# Enterprise Risk Management and Performance of Nigeria's Brewery Industry

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**Abstract**

Given the complexity of today's business world, the process of planning, organizing, leading and controlling the activities of an organization in order to minimize the effect of risk on an organizations' performance is very important. This involves a risk management system which expands the process to include not just risk associated with accidental losses, but also financial, strategic operating and other risk. It is against this background that our paper examined the effect of enterprise risk management on performance of firms in the brewery industry in Nigeria. The study adopted the cross section survey design and copies of questionnaire were distributed to 375 respondent comprising top and middle level management staff of three major brewing firms in Nigeria. Using Z-test statistic, we found that enterprise Risk Management enhances the performance of firms in the Brewery industry in Nigeria. The study therefore recommends that managers in the brewery industry in Nigeria should continue to adopt and implement enterprise rise management as a tool to enhance organizational performance and this should be backed by policy.

**Keywords:** ERM, Performance; Brewery Industry; Nigeria

## 1.0 Introduction

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). Enterprise risk management expands the process to include not just risk associated with accidental losses, but also financial, strategic operating and other risk.

Enterprise risk management and internal control system are interwoven in that internal control is the system of controls, financial and otherwise, established by management in order to carry on the business of the enterprise in an orderly manner, ensure the adherence to management policies, safeguard the assets and secure as far as possible the completeness and accuracy of the record (Ozor, 2010). The internal control structure consists of management's policies, procedures to reasonably prevent material errors and irregularities from occurring or going undetected (Barnes, 2004). Enterprise Risk Management focuses on adopting a systematic and consistent approach to managing all the risks confronting an organization (Koontz, O'Donnell and Dietrich, 2000).

Risk management is a key part of growing the company's revenue and future profitability. Risk management links to conformance which leads to performance. Performance leads to sustainable profitability and growth. Hence, there is a direct linkage between Risk Management and profitability. The brewing industries although giants in the manufacturing sector are expose to such risks as Business Risks, operating risks, strategic risks, political and legal and regulatory risks. This has bear suggested as reasons which make it difficult for them to achieve their organizational objectives such as maximization of profit or shareholders wealth or growth. Brewing industries have thus found it difficult to fulfill the promise they have made to the various stakeholders.

The business risk that is inherent to these organizations's exposes them to injury or loss. These risk threaten the realization of the entity's objectives and in more serious cases, the organisation's ongoing existence. Strategic risks reflect the opportunities and threat faced by the brewing industries in Nigeria given the competitive environment. Whereas the operating risk is as the name implies arises when the right thing are done in the wrong ways as operations are being carried out. This is common in areas where sloppy is being performed, where there is lack of safety standards; where there are errors in equipment setting leading to poor quality in manufactured products and where there is failure to check product quality on a timely basis (Ozor, 2010). The inability of the brewery industry to manage their risk and capital on all valuable investment opportunities make it impossible for them to meet up with their obligation to shareholders. Therefore it is against this background that our paper seeks to determine the extent to which enterprise risk management affects firm performance in the brewery industry in Nigeria. The rest of this paper is further divided into the following sections. Section two; the review of related literature, section three; the methodology; section four the analysis of data while we concluded with section five.

## 2.0 Review of Related Literature

The theory of control is the building block of the science of management. The concept of control is all about measurement after planning. The principles of control include that it is linked to communication. A very powerful means of communicating involves any activity not placed into words, neither orally nor in writing. Everyone is conscious of the power of a smile, a gesture, or a fist as a means of communicating. The cliché "Actions speak louder than words" illustrates the importance of non-verbal communication. While this method is important in all managerial situations, it becomes a major managerial problem when people communicate across cultural boundaries (Massie, 2006: 112).

Enterprise Risk Management (ERM) to enhance organizational performance in the brewery industry in the Southern States of Nigeria consists of managements' policies and procedures to reasonably prevent material errors and irregularities and to prevent frauds and forgeries in the industry. Enterprise Risk Management focuses on adopting a systematic and consistent approach in the form of a paradigm for managing the portfolio risks of firms in the brewery industry.

Enterprise Risk Management (ERM) is supposed to reduce the probability of financial distress and allow firms to continue their investment strategies expecting smoother, steadier earnings. Beasely and Rclune (2004) asserted that Enterprise Risk Management (ERM) has emerged as a new paradign for managing the portfolio of risks that face organizations and policy makers continue to focus on mechanisms to improve corporate governance and risk management.

Smith and Stulz (2004) in a related empirical study supported the view that reducing earnings volatility in the presence of a convex income tax schedule could also provide a motivation for risk management activities. The duo focused on the costs associated with financial distress and costly external financing, taxes and managerial risk aversion. According to them risk management in the traditional sense usually refers to offsetting known risks by either purchasing insurance or engaging in financial engineering using such derivatives as warrants bonuses etc.

Conversely, ERM takes a holistic view of risk management and attempts to reduce the probability of large negative earnings and cash flows via the use of recent techniques in securities risk portfolio management (i.e. offsetting risks across the enterprise). Empirically, Smith and Stulz (2004) examined a sample of 106 firms by examining how financial, asset and market characteristics change around the time of ERM adoption. The effect of such independent characteristics, asset characteristic and market characteristic were analyzed and found potentially ambiguous in measuring the overall risk tolerances/volatility of the firms.

Much advancement in management are essentially improvements in the individual techniques of control. Control is the process that measures current performance and guides it toward some predetermined goal. The essence of control lies in checking existing actions against some desired results determined in the planning process. The essential elements of any control system are: a predetermined goal, plan, policy, standard, norm, decision, rule, criterion, or yardstick; a means for measuring current activity (quantitatively, if possible); means of comparing current activity with a criterion; some means of correcting the current activity to achieve the desired result (Massie, 2006).

The first element of a control system involves the answer to the question: What should be the results? This element forces attention on the future and what is desired or expected. The attempt to predict future events provides the basis for interpreting the meaning of events when they actually occur. Even poor prediction provides a framework for better understanding of current experience. The predetermined criterion may even be set arbitrarily. The goal may be judged by others to be bad. A useful control system does not evaluate the goodness of the goal; it merely provides a means by which activity can be directed toward an actual goal (Lawler, 2008).

The predetermined criterion should be stated explicitly. For this reason, quantitative statements are usually preferable. In production management, physical units, such as ton-miles of freight, units per machine-hour, or pounds of scrap page per unit of output, may provide a simple and direct yardstick for operations. In financial management, dollar values serve as explicit statements of norms. Often, financial managers use past achievements of the firm as crude yardsticks for controlling current operations, for example, the record of the past twelve months. The assumption is that past performance was not too bad and that if it can be equaled or surpassed, the firm will not decline. Marketing managers often use such industry data as benchmarks against which the company can compare its own sales efforts. They also develop quotas based on market potential to serve as predetermined goals (Massie and Douglas, 2005).

The second element in any control system is the measurement of actual performance. This step usually requires the greatest attention and expense; because records and reports must be devised to present actual performance must be in units similar to those of the predetermined criterion. Prompt reporting of actual performance increase the value of a control system. Recent improvements in data processing increase the speed of reporting this data (Robbins, 2004).

The degree of accuracy to which measurement is carried will depend upon the needs of the specific application. All measurement is accurate only to some limited degree. There are many instances in management when it is desirable to round a number to emphasize important magnitude. Concern over small errors might overshadow major factors and confuse the interpreter. The ability of a good manager to strike quickly at the heart of the meaning of past performance is a most important factor in successful management (Tanner, 2004).

Comparison of a criterion with actual performance indicates variations in activity. This key step adds meaning to the data provided by the control process. Because some variation can be expected in all activity, a critical question facing a manager is the determination of what amount of variation is large enough to be significant and worth attention. If limits of variation are not clear, the manager may waste time studying unimportant problems while failing to give sufficient time to pertinent issues (Massie, 2006).

The method of presenting comparisons of performance with the predetermined goal is an important question. The simplest and most direct method is usually the best. Graphical techniques provide means of visualizing important relationships, uncluttered by insignificant details. Anyone who has attempted to interpret large volumes of quantitative data will recognize the sense of futility that develops unless some simplified approach can be devised (Lawler, 2008).

The third element of a control system involves the study of relationships. Such techniques as ratios, trends, mathematical equations, and charts help add meaning to the measurements of actual performance by showing the relation of actual experience to the predetermined criterion (Massie and Douglas, 2004). The purpose of comparing past performance with planned performance is not only to determine when a mistake has been made but to enable the manager to predict future problems. A good control system will provide information quickly so that trouble can be prevented. A good manager will not be lulled into inactivity by success, but will remain alert to controls that indicate the need for some present action that will eliminate future potential problems before they develop (Robbins, 2004). The fourth element of a control system is the action phase of making corrections. This fourth element may involve a decision not to take any action – if the performance is under control.

Two basic types of error that faces the manager taking corrective action: (1) taking action when no action is needed and (2) failing to take action when some corrective action is needed. A good control system should provide some basis for helping the manager estimate the risks of making either of these types of error. Of course, the final test of a control system is whether correct action is taken at the correct time (Tanner, 2004).

On the Nigerian Brewery Industry, Nigerian Breweries Limited was the first to be established in 1946. It had its headquarters in Lagos. This coincidentally was the year that a pre-independence National Development Plan that spanned ten years was launched by the Colonial Government. After this plan, four other post-independence plans were launched namely 1962 – 1968, 1970 – 1974, 1974 – 1980, and 1981 – 1985. None of these plans had the objective of increasing manufacturing output in Nigeria. However, the industrial policy objectives of 1980 and 1988 filled these gaps. In the 1990s, many brewing companies had the problem of having to respond to the Nigerian Government's policy of use of local raw materials such as corn, sorghum etc to brew beer. Many of them had to fold up because of the high capital outlay needed to replace their brewing equipment. The brewing companies such as Nigerian Breweries Limited, and Guinness Nigeria Plc that were subsidiaries continued to send them malted barley, yeast, hops etc that were used for brewing (Amah, 2006).

## 3.0 Methodology

The cross sectional survey type was adopted for this paper. In practice enterprise risk are evaluated through the use of internal control questionnaires. This also forms the basis for the choice of the research design used for this study. The data were gathered from primary sources through the issue of questionnaire. The target population of the study were top management and middle management level of the three brewing firm with their factories and depots located in southern and northern parts of Nigeria. See Appendix (Table 1) depicts the population of the study:

It is not possible to interview all the respondents in the population which comprised all the top management and middle management staff in the firms. As a result we used the Taro Yamane formula to determine the sample size of our study. Using the Taro Yamane formula, we have;

$$n = \frac{N}{1 + N(e^2)}$$

where:

$N$ = is the sample size,

N = is the population

1 = is a constant,

$e^2$ = is the estimated standard error which is 5% for 95% confidence level.

$$n = \frac{6000}{1 + 6000(0.05)^2}$$

$$n = \frac{6000}{1 + 15} = \frac{6000}{16}$$

n = 375.

The sample sizes are distributed to Nigerian Breweries plc, Guinness Nigeria Plc, and Jos International Breweries at the rates of 188, 150 and 40 respectively giving a total sample size of 375. Data analysis refers to efforts made in order to categories, summarize and seek pattern and relationship with data collected. Yomere (1999) describes it as those techniques whereby the researcher extracts from the data, (meaningful) information that was not apparent initially and would enable a summary description of research work made. Hence we used the Z-Test statistic to determine the effect of enterprise risk management on performance of brewery industry in Nigeria.

## 4.0 Analysis of Data

From copies of questionnaire distributed to respondents, 350 out of 375 respondents making 93% of them strongly agreed or agreed that the implication of enterprise risk management could enhance the performance of firm in the brewery industry in Nigeria while 25 of them making 7% of them gave answers to the contrary has implications. The implication indicates that the integrative nature of enterprise risk management makes for performance optimization. This is because the characteristic of an integrated approach to all kinds of risks is better than the partial integration of similar risks within the organization. Testing the responses using Z-test statistic, we hypothesized that:

**$H_0$:** Enterprise Risk Management does not enhance the performance of firms in the Brewery industry in Nigeria

**$H_a$:** Enterprise Risk Management enhances the performance of firms in the Brewery industry in Nigeria

See Appendix (Table 2) for detail computation.

From Table 2, it is shown that the calculated Z-value which is 42.976 is greater than the table Z-value at 95% confidence level which is 1.645. So the null hypothesis that the implication of enterprise risk management does not enhance the performance of firms in the brewery industry is rejected and the alternative hypothesis that the implication of enterprise risk management enhances the performance of the firms in the brewery industry in Nigeria is accepted at 5% level of significance.

## 5.0 Discussion of Results and Conclusion

The findings in the study in which most of the respondents either strongly agreed or agreed that in the brewery industry in Nigeria, the implications enterprise risk management, control environment, quality of risk assessment procedures, impact segregation of duties and level of communication system all have a significant effect on firm performance are related to theories and a model. The theories are namely the control theory, internal control framework model and structural contingency theory of performance which the model is the enterprise risk management framework model.

Enterprise risk control is an important aspect of enterprise risk management as stipulated by Moeller (2007), also Massie (2006), was of the view that in responsibility accounting, costs are identified with those individuals who are responsible for their control. The finding that enterprise risk management in the brewery industry in Nigeria has a positive effect on firm performance has auditing implications. Conviser (2004) wrote that auditing is that aspect of accounting that is charged with the responsibility of the examined of the business and financial records to see that they are true and correct. An audit consists of a methodical review and objective examination of an enterprise's financial statements (Conviser, 2004).

Many boards of directors of companies find it helpful to assign primary risk oversight responsibility to a committee of the board. This board is called the audit committee. It is charged with directly overseeing the risk management function. It should receive regular reports of the enterprise risk management process from those members of senior management responsible for risk management of the enterprise. Similarly, the audit committee in turn should make regular reports to the full board of directors to ensure that the board members as a whole have an understanding of the risk profile of the entity and so can engage in strategic risk-information, decision-making appropriate to their leadership role (Branson, 2010).

The rule that most board of directors of registered companies delegate the primary oversights of risk management to the audit committee is consistent with the Company and Allied Matters Act. This rule requires the audit committee to discuss policies with respect to risk assessment and risk management. For many companies, however, the scope and complexity of enterprise risk management for it to have a positive effect on firm performance may dictate the consideration of establishing a dedicated risk management committee of the board of directors so as to force increased attention at the board level on risk management and oversight (Branson, 2010).

The finding that the implication of enterprise risk management could enhance the performance of firms in the brewery industry in Nigeria puts our paper in context. The implication of this finding is that the proper implement of the organization wide, system approach to managing all the risks of the organization could enhance the extent to which the organizational objectives are achieved and promises made to the stakeholders are fulfilled. This meant that the process affected by the 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 entity and manage risk to be within its risk appetite could provide reasonable assurance towards the achievement of the entity's goals and objectives.

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**Appendix**

Table 1: Population of the Study

| Companies | Sex | | Total |
|---|---|---|---|
| | Male | Female | |
| Nigeria Breweries Plc | 1668 | 634 | 2302 |
| Guinness Nigeria Plc | 1087 | 833 | 1920 |
| Jos International Breweries | 1012 | 766 | 1778 |
| Total | 3767 | 2233 | 6000 |

Source: Publication of NBL, Guinness Plc and JIB Annual Reports of 2009

**Questionnaire**

**Section 1: Personal Data**

1. Sex: Male [ ] Female [ ]
2. Marital Status: Married [ ] Single [ ] Widowed [ ] Separated [ ] Divorced [ ].
3. Age: Less than 20 years [ ] 21 – 30 years [ ] 31 – 40 years [ ] 51 – 60 years [ ] above 60 years [ ].
4. Highest Educational Qualification: Trade Certificate [ ] Diploma [ ] O.N.D. [ ] H.N.D. [ ] First Degree [ ] Second Degree [ ] Ph.D. [ ] Professional Qualification (Please state)____________________________________________

   ______________________________________________________

5. Status: Senior Staff [ ] Junior Staff [ ].

6. Duration worked in years: 1 – 5 years [ ] 6 – 10 years [ ] 11 – 15 years [ ] 16 – 20 years [ ] 21 – 25 years [ ] 26 – 30 years [ ] Above 30 years [ ].

**Section 2: Data on Implication Enterprise Risk Management**

For the Statements in numbers 7 – 24, use the following responses of Strongly Agree (SA) (5) Agree (A) (4), Undecided (3), Disagree (D) (2), Strongly Agree (SD) (1).

| | | RESPONSES | | | | |
|---|---|---|---|---|---|---|
| **S/N** | **STATEMENTS** | **SA** | **A** | **U** | **D** | **SD** |
| 7. | Staff in the internal audit department possess the requisite qualification | | | | | |
| 8. | Staff perform task that are commensurate to their Authority. | | | | | |
| 9. | Newly recruited staff undergo training while existing staff go for mandatory re-training programme. | | | | | |
| 10. | There are organizational performance factors that have been impacted upon by better implementation of enterprise risk management. | | | | | |
| 11. | The firms conform to the stipulated minimum standard(s) in the industry. | | | | | |
| 12. | Most firms in the industry have not contravened any of the ruled regulations that is established by such bodies as: NAFDAC, SON, etc. | | | | | |
| 13. | It seems corrupt practices by officials of the above bodies are ore prevalent in the south. | | | | | |
| 14. | The larger market in the southern states is not as a result of religious limitations. | | | | | |
| 15. | Risk assessment procedures proffered by both the internal and external auditors are strictly adhered to. | | | | | |
| 16. | Such controls as physical control of assets, separation of duties, rotation of staff, method(s) of arithmetic and accounting, etc. are strictly adhered to. | | | | | |
| 17. | Management letters and letters of weaknesses as proffered by the external auditors are reacted positively by top management. | | | | | |
| 18. | Enterprise risk management focuses on adopting a systematic and consistent approach to managing all of the risk confronting an organization. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 19. | Increases level of control of activities in the industry by such bodies as NAFDAC, EFCC, SON, ICPC, Customs tariffs and CAC impact negatively on the profit making performance of the firms. | | | | | |
| 20. | The implication of enterprise risk management has an impact on firm performance of the brewing companies in Nigeria. | | | | | |
| 21. | Firm performance is the extent to which the company fulfils the promises made to stakeholders. | | | | | |
| 22. | Firm performance is the extent the company's objectives are efficiently achieved in the most economic means. | | | | | |
| 23. | Most firms in the industry have experienced sanctions via firms by regulatory bodies for misleading the public. | | | | | |
| 24. | Most firms share general technical information in the industry through journals, periodicals. | | | | | |
| 25. | The level of control activities has significance effect on firm performance in the brewing industry in Nigeria. | | | | | |
| 26. | The quality of risk assessment procedures has a significance effect on firm performance in the brewing industry in Nigeria. | | | | | |
| 27. | The communication system has a position relationship with firm performance in the brewing industry in Nigeria. | | | | | |
| 28. | Middle level managers are wholly involved in planning and controlling of activities within their respective segments. | | | | | |
| 29. | There are separation of individuals within various departments and functional areas culminating little or no interdependencies within the industry. | | | | | |
| 30. | There exists greater proportionality and consistency in response to risks since the adoption of enterprise risk management by the company. | | | | | |