The Relationship between Enterprise Risk Management (ERM) and Organizational Performance: Evidence from Nigerian Insurance Industry.

Musa A. Obalola1 Ph.D, Thomas I. Akpan Ph.D2 Olufemi, A. Abass3*
1. Department of Actuarial Science, Faculty of Business Administration University of Lagos. Nigeria.
2. Department of Banking and Finance, Faculty of Management Sciences, University of Uyo. Nigeria.
3. Department of Insurance, Faculty of Management Sciences, Lagos State University.
* Email of corresponding author: femmy_4me@yahoo.com

Abstract

Modern business environment is embroiled with business risks which can have a negative impact on an organization existence and success. The business risks represent the threats to the ability of an enterprise to execute business process and create customer value. These risks are multifaceted and cut across operational, strategic, systemic and reputational. Insurance business being an enterprise is also faced with these risks. This study aims at finding out whether the management of these integrated risks through enterprise risk management (ERM) can lead to organizational performance in Nigerian Insurance industry. Using purposive sampling technique, ten (10) general insurance companies were selected from forty nine (49) companies operating in Nigeria. Contingency reserve, shareholders’ fund, gross premium and net premium were used as dummies for ERM indicators. Panel data was adopted for a ten year period of 2001 to 2010. The study reveals that there is joint cause relationship among ERM variables and organizational performance though, individual relationship of the indicators differ. It is recommended that the Nigerian insurance industry should adopt ERM practice in order to boast organizational performance and by extension increases organization’s reputation.

Keywords: Insurance, Risk Management, Enterprise Risk Management, Corporate Performance

1.0 Introduction

Successful economic performance and value creation are considered the major drivers for the establishment of an organization in modern business environment (Liebenberg & Hoyt, 2003:2008). Modern business environment according to Yilmaz (2009) is embroiled with market dynamics, which make it difficult for companies to plot the right course for their continued existence and success. Wawera and Kisaki (2012) assert that in business, there is no way of avoiding risk without giving up the opportunity to gain profits. This is known as business risk. These business risks according to Bell, Solomon & Thomas, (1997) represent threats to the ability of an enterprise to execute business process effectively and to create customer value in accordance with strategic objectives. Business risks are multifaceted and can be categorized into: pure risks or insurance risks, market risk, operational risks, strategic risks, reputational risks, systemic risk and compliance risk (CAS: 2003, COSO: 2004).

The synthesis from the above shows that risk can no longer be categorized and separately managed in “silos”. Hence, organizations must manage a wide array of risks in an integrated, holistic and enterprise-wide fashion (Hoyt & Liebenberg 2008; Liebenberg and Hoyt 2003 & Acharyya, 2009). Managing these risks however calls for the adoption of a robust Enterprise Risk Management variously known as Integrated Risk Management (Hoyt & Lienhenberg, 2008), Corporate Risk Management (Razali & Tahir, 2011), Strategic Risk management, Holistic Risk Management, Business Management (D’Arcy, 2001; Manab et al, 2006) as shield to managing organization risk on enterprise-wide basis for the purpose of increasing short-term and long-term value to stakeholders. Since insurance business is also an enterprise, the practice of ERM is not excluded. Insurance companies face a growing number of new and interrelated risks that are increasingly difficult to quantify
(Rogers, 2009). Broadly speaking, Hau, Guo & Feng (2009) classify insurance risk into external and internal. The formal includes social and political risks while the later may be divided into actuarial risk, underwriting risk, insurance risk, investment risk, operational risk, liquidity risk and financial risk. To cope with this complexity, Rogers (2009) further asserts that insurance companies will have to adopt ERM to manage these risks in a holistic manner.

This study also seeks to find out whether the management of these integrated risks can lead to organizational performance in Nigeria Insurance Industry.

2.0. Literature Review and Conceptual Framework

2.1 Concept of Enterprise Risk Management

Enterprise according to Tahir & Razali (2011) means to integrate or aggregate all types of risks, using integrated tools and techniques to mitigate the risks and to communicate across business lines. Enterprise risk on the other hand according to Dickinson (2001) is the extent to which the outcome from a corporate strategy of a company may differ from those specialized in its corporate objectives (using a domicile risk measure). Kleffner, Lee & Mc Gannon (2003) define ERM as the management of operational and financial risk simultaneously in order to maximize the cost effectiveness of risk management within the constraints of the organizations tolerance for risk. Though, this definition encompasses operational risk, Waweru and Kisaka (2012) pointed out that the definition fails to appreciate that companies are exposed to other risks like strategic and reputational risks.

The main thrust of ERM according to Risk and Insurance Management Society (2006) is grounded on three perspectives, namely; strategy, process and culture. From a strategic point of view, Casualty Actuarial Science (CAS) (2003) sees ERM as a discipline by which an organization in any industry assesses control, exploit, finances and monitors risk from all sources for the purpose of increasing the organization’s short and long term value to its stakeholders. Importantly, Committee of Sponsoring Organization of the Tradeway Commission (COSO) (2004), defines ERM as a process affected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the organization’s entity and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives. This process involves various strata in an organization (Board of Directors, Management and Personnel), Chartered Enterprise Risk Analyst (CERA) (2010). ERM is also a cultural approach that guides the organization to opportunity taking and uncertainty reduction. By adopting ERM, users are able to identify any potential incidents that may affect the organization and know the risk-appetite of an organization. If the risk-appetite is known, decision made by the organization to curb risks may be parallel with firm’s objectives (Walker et al; 2003).

Enterprise Risk Management is clearly different from Traditional Risk Management. Yazid et al (2012) assert that TRM treats and manages risk in “silos” whereas ERM integrates all types of risk faced by the companies concerned. Dickinson (2012) argues that TRM involves transfer of certain types of risks to insurance companies. These transferred risks are related to natural accidents, human error or fraud. Hence, the objective of TRM is to maximize the productive efficiency of enterprise with special focus on pure risks and speculative risks. Major characteristics of TRM include risk identification and assessment, discrete risks, involves risk mitigation, risk with no owners, deals with hazard risk quantification and employees see risk as individual responsibility. While ERM according to Yazid et al (2012) is essentially to integrate and coordinate all types of risks across the entire company and with the adoption and application of ERM, companies could possibly identify all the potential incidents that may directly or indirectly affect the company and ultimately know very well their risk-appetite.

2.2 Theoretical Framework of ERM

The theoretical foundation of ERM according to Doherty (1985) was introduced in a very basic silo format since the earlier version of risk management has been concerned with managing the enterprise insurance portfolio.

Although, IMA (2006) was quick to point out that some of these frameworks are legally mandated or implied, some of them were written by guidance setting organizations such as COSO, while others were written by individuals with a wide range of backgrounds including insurance, government, safety and engineering. It is important to note that these frameworks lead to different approaches, some lean towards financial reporting and internal control and others lean toward management, corporate governance and accountability. Nevertheless, they all share a common theme which include; the identification, prioritization and quantification of risks in order to help corporation effectively manage their exposure.

Though, some of these frameworks are not without some challenges towards its implementation. These challenges according to Warrier and Chandrashekhar (2006) include the fact that ERM objectives are not aligned to corporate objectives, insufficient commitment from top management inadequate conceptualization of ERM model, poor decision support or inadequate tools and systems for statistical analysis and cultural mismatch.

For the purpose of this research, Committee of Sponsoring Organizations of the Tradeway Commission (COSO) framework shall be adopted. This framework has been adopted based on its uniform approach to managing internal control system and it is quite popular among researchers (Bohn and Kemp, 2006; Bonen et al 2006; and Yezid et al 2011).

2.3 The Practice of Enterprise Risk Management in Insurance.

Acharyya & Johnson (2006) assert that there is no enough information about the ERM initiative by insurance companies. Hence, there is no consistent understanding and framework of ERM in the global insurance industry. Risk – intensive nature of insurance business according to Wang & Faser (2006) makes the risk dynamics very different from other sectors like manufacturing, processing or constructing services. Therefore, ERM in insurance according to Acharyya (2008) is a structured approach to analyze risk – returned based decision making. Wang & Faber (2006) assert that the causes (drivers) of insurance failure that necessitate adoption of ERM in insurance industry include; under-reserving, under-pricing, unsupervised delegation of underwriting authority, rapid expansion (especially into unfamiliar markets), misuse of reinsurance and mismanagement. Acharyya (2008) further added investment, poor internal control and natural and man- made catastrophes. Hau, Gao & Feng (2009) broadly categorize these risks into external risks factor and internal risks factor. While the internal risk factors are factors within the control of insurance companies, external risks factors are beyond the control of insurance companies.

Standard & poor’s (2005) posits that ERM practice takes place when insurance company commits to risk management for all of its important risks. This involves linking risk capital values to the actual risk – taking activities for the insurer to assess the projected and historical performance of its different risk – taking activities in proportion to the economic capital required to support those activities.

Hau, Gao & Feng (2009) assert that insurance enterprise risk management system is in accordance with the steps to complete the following four links: develop an enterprise risk management strategy, the course of the mission is to link strategic objective and linking risk management to ensure the integrity of the identification and awareness of the enterprise insurance companies are facing, constructing the risk management infrastructure and gradually formed an enterprise risk management environment.
2.4 Concept of Organizational Performance

Organizational performance of companies is driven by the quality of allocation to tangible and intangible assets including ERM (Onafalujo, 2012). Performance according to (Goodman, 2001; Adsera and Vinolas, 2003; Talisayo, 2008) is driven by past activities of the company which impact on the current and the future. Major concern had always been the measurement of organizational performance. Acharyya (2007) stresses that the primary goal of measuring performance is to assess the progress of achieving corporate objectives which can either be financial or non-financial).

Hansen (1989) proposes two perspectives toward performance measurement; financial management and strategic management. The financial management emphasizes on the economic factors focusing on the external market from financial context. It focuses on income (profit and loss), cash flows, return on investment and value (Acharyya, 2007). Under financial management, the primary task of management is to maximize returns to shareholders (Doherty 2000; Fatemi 2002). A major criticism of financial management according to Acharyya (2007) is the heavy reliance on financial outcomes and exclusion of strategic, operational and ethical issues including firm’s social and environmental responsibilities.

Strategic management according to Hansen (1982) emphasizes on the organizational factors approaching from psychological and sociological perspectives. It encompasses the risk taking and decision making issues by managers (Acharyya & Ball, 200). A major criticism of strategic management is that it emphasizes more on subjective issues like customer preference, employee satisfaction rather that firms financial outcomes.

Beaman (1996) suggests Performance Measurement System (PMS) which can be used in measuring an organization’s strength. Main features of PMS include inclusiveness, universality, measurability and consistency. Kerr (2005) asserts that PMS can only be designed by aligning the goals of individuals and divisions with that of the organization. Feurer (1995) cited by Acharyya (2007) posits suggest that PMS should include components of evaluating the internal and external environments of an organization. Acharyya (2007) further suggests that PMS to be developed for ERM to address these issues.

2.5 The Link between ERM and Organizational Performance in Insurance Industry.

Killackey (2009) posits that organizations need to have ERM programmes properly aligned with their strategies at various levels, including business strategy level. The outcome of the ERM programmes according to Acharyya (2007) should provide information in determining corporate objectives and formulation of appropriate corporate strategies. ERM programmes need to be aligned with business strategies to cover the complete hierarchy of operational risks. Having seen ERM as a management system, Feurer (1995) posits the performance of ERM should provide feedback for the cognitive and behavioural learning processes of the organization in addition to delivering tangible value for the organization.

Acharyya (2007) links organizational culture to ERM performance, he believes that changing organizational culture in the way it perceives risk and management business as a whole. ERM performance in insurance according to Acharyya (2007) was developed mostly by rating agencies like B&P, A.M Best, Fitch and Moody’s. The assessment quality of insurance company include industry risk, business position, management and corporate strategy, operating performance, capitalization, investments, liquidity, financial, flexibility and ERM implementation. (Ingram, 2005, Standard & Poors 2006 & Acharyya 2007). They further classified ERM quality definitions into excellent, strong, adequate and weak”. Acharyya (2007) pioneered a conceptual framework to measure the performance of ERM.

3. Research Methods and Model Specification

3.1 Research Methods
The research studies the relationship ERM variables and organisational performance in Nigerian insurance industry. Secondary data was adopted for this study. The essence of this study is to find out if there is any relationship between indicators of ERM and organizational performance of insurance companies operating in Nigeria. Null hypotheses were formulated to test whether:

1. There is no significant relationship between ERM variables and organizational performance of the insurance industry for the period of 2001-2010.
2. Leading and laggard insurance companies differ in their overall loss ratio during the period of 2001-2010.

3.2 Population and Sampling Design

The population of the study is the forty nine (49) general insurance companies operating in Nigeria. Ten (10) general insurance companies were selected out of 49 companies operating in Nigeria using purposive sampling method. Acharyya (2009) suggests that ERM is a function of insurance risk, financial risk, operational risk and hazard risk. Hence, contingency reserves, shareholders funds, gross premiums and net premiums were used as ERM variables. Loss ratio was used to measure performance of the selected insurance companies. The ten companies were grouped in two, the leading companies and laggard. The grouping was done according to the industry rating by Nigerian Insurers Association through its annual publication, ‘Nigeria Insurance Digest’ 2012. The essence of the grouping is to find if there is any parity in the application of these variables between the leading companies and the laggard insurance companies. Panel data was adopted for a ten year period of 2001 to 2010. Acharyya (2009) proposes a regression model to measure ERM.

3.3 Model Specification

\[ f(ERM) = a + \alpha * InsuranceRisk + \alpha * FinancialRisk + \alpha * OperationalRisk + \alpha * HazardRisk + \epsilon. \]

The formulated hypotheses were also tested using statistical techniques of two samples General Linear Model (GLM) MANOVA and multiple regression analysis available on SPSS (version 15) statistical software and Stata (version 10).

The study adopts Multiple Linear Regression Technique in establishing a relationship between ERM variables and organizational performance of the insurance industry for the period of 2001-2010. The statistical techniques used alongside the multiple regression technique include: coefficient of determination (R²), Anova (F), standard error test, test of correlation (T), multicolinearity test of Variance Inflation Factor (VIF) and Tolerance Values. Also two-sample General Linear Model (GLM) of MANOVA was also used to establish and understand the nature of relationship that exists between organizational status and organizational performance.
3.4. Presentation of Empirical Results

Table1:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.196</td>
<td>0.457</td>
<td></td>
</tr>
<tr>
<td>CONTIGENCY_RESERVES</td>
<td>7.17E-010</td>
<td>0.000</td>
<td>0.152</td>
</tr>
<tr>
<td>NET_CLAIMS</td>
<td>1.33E-007</td>
<td>0.000</td>
<td>0.708</td>
</tr>
<tr>
<td>SHARE_HOLDERS_FUNDS</td>
<td>-3.16E-008</td>
<td>0.000</td>
<td>-1.110</td>
</tr>
<tr>
<td>LIQUIDITY RATIO</td>
<td>0.012</td>
<td>0.013</td>
<td>0.389</td>
</tr>
</tbody>
</table>

F = 72.7 ((df = 4, 5); P< 0.05), R² = 0.602.

L_R = 2.196 + 7.17 * 10^-10C_R + 1.33 * 10^-7N_C - 3.16 * 10^-8S_F + 0.012L

Table2:

<table>
<thead>
<tr>
<th>Status</th>
<th>N</th>
<th>Mean</th>
<th>Std.dev</th>
<th>GLM Vars.</th>
<th>Value</th>
<th>Df1, Df2</th>
<th>F</th>
<th>P_Val</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading</td>
<td>5</td>
<td>0.201</td>
<td>0.149</td>
<td>Pillai's Trace</td>
<td>0.546</td>
<td>1, 4</td>
<td>0.300</td>
<td>0.858</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>0.201</td>
<td>0.149</td>
<td>Wilks' Lambda</td>
<td>0.454</td>
<td>1, 4</td>
<td>0.300</td>
<td>0.858</td>
</tr>
<tr>
<td>Laggard</td>
<td>5</td>
<td>0.258</td>
<td>0.172</td>
<td>Hotelling's Trace</td>
<td>1.201</td>
<td>1, 4</td>
<td>0.300</td>
<td>0.858</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>0.258</td>
<td>0.172</td>
<td>Roy's Largest Root</td>
<td>1.201</td>
<td>1, 4</td>
<td>0.300</td>
<td>0.858</td>
</tr>
</tbody>
</table>
3.5 Discussion of the Empirical Results

Table 1 shows the Anova value (F) of 72.7 ((df = 4, 5); p< 0.05) is significant at 0.05 level. This shows that hypothesis is rejected. Consequently, there is a significant relationship between ERM variables and organizational performance of the insurance industry for the period of 2001-2010.

Table 2 shows that the observed Anova values (F) for all multivariate levels are not significant at 0.05 levels of significance (eg., Pillai’s Trace F (1, 4) = 0.3; P>0.05). Therefore, the null hypothesis is rejected. Although, the overall mean loss ratio of the leading insurance companies (overall mean = 0.201) outweighs that of the laggard insurance companies (overall mean = 0.258), the P value indicates that this difference in mean values is by chance and not a significant one. This result shows that insurance company status do not affect their organizational performance. Further clarification is depicted in table 3. Irrespective of the status of players in the Nigerian insurance industry, ERM can be adopted and it will further improve the organizational performance. The negative value of the co-efficient of C_R indicates that, for every one million naira increase in contingency reserve, there will be a corresponding increase of 0.000000000717 in company loss ratio. Same interpretation applies for net claim and liquidity ratio. The co-efficient of determination $R^2$ is 0.602. This implies that about 60% of the dependent variable (loss ratio) can be explained by the independent variables (contingency reserves, net claims, share_holders_funds, liquidity ratio), leaving about 40% to be explained by other factors. The $R^2$ value also indicates the overall effect size of the independent variables.

The Anova value (F) of 72.7 ((df = 4, 5); p< 0.05), is significant at 0.05 level. This implies that the model obtained can be used to forecast. The T and Beta values respectively show the relationships and strengths between individual predictor variable and the dependent variable. Both contingency reserve (T = 6.497 (P<0.05); Beta = 0.152) and net claims (T = 3.342 = (P<0.05); Beta = 0.708) respectively have significant positive impacts on organizational performance, thus, contingency reserve move in the same trend with loss ratio (an indicator for organizational performance) likewise net claims. Liquidity ratio (T = 0.907 (P>0.05); Beta = 0.389) has no...
significant impact on organizational performance. Shareholders’ funds (T = -2.579 (P<0.05); Beta = -1.110) has a negative significant impact on organizational performance, thus, shareholders funds and Loss ratio (an indicator for organizational performance) does not move in the same trend.

4.0 Conclusion

This study reveals that there is a joint cause significant relationship among the ERM variables and organizational performance. However, the individual relationship differs a bit. For example, contingency reserve, net claims and liquidity ratio have strong relationship than the shareholders’ funds. The reason had been that shareholders’ funds may be seen as regulatory risk which may have enough impact on the day the running of the organization.

5.0 Recommendations

It is however recommended that insurance companies operating in Nigeria should manage their risks (pure risks or insurance risks, market risk, operational risks, strategic risks, reputational risks, systemic risk and compliance risk) holistically through enterprise risk management mechanisms instead of the silo way previously adopted. Adoption of ERM will increase organizational performance in Nigerian insurance industry irrespective of the status of the firms that is either big or small. Moreover, ERM will further boost the reputation, financial, and strategic operations of insurance companies in Nigeria (Onafalujo and Eke, 2011). Insured confidence will also be increased and by extension creates customer value.

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