors.

In contrast to the prior studies of the value relevance of risk management, the study focus not on assessing the potential value-relevance of specific forms of hedging or risk management but on the overall risk management posture of the firm at the enterprise level. In other words, is the firm pursuing an ERM program or not, and if it is, what is the value-relevance associated with such a programme. Lundqvist (2014) indicates that there exists no real consensus about the value creation and inconclusive of the implementation of ERM because of the multiple frameworks for the implementation of ERM.



3. Method and Empirical Models

Surviving the turbulent economic situation requires a strong risk management adoption at management level. To get reliable information on how enterprise risk management is implemented necessitates the need to visit the head offices of insurance companies since this is where both administrative and long term policies are taken. The survey respondents for this study were the senior managers in insurance companies who have had at least some experience in enterprise risk management. The positions of the respondents include general manager, senior manager, director, and risk officers in generating a different perception among the respondents for the purpose of obtaining an accurate result in this study. Purposive sampling has been employed in order to select the firms that are operating in insurance companies.

Empirical models

ERM drivers and framework play significant role in terms of ERM implementation. These tools are necessary considering a range of criteria of each as they affect ERM implementation. Thus, the model linking these two variables with implementation is given as follows:

$$ERMI = \beta_0 + \beta_1 ERMD + \beta_2 ERMF + \varepsilon \quad (1)$$

ERMI = ERM implementation

ERMD = ERM drivers,

ERMF = ERM framework

and $\varepsilon = \text{error term}$

β_0 is the intercept; β_1 to β_2 represent coefficient of independent variables.

ERM awareness and implementation- The level of ERM awareness as well as implementation among board members is expected to have positive effect on stakeholders' values its implementation. It has been verified in some advanced economies that those companies that adoption ERM into decision making of organization as well as implementing it into business activities usually do well compared to those that do not. On the basis of this premise, this study develops model that suitably capture the assumption with the aim of empirically validating the assumption in emerging economy like Nigeria. Hence, the required model to test objective (ii) of the study is given as follow:

$$STKDV = \beta_0 + \beta_1 ERMA + \beta_2 ERMIS + \varepsilon \quad (2)$$

STKHDV = Stakeholder value,

ERMA = ERM awareness,

ERMIS = ERM implementation strategy,

and $\varepsilon = \text{error term}$

β_0 is the intercept; β_1 to β_2 represent coefficient of independent variables.

4. Results and Discussions

This subsection deals with presentation of descriptive and inferential results of ERM concerning its adoption, drivers, framework, implementation and stakeholders' value among insurance companies in Lagos Metropolis. The first five tables show descriptive results using Monte Carlo test of significance while Tables 6 and 7 deal with inferential analysis on ERM's independent variables on stakeholders' value.



Table 1: ERM awareness among the selected insurance companies in Lagos metropolis

		N	Mean	Std. Deviation	Minimum	Maximum	Coefficient of variation	Monte Carlo sig.
ERMA1	There is a formal structure in place for monitoring risk and response	150	4.6067	1.51899	1	7	0.3297379	0.000
ERMA2	We have the necessary information to manage risk at an enterprise-wide level	150	4.68	1.05754	2	7	0.2259699	0.000
ERMA3	We have a common terminology, methodology and set of standards for managing risk	150	4.1733	1.14544	1	7	0.2744668	0.000
ERMA4	Company objectives, policies and tolerance for risk are clearly communicated through the organisation	150	4.82	1.58037	2	7	0.3278786	0.000
	ERMA	150	4.57	1.10525	2.25	6.75	0.241849	0.000

Source: Authors’ computation using IBM- SPSS

In the first and second criteria listed criteria in Table 1, many respondents agreed that there is a formal structure in place for monitoring risk and response (ERMA1: mean/std. = 4.6067/1.51899; coefficient of var. = 0.3297379, $p < 0.05$) as they have the necessary information to manage risk at an enterprise-wide level (ERMA2: mean/std. = 4.68/1.05754; coefficient of var. = 0.2259699, $p < 0.05$). However, many indifferent as having a common terminology, methodology and set of standards for managing risk (ERMA3: mean/std. = 4.1733/1.14544; coefficient of var. = 0.1839781, $p < 0.05$). Meanwhile, they agreed that their respective companies objectives, policies and tolerance for risk are clearly communicated through the organisation (ERMA4: mean/std. = 4.82/1.58037; coefficient of var. = 0.3278786, $p < 0.05$). In all of the listed criteria, the most stable and likely to be the practice among the insurance companies is criterion ERMA2 (being the least coefficient) which implies that there is exist the necessary information to manage risk at an enterprise-wide level. The overall means for the listed criteria on ERM awareness indicates good level of awareness among staff (ERMA4: mean/std. = 4.57/1.10525; coefficient of var. = 0.241849, $p < 0.05$).

ble 2: ERM drivers among the selected insurance companies in Lagos metropolis

		N	Mean	Std. Deviation	Minimum	Maximum	Coefficient of correlation	Monte Carlo Sig.
ERMD1	Greater transparency (Corporate Governance)	150	4.9133	1.27409	2	7	0.2593132	.000 ^b
ERMD2	Financial disclosures with more strict reporting and control requirement	150	5.1733	1.06655	2	7	0.2061639	.000 ^b
ERMD3	Security and technology issues	150	5.08	1.35864	2	7	0.2674491	.000 ^b
ERMD4	Business continuity and disaster preparedness	150	5.3067	1.36567	2	7	0.25735	.000 ^b



ERMD5	Focus on rating agencies	150	5.42	0.89195	2	7	0.164566	.000 ^b
ERMD6	Regulatory compliance (laws and regulations)	150	5.4467	0.85559	1	7	0.1570852	.000 ^b
ERMD7	Globalization in a continuously competitive environment	150	5.12	1.0227	2	7	0.1997452	.000 ^b
ERMD		150	5.2286	0.78386	2.86	7	0.1499186	.000 ^b

Source: Authors’ computation using IBM- SPSS

Table 2 shows the ERM drivers among the selected insurance companies. In this table, many respondents agreed that greater transparency (corporate governance) (ERMD1: mean/std. = 5.0800/1.35864; coefficient of var. = 0.2674491, $p < 0.05$) and financial disclosure with more strict reporting and control requirement (ERMD2: mean/std. = 5.1733/1.06655 coefficient of var. = 0.2061639, $p < 0.05$). Also, many respondents agreed that security and technology issues are part of the key drivers for ERM (ERMD3: mean/std. = 5.0800/1.35864; coefficient of var. = 0.2674491, $p < 0.05$) and business continuity and disaster preparedness (ERMD4: mean/std. = 5.3067/1.36567 coefficient of var. = 0.2573500, $p < 0.05$). Also, within the scale of 1 to 7, many respondents agreed that the ERM drivers in their companies focus on rating agencies (ERMD5: mean/std. = 5.4200/0.89195; coefficient of var. = 0.164566, $p < 0.05$) and regulatory (ERMD6: mean/std. = 5.4467/0.85559; coefficient of var. = 0.1570852, $p < 0.05$).

Similarly, many respondents agreed that ERM drivers in their respective companies focus on globalization in a continuously competitive environment (ERMD7: mean/std. = 5.1200/1.02270; coefficient of var. = 0.1997452, $p < 0.05$). On the balance of evidence, ERM drivers in the selected insurance companies is strong (ERMD: mean/std. = 5.2286/0.78386; coefficient of var. = 0.1499186, $p < 0.05$).

Table 3: ERM framework among the selected insurance companies in Lagos metropolis

		N	Mean	Std. Deviation	Minimum	Maximum	Coefficient of correlation	Monte Carlo Sig.
ERMF1	Avoidance of risk by aborting actions that contributes to risk	150	5.0933	1.05134	2	7	0.2064157	.000 ^b
ERMF2	Reduction of risk by reducing the likelihood or impact of risk	150	4.9867	1.00993	2	7	0.2025257	.000 ^b
ERMF3	Share or insure risk by transferring or sharing a portion of the risk (impact)	150	5.2667	1.07233	2	7	0.2036067	.000 ^b
ERMF4	Acceptance of risk based a cost/benefit decision	150	5.12	1.31547	1	7	0.2569284	.000 ^b
ERMF		150	5.1167	0.85416	2	7	0.1669364	.000 ^b

Source: Authors’ computation using IBM- SPSS

Table 3 shows the ERM framework as regards risk management in the selected insurance companies in Lagos metropolis. In the table, there are four listed criteria for ERM framework. Within the scale of 1 to 7, many respondents agreed that their ERM framework avoids risk by avoiding actions that contributes to risk (ERMD1: mean/std. = 5.0933/1.05134; coefficient of var.



= 0.2064157, $p < 0.05$) and also reduces the likelihood or impact of risk (ERMF2: mean/std. = 4.9867/1.00993, coefficient of var. = 0.2025257, $p < 0.05$). In addition, many respondents agreed that their ERM framework enables them to share or insure risk by transferring or sharing a portion of the risk impact (ERMF3: mean/std. = 5.2667/1.07233; coefficient of var. = 0.2036067, $p < 0.05$) and that they accept risk based on cost/benefit decision (ERMF4: mean/std. = 5.1200/1.31547 coefficient of var. = 0.2569284, $p < 0.05$). From these criteria, it can be said that ERM framework strongly applied to its implementation in respective insurance companies (ERMF: mean/std. = 5.1167/0.85416; coefficient of var. = 0.1669364, $p < 0.05$).

Table 4: ERM implementation strategy among the selected insurance companies in Lagos metropolis

		N	Mean	Std. Deviation	Minimum	Maximum	Coefficient of correlation	Monte Carlo Sig.
ERMIS1	Policy is supported at board of director or executive level	150	4.82	0.94172	2	7	0.1953786	.000 ^b
ERMIS2	Having an enterprise risk data infrastructure in place	150	4.5	1.01499	1	7	0.225553	.000 ^b
ERMIS3	Adequate employee training	150	4.8667	1.1391	3	7	0.2340608	.000 ^b
ERMIS4	Hiring qualified staff	150	4.8067	1.11546	1	7	0.2320651	.000 ^b
ERMIS5	Ability for organisation to adapt to changes in business environment	150	5.4	0.78578	2	7	0.1455148	.000 ^b
ERMIS6	Documented records	150	5.4933	0.93942	2	7	0.1710105	.000 ^b
	ERMIS	150	4.9811	0.66486	2.5	6.67	0.1334756	.000 ^b

Source: Authors' computation using IBM- SPSS

Within the range of 1 to 7 as shown in Table 4, many respondents agreed that the ERM policies implementation are supported at board of director or executive level (ERMIS1: mean/std. = 4.8200/0.94172; coefficient of var. = 0.1953786, $p < 0.05$) as having an enterprise data infrastructure in place is most paramount to them (ERMIS2: mean/std. = 4.5000/1.01499; coefficient of var. = 0.225553, $p < 0.05$). Also, in criteria three and four, many respondents agreed that employees received adequate training for the ERM implementation (ERMIS3: mean/std. = 4.8667/1.13910; coefficient of var. = 0.2340608, $p < 0.05$) and that management ensure they hired qualified staff that can assist them to implement ERM in their respective organisation (ERMIS4: mean/std. = 4.8067/1.11546; coefficient of var. = 0.2320651, $p < 0.05$).

Similarly, in the fifth and sixth criteria, many respondents agreed that ERM afford the selected insurance companies to adapt to changes in business environment (ERMIS5: mean/std. = 5.4000/0.78578; coefficient of var. = 0.1455148, $p < 0.05$) as individuals documented records (ERMIS6: mean/std. = 5.4933/0.93942; coefficient of var. = 0.1710105, $p < 0.05$). From these six criteria, it can be said that the level of ERM implementation in the selected insurance companies is good (ERMIS: mean/std. = 4.9811/0.66486; coefficient of var. = 0.1334756, $p < 0.05$).



Table 5: Stakeholders values among the selected insurance companies in Lagos metropolis

		N	Mean	Std. Deviation	Minimum	Maximum	Coefficient of correlation	Monte Carlo Sig.
STKHVD1	Adoption of ERM has increased the investment performance of our company	150	6.8267	0.3798	6	7	0.0556353	.000 ^b
STKHVD2	Adoption of ERM has increased the financial performance	150	6.4533	0.49949	6	7	0.0773996	.373 ^b
STKHVD3	Adoption of ERM has increased the market performance	150	6.5267	0.50096	6	7	0.076756	.627 ^b
STKHVD4	Adoption of ERM has increased our company productivity	150	5.48	0.79191	5	7	0.1445083	.000 ^b
STKHVD5	Adoption of ERM has created value for firms	150	5.4533	0.80757	5	7	0.1480875	.000 ^b
STKHVD6	ERM leads to quality of services to customers	150	5.4067	0.76935	5	7	0.1422968	.000 ^b
STKHVD7	Earnings per share have significantly increased following ERM implementation	150	5.5	0.80059	5	7	0.1455613	.000 ^b
STKHVDV		150	5.9495	0.49932	5.43	7	0.0839257	.000 ^b

Source: Authors' computation using IBM- SPSS

In Table 5, many respondents extremely agreed that adoption of ERM has increased the investment performance of their companies (STKHVD1: mean/std. = 6.8267/0.37980; coefficient of var. = 0.0556353, $p < 0.05$). Also, they strongly agreed that ERM adoption has increased the financial performance (STKHVD2: mean/std. = 6.4533/0.49949, coefficient of var. = 0.0773996, $p < 0.05$) as well as increased the market performance (STKHVD3: mean/std. = 6.5267/0.50096; coefficient of var. = 0.076756, $p < 0.05$).

More so, many respondents agreed that ERM adoption has increased their companies productivity (STKHVD4: mean/std. = 5.4800/0.79191, coefficient of var. = 0.1445083, $p < 0.05$), increased value for firms (STKHVD5: mean/std. = 5.4533/0.80757; coefficient of var. = 0.1480875, $p < 0.05$), and leads to quality of services to customers (STKHVD6: mean/std. = 5.4067/0.76935; coefficient of var. = 0.1422968, $p < 0.05$). Lastly, many respondents agreed that earnings per share have significantly increased following ERM implementation (STKHVD7: mean/std. = 5.5000/0.80059; coefficient of var. = 0.1455613, $p < 0.05$). Based on this, it can be said that there is a very strong stakeholders' value appreciation among the selected insurance companies in Lagos metropolis (STKHVDV: mean/std. = 5.9495/0.49932, coefficient of var. = 0.0839257, $p < 0.05$).



Table 6a: Relating ERM implementation to ERM drivers' and framework in selected insurance companies

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.727 ^a	0.528	0.525	0.45823	0.528	165.666	1	148	0.000
2	.740 ^b	0.548	0.542	0.45001	0.02	6.458	1	147	0.012

a. Predictors: (Constant), ERMD

b. Predictors: (Constant), ERMD, ERMF

Source: Authors' computation using IBM- SPSS

Table 6a shows the relationship of ERM drivers and framework relate to implementation in selected insurance companies. The table shows that the entries of ERM drivers and ERM framework respectively accounted for 52.8% ($R^2 = 0.528$; $F = 165.666$, $p < 0.05$) and 2% ($R^2 = 0.002$; $F = 6.458$, $p < 0.05$) on implementation and are significant. Table 6b shows the extent by which drivers and framework influence the ERM implementation in insurance companies.

Table 6b: Predicting ERM implementation from ERM drivers' and framework in selected insurance companies

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
2	(Constant)	1.662	0.252		6.607	0.000
	ERMD	0.453	0.08	0.534	5.691	0.000
	ERMF	0.186	0.073	0.239	2.541	0.012

a. Dependent Variable: ERMIS

Source: Authors' computation using IBM- SPSS

In Table 6b, ERM drivers (ERMD: Beta = 0.443, $t = 5.691$, $p < 0.05$) and framework (ERMF: Beta = 0.186, $t = 2.541$, $p < 0.05$) have positive and significant effect on ERM implementation among the selected insurance companies.

Table 7a: Linking stakeholders' value to ERM awareness and implementation in selected insurance companies in Lagos metropolis, Nigeria

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.499 ^a	.249	.244	.58592	.249	49.179	1	148	.000
2	.837 ^b	.701	.696	.37133	.451	221.474	1	147	.000

a. Predictors: (Constant), ERMA

b. Predictors: (Constant), ERMA, ERMIS

Source: Authors' computation using IBM- SPSS



Table 7a shows the combined relationship of ERM awareness and implementation on stakeholders’ value in selected insurance companies in Lagos Metropolis. In the table, the entry of ERM awareness and implementation significantly accounted for 24.9% (ERMA: $R^2 = 0.249$; $F = 49.179$, $p < 0.05$) and 45.1% (ERMIS: $R^2 = 0.451$; $F = 221.474$, $p < 0.05$) of stakeholders’ value respectively in the selected insurance companies in Lagos metropolis.

Table 7b: Predicting stakeholders’ value from ERM awareness and implementation in selected insurance companies in Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
2 (Constant)	.763	.230		3.313	.001
ERMA	.007	.034	.011	.194	.846
ERMIS	.842	.057	.831	14.882	.000

a. Dependent Variable: STKHDR

Source: Authors’ computation using IBM- SPSS

In Table 7b, the adoption of ERM has positive but not significant in effect with stakeholders’ value (ERMA: Beta = 0.007, $t = 0.194$, $p > 0.05$) while its implementation has positive and significant effect on stakeholders’ value among the selected companies of stakeholders’ respectively (ERMIS: Beta = 0.842, $t = 14.882$, $p < 0.05$).

From the results obtained for ERM drivers and framework, it is possible to predict the direction with degree of accuracy among the selected insurance companies. The total explained variables implied that both ERM drivers and framework accounted for 54.8% of factors responsible for ERM implementation and this takes place at the speed of 44.3% (ERM drivers) and 18.6% (framework) respectively. This means that ERM drivers as implementation tool is more likely to speed up implementation more than twice of the framework even though both of them are significant. These results confirm both theoretical and empirical literature that ERM drivers and framework actually lead to ERM implementation among the selected insurance companies in Lagos metropolis, Nigeria (Nocco & Stulz, 2006; Susniene & Vanagas, 2006; Freeman et al, 2007).

Thus, the model can be fitted as follow:

$$ERMI = 1.662 + 0.443ERMD + 0.186ERMF.$$

Hence, a unit increase in each of them significantly increases the ERM implementation in respective organisations. This model prediction suitably meets the presumption by Harrison and Wicks (2013) which buttress this argument by supporting the idea that stakeholder depend on the firm and its other stakeholders to satisfy their own interests.

Similarly, both the ERM awareness and implementation significantly contributed 70.1% to stakeholders’ value. However, measuring the effect of each variable through multiple regression, we noted that despite the 24.9% contribution of ERM awareness to stakeholders’ value is not significant as the speed of its contribution is just .7% while that ERM implementation’s impact on stakeholders’ value move at the speed of 84.2%. Consequently, it can be concluded that rate at



which ERM awareness has nothing to do with stakeholders' value its implementation positive and significant impact on stakeholders' value.

The fitting model is given as follows:

$$STKDV = 0.763 + 0.007ERMA + 0.842ERMIS .$$

When it comes to prediction, it is possible to ascertain that ERM implementation has significant effect on stakeholders' value but this cannot be said of that of ERM awareness since its contribution is not significant. This finding also help to closely link the effect of ERM implementation through empirical test beyond the earlier description obtained by Adeyele e al (2019)

5. Conclusion and Recommendations

This study empirically examined the combined effect of ERM drivers and framework on implementation and found that they have positive and significant effect. Among the criteria for ERM framework, risk reduction assists insurance companies to reduce the likelihood or impact of risk on stakeholders' values. Also, the study revealed that there is at least good financial disclosure with stricter reporting and control requirement as one of the ERM drivers which indicates a good fit for the overall drivers for ERM implementation.

Due to the level of awareness about the necessary information to manage risks at an enterprise-wide level among the board of directors, the staff members of insurance companies do experience sound risk management when it comes to implementation. Apart from this, insurance companies on the average have a good knowledge of the necessary information to manage risk at an enterprise-wide level which generally yielded a strong awareness level of awareness among staff. It was also found that adoption of ERM by insurance companies has increased the investment performance of insurance companies in Lagos metropolis with a very strong appreciation in stakeholders' value.

This study moved beyond theoretical contribution to empirical contribution on how ERM drivers and framework lead to implementation instead of retiring it to design science approach as it now include a fuller empirical validation of the framework on stakeholders' value. The study also established that the level of ERM implementation has positive impact on stakeholders' value while the level of awareness is not significant. However, descriptive analysis suggests a significant level of awareness among insurance companies.

In the light of the above findings, we recommend that Insurance companies should consciously enhance the capacity of their staff to strategically use ERM drivers and framework for effective implementation which will in turn boost the stakeholders' value of their companies. Similarly, the Management should ensure that the ERM framework is effectively embedded in their core activities and general business operations so as to derive its maximum positive impact on stakeholders' values.

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Appendix

Insurance Companies in Nigeria 2018 to 2019 (<https://www.google.com/search?>)

1. AIICO Insurance Plc – Commenced operation in 1963
2. AXA Mansard Insurance Plc
3. Leadway Assurance Company Ltd – Started operation in 1971
4. Mutual Benefit Assurance Plc – April 18, 1995
5. Corner Stone Insurance Plc -26th July 1991
6. Industrial and General Insurance Plc – first incorporated as private liability insurance company in Nigeria 31st October, 1991 and 2007. It started operating as a composite insurance company in January 1992
7. Custodian and Allied Insurance Plc – Provide both life and general insurance and started 13th August. 1987
8. NEM Insurance Plc – commenced operation in 1946 through the agency of Edward Turner and Co
9. Prestige Insurance Ltd – was founded in 1988
10. Linkage Assurance Plc- was incorporated on March 26, 1991 and was issued license on October 7, 1993/
11. African Alliance Insurance Plc – Started operation on May 6, 1960
12. Lasco Assurance Plc- was granted license as an insurer in August 1, 1980
13. Gold Link Insurance Plc –Started operation on September 8, 1993.
14. International Energy Insurance Company Ltd- Started operation on March 26th, 1969.
15. Continental Reinsurance Plc – It was founded in 1987 and was converted to public Limited in 1999.