


**EFFECT OF EXECUTIVE COMPENSATION ON FINANCIAL PERFORMANCE OF LISTED NON-FINANCIAL FIRMS IN NIGERIA**

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p><b>Received</b> 20 February 2023</p> <p><b>Accepted</b> 08 May 2023</p>	<p><b>Purpose:</b> Examine the effect of executive compensation on the financial performance of listed non-financial firms in Nigeria.</p> <p><b>Theoretical framework:</b> The continuous rise in compensation of executives in Nigeria without a corresponding increase in firm performance has continued to generate intense debates and controversial opinions within the corporate environment. Consequently, the need to understand the degree of relationship between executive compensation (measured by salary emolument, bonuses, stock-based compensation and pension) and firm performance (measured by return on equity).</p> <p><b>Design/methodology/approach:</b> A correlational research design was used based on a filtered census population of 63 firms listed on Nigeria's stock exchange. Secondary data was obtained from the annual financial reports of these firms and analyzed using the generalized methods moments.</p> <p><b>Findings:</b> The study found salary emoluments, bonuses and stock-based compensation, as measures of executive compensation, have negative impact on the return on equity of listed non-financial firms in Nigeria. Where executive pension claims a positive impact on the return on equity of listed non-financial firms in Nigeria.</p> <p><b>Research, Practical &amp; Social implications:</b> Regardless of executive compensation being an incentivizing tool for the executive team, which has a significant impact on company strategy, decision-making, and value creation as well as enhancing executive retention, different components of executive compensation exert different effect on the financial performance of firms as confirmed by this research.</p> <p><b>Originality/value:</b> The research points out different executive compensation measures have different impacts on performance. Consequently, the need for stakeholders to determine the perfect combination of the compensation measures that best drive performance.</p>
<p><b>Keywords:</b></p> <p>Executive Salary; Executive Bonuses; Stock-Based Compensation; Executive Pension; Return on Equity.</p> <div data-bbox="172 994 480 1240" style="text-align: center;">  </div>	<p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i5.1570">https://doi.org/10.26668/businessreview/2023.v8i5.1570</a></p>

**EFEITO DA REMUNERAÇÃO DE EXECUTIVO NO DESEMPENHO FINANCEIRO DE EMPRESAS NÃO FINANCEIRAS LISTADAS NA NIGÉRIA**

**RESUMO**

**Objetivo:** Examinar o efeito da remuneração executiva sobre o desempenho financeiro de empresas não financeiras listadas na Nigéria.

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**Referencial teórico:** O aumento contínuo da remuneração dos executivos na Nigéria, sem o correspondente aumento do desempenho das empresas, continua gerando intensos debates e opiniões controversas no ambiente corporativo. Conseqüentemente, a necessidade de entender o grau de relação entre a remuneração executiva (medida por remuneração salarial, bônus, remuneração baseada em ações e pensão) e o desempenho da empresa (medida pelo retorno sobre o patrimônio líquido).

**Projeto/metodologia/abordagem:** Um projeto de pesquisa correlacional foi usado com base em uma população de censo filtrada de 63 empresas listadas na bolsa de valores da Nigéria. Dados secundários foram obtidos dos relatórios financeiros anuais dessas empresas e analisados usando os momentos dos métodos generalizados.

**Resultados:** O estudo constatou que emolumentos salariais, bônus e remuneração baseada em ações, como medidas de remuneração executiva, têm impacto negativo sobre o retorno sobre o patrimônio líquido de empresas não financeiras listadas na Nigéria. Onde as reivindicações de pensão executiva têm um impacto positivo no retorno sobre o patrimônio líquido de empresas não financeiras listadas na Nigéria.

**Implicações de pesquisa, práticas e sociais:** Independentemente de a remuneração executiva ser uma ferramenta de incentivo para a equipe executiva, que tem um impacto significativo na estratégia da empresa, na tomada de decisões e na criação de valor, além de aumentar a retenção de executivos, diferentes componentes da remuneração executiva exercem diferentes efeito sobre o desempenho financeiro das empresas, conforme confirmado por esta pesquisa.

**Originalidade/valor:** A pesquisa aponta que diferentes medidas de remuneração executiva têm diferentes impactos no desempenho. Conseqüentemente, a necessidade de as partes interessadas determinarem a combinação perfeita das medidas de remuneração que melhor impulsionam o desempenho.

**Palavras-chave:** Salário Executivo, Bônus Executivo, Remuneração Baseada em Ações, Previdência Executiva, Retorno sobre o Patrimônio Líquido.

## EFFECTO DE LA COMPENSACIÓN EJECUTIVA EN EL DESEMPEÑO FINANCIERO DE LAS EMPRESAS NO FINANCIERAS COTIZADAS EN NIGERIA

### RESUMEN

**Propósito:** Examinar el efecto de la compensación ejecutiva en el desempeño financiero de las empresas no financieras que cotizan en bolsa en Nigeria.

**Marco teórico:** El continuo aumento de la compensación de los ejecutivos en Nigeria, sin el correspondiente aumento en el desempeño de la empresa, continúa generando intensos debates y opiniones controvertidas en el entorno corporativo. En consecuencia, la necesidad de comprender el grado de relación entre la compensación ejecutiva (medida por compensación salarial, compensación basada en acciones y pensión) y el desempeño de la empresa (medido por el retorno sobre el capital).

**Diseño/metodología/enfoque:** Se utilizó un diseño de investigación correlacional basado en una población censal seleccionada de 63 empresas que cotizan en la bolsa de valores de Nigeria. Los datos secundarios se obtuvieron de los informes financieros de estas empresas y se analizaron utilizando momentos de métodos generalizados.

**Resultados:** El estudio encontró que los emolumentos salariales, las bonificaciones y la compensación basada en acciones, como medidas de compensación ejecutiva, tienen un impacto negativo en el rendimiento del capital de las empresas no financieras que cotizan en bolsa en Nigeria. Donde los reclamos de pensiones de ejecutivos tienen un impacto positivo en el rendimiento del capital de las empresas no financieras que cotizan en Nigeria.

**Investigación, práctica e implicaciones sociales:** independientemente de si la compensación ejecutiva es una herramienta de incentivo para el equipo ejecutivo, tiene un impacto significativo en la estrategia de la empresa, la toma de decisiones y la creación de valor, además de aumentar la retención de ejecutivos, diferentes componentes de ejecutivos. compensación tienen diferentes efectos en el desempeño financiero de las empresas, como lo confirma esta investigación.

**Originalidad/Valor:** La investigación muestra que diferentes medidas de compensación ejecutiva tienen diferentes impactos en el desempeño. De ahí la necesidad de que las partes interesadas determinen la combinación perfecta de medidas de recompensa que impulsen mejor el rendimiento.

**Palabras clave:** Salario Ejecutivo, Bonificación Ejecutiva, Compensación Basada en Acciones, Pensión Ejecutiva, Retorno sobre Capital.

## INTRODUCTION

Globally, the corporate environment is characterized by intense competition to achieve relative advantage. Every company maintains achieving this by striving to maximize profits and improve the welfare of stakeholders thus, assessing performance to find out the company's current position compared to competing companies (Hidayah et al, 2021). Improving corporate performance mostly lies under the gamut of the executives (agents) who seemingly work to enhance the profitability of the firm for the benefit of the shareholders (owners). The relationship between executive compensation and firm performance has generated research interest with the underlying assumption that executives tend to be opportunistically self-interested at the expense of shareholders' interests (Jensen, 1986). Executive compensation has received considerable attention in recent years because of its influence on corporate governance of organizations receiving serious attention from scholars and researchers (Wang et al, 2021); Shareholders, media, and the public (El-Sayed & Elbardan, 2016) and regulators & institutions. Thus, becoming a global phenomenon in corporate finance literature.

Although Executive compensation has been a major corporate governance mechanism to solve agency problems, it has become a problem itself. An improperly compensated executive can cost shareholders money and can produce an executive who lacks the incentive to increase profits and boost the share price. The importance of developing a compensation strategy that aligns the overall goals and growth objectives of the business with each executive's personal financial gain can result in attracting and motivating great leaders cannot be overemphasized.

Due to the rising pay of CEO/Executive Compensation in developed countries, much attention has been focused in that direction unlike in Nigeria where executive compensation has received little attention seemingly because of the nature of this concept (Olaniyi et al., 2017). In Nigeria, the most common types of executive compensation include cash salaries, bonuses, and allowances but with the continuous conflicting forces of the executives' desire to maximize their pay and the shareholders' penchant to maximize firm value, the debate over the existing nature of relationship between executive compensation and firms' performance is far from being over.

The non-financial sector is the largest sector in Nigeria, driving the economic growth and development prospects of the country. This sector houses large industries such as the Agriculture, Conglomerate, Construction/Real Estate, Consumer Goods, Industrial Goods, ICT, Natural Resources, Oil & Gas, Health Care as well as Services Sector (NSE Report, 2020).

The importance of the Non-financial sector to the developmental strides of Nigeria's economic performance is very significant as it stimulates employment generation, economic growth and also contributes to the country's Gross Domestic Product (GDP) (Arazu et al. 2017; Muzata and Marozva 2022). However, the continuous rise in compensation of executives in the sector without corresponding increase in firm performance, and the shareholders' wealth maximization objective, has continued to generate intense debates and controversies among corporate analysts and policy makers (Muzata & Marozva, 2022). This unfortunate trend can lead to bankruptcy and corporate collapses in the affected organizations, hence the need to empirically interrogate the relationship between executives' compensation and financial performance of listed non-financial firms in Nigeria.

Previous empirical studies on the relationship between Executive Compensation and Firm Performance have continued to yield conflicting findings. While many of these studies have established a negative, weak and no relationship (Al- Azhary, 2022; Singh, 2021; Rath, 2020; Cieslak et al 2021; Jiang & Zhang, 2018; Olaniyi et al, 2017), others have established positive and strong relationship (Ahamed, 2022; Omamo et al., 2022; Al- Shammari, 2021; Ma, 2021; Rehman et al, 2021; Wu, 2021). Based on these conflicting findings, this study therefore becomes imperative to further interrogate the nature of direction of this relationship between executive compensation and firm performance of listed non-financial firms in Nigeria.

Additionally, methodological analyses of studies conducted on the relationship between executive compensation and firm performance in Nigeria are sparsely available and have employed varying forms of statistical methods. For instance Ekienabor et al (2017) studied the Influence of Chief Executive Officer's Compensation on Firms' Performance in the Nigeria Banking Industry using the Panel Least Square Techniques. However, there is evidence of dearth studies especially for Nigeria that used GMM model to investigate nature of relationship between executive compensation and firm performance of listed non-financial firms in Nigeria. The application of GMM model is very imperative as it attempts to explore both the short run and long run impact of executive compensation on the financial performance of listed non-financial firms in Nigeria. Understanding the long run impact of these variables is important for the sustainability of the firms as going-concern entities. The study is structured into five sections as follows: the first section is the introduction, the second section is the review of literature, the third section examined the methodology and analysis of data, the fourth section focused on results and the discussion of findings, while the fifth section is the concluding part

of the article and presents the conclusion, managerial implications and suggestions for future research.

## LITERATURE REVIEW

### Executive Compensation

Executive compensation is the financial and other non-financial benefits received by an executive in return for services rendered to an organization. Empirically, Kim et al (2017) explained executive compensation as being composed of the financial compensation and other non-financial awards received by an executive from their firm for their service to the organization. This comprises of fixed salary, variable performance-based bonuses (cash, shares or stock options) and benefits and other prerequisites all ideally configured to consider government regulations, tax law, the desires of the organization and the executive (Emmanuel et al., 2017).

Generally, Executive compensation is set by the board of directors, specifically by the compensation committee consisting of independent directors, with the purpose of incentivizing the executive team, who have a significant impact on company strategy, decision-making, and value creation as well as enhancing executive retention. The executives of every company are significantly the decision makers, corporate strategy formulators and the overall value creators of the company. Consequently, these executives should be incentivized so that they adopt those strategies, investments, and actions that result in an increase in shareholder value.

In practice, previous studies (Ntim et al., 2019; El-Sayed & Elbardan, 2016) note that total executive compensation is broadly comprised of two models. Firstly, the total cash remuneration that is fixed compensation (comprising the base salary, annual bonus, contribution, and other monetary pay and benefits-in-kind). Secondly, the Equity-based remuneration/ Variable compensation (the value of granted equity, value of awarded long-term incentive plans and options awarded either as intrinsic or estimated). Similarly, Singh et al., (2021) argued executives' are said to play major roles in corporate governance, company's growth and development and in generating profits to the shareholders and are consequently entitled to two types of remunerations in the fixed remuneration which includes, basic salary, pension, housing allowances, and secondly performance-based remunerations which include bonus, shares, and share options. This study adopts the Nascimento et al. (2020)'s four dimensions of executive compensation, made up of salary emolument, bonuses, pension, and stock-based compensation, which are explained below.

### **Salary Emolument**

This is a fixed amount of money paid to an employee by an employer in return for work done (Davis et al. 2022). Base salary is the largest component of the total compensation package for most employees which does not include other benefits from an employer (Hofmann, 2015). Unlike employee salaries which are paid monthly, or biweekly, executive salaries are usually set on a yearly basis. According to Wu (2021), executive salary is designed as a motivating factor to improve the firm performance, hence increasing the firm's value.

### **Bonuses**

These are awards given to managers if a given benchmark is achieved. (Singh et al. 2021; Omamo et al. 2022) opined that executive remuneration is a performance motivating tool that encompasses incentives in the form of cash bonuses which are awarded in lump sum when the operational year ends. The most common measures for bonuses are based on accounting data which elicits measures that are directly linked to the executives' specific areas of responsibility. Bonuses are usually paid to the executives upon attaining previously set goals. Studies have suggested bonuses to be a driving factor for performance, for instance, Omamo et al. (2022) argues executive bonuses are aimed at motivating executives to pay more attention on the company's key objectives of increasing shareholder value and in turn their own wealth. Cash bonuses are used to reward executives for their short-term successes in the firm (Singh et al. 2021). Singh et al. (2021) further argued that executive cash compensation (bonuses) are significantly positively associated with firm performance.

### **Stock-Based Compensation**

Traditionally, stock-based compensation plans have been used by firms to reward top management and key employees and to link their interests with shareholders (Emmanuel et al.,2017). Previous studies suggest that granting equity to employees can align their interests with that of the shareholders of the company. The use of stock-based compensation as a solution to agency problems between shareholders and managers has increased dramatically. Riyadh et al., (2022) suggest managerial stock ownership motivates managers to improve performance, increasing the firm value which further confirms the similarities between the managers and shareholders in advancing the firm for the long term.

However, these contracts induce executives to make resource-allocation decisions designed to increase shareholder value sometimes at the expense of other stakeholders, including workers and taxpayers (Kotnik & Sakinc, 2022).

### **Pension**

This is considered as a guaranteed payment to employees in retirement by the employer (Hlaing & Stapleton, 2022). It is a debt-like compensation, or unsecured debt claims against the firm, in favor of the executives (Hlaing & Stapleton, 2022). Generally, it is expected that pension plan is set by the firm to pay executives a fixed amount at or after their retirement unless the firm goes to bankruptcy (Ngo et al. 2022). However, in the event of bankruptcy, the firm treats these pension plans as unsecured debts. Based on this defining feature, it is expected that executive pensions seamlessly align the manager's interests with that of (unsecured) debt holders. Performance-wise, executive pensions motivate executives to manage their firms conservatively to reduce the risk associated with their pension plans (Kwak, 2018).

### **Financial Performance**

Firm financial performance is generally defined as a measure of the extent to which a firm uses its assets to generate revenues. Financial performance is the company's financial condition over a certain period that includes the collection and use of funds measured by several indicators of capital adequacy ratio, liquidity, leverage, solvency, and profitability (Fatihudin, 2018).

According to Gentry and Shen (2010) to assess the financial aspect of firm performance, organizational researchers generally use either accounting-based measures of profitability such as return on assets (ROA), return on sales (ROS), and return on equity (ROE), return on investment (ROI), or market-based measures such as Tobin's Q and market return which indicate the market value or the share of the firm as well as the financial prospect of the firm in the future. Accounting-based measures, including profitability, efficiency, liquidity, gearing, and investment ratios, are calculated using the figures from the financial reports and may represent a firm's financial performance. These ratios depict the success of a firm in generating profits or returns from the resources owned. In contrast, Practically, due to the rising mistrust of accounting data from the firms, it has been suggested that investors should employ market indicators for decision making (Nguyen, 2021). The choice of whether to use accounting or market-based calculations for measuring a firm's financial performance depends upon the

specific aims of the research (Emmanuel, et al., 2017). For the purpose of this research, accounting based measure of financial performance, that is, Return on equity will be adopted.

### **Return on Equity**

This is a measure of the profitability of a firm in relation to the equity, arrived at after dividing net income by shareholders' equity (Ahamed, 2022). ROE is also seen as an accounting-based measure which shows what investors get out of their investment, and further explains that a firm with greater ROE has the ability to generate income from within than that with lower ROE (Ahamed, 2022). Fallatah (2015) explained that ROE is the best measure to find the relationship between CEO's pay and firm performance as it measures the profitability of a firm generated as compared to the shareholder equity (Bansal et al., 2023).

### **Relationship Between Executive Compensation and Financial Performance**

Several empirical studies, especially in the last two decades examined the relationship between executive compensation and firm performance in both developing and developed countries, in an attempt to provide convincing evidence about the relationship between these variables. The results of these studies have generally had dichotomous outcomes. Some studies reporting a weak pay-performance relationship, other studies establishing a strong pay-performance relationship while there are also few studies that reported a negative association between executive compensation and firm performance.

Ahamed, (2022) analyzed the relationship between CEO compensation and bank performance in Bangladesh. Finding CEOs' compensation package is positively and significantly related to the bank performance. In accordance, Ibrahim and Ahmed (2020) considered the effect of executive compensation and share ownership on financial performance of listed commercial banks in Nigeria. Adopting a Robust Ordinary Least Square regression technique for the estimation, their study found CEO Pay has positive effect on financial performance of banks. Recommending that management should tie the payment of CEO of the banks to performance.

Adversely, Hassen (2015) reviewed the effect of CEO compensation on firm performance of French family firm. Using the multiple regression method over a period of four years (2007- 2010). The study revealed that excess remuneration paid to executives has a negative impact on financial performance. The result confirmed CEO compensation is used by families as a tunneling mechanism that exacerbates agency costs. On the same note, Olalekan



and Bodunde (2015) considered the impact of CEO pay on performance of 11 selected Nigerian quoted banks between 2005 and 2012, using a dynamic Generalized Method of Moments (GMM). The study revealed that the CEO pay exerts significant but negative influence on bank performance in Nigeria. This study therefore concludes that rather than being an important corporate governance mechanism to align the interests of CEO with those of shareholders, the CEO pay of Nigerian quoted banks is indeed part of agency problem in the industry.

Establishing inconsistent results, Dias, (2020) Traced the links between Executive Compensation Structure and Firm performance in Brazilian market finding a positive relationship between the performance of companies and the variable incentives of executive compensation, especially the long-term incentive, as well as a negative relationship between the performance of firms and the fixed component of the compensation structure. Abrokwah et al (2018) tested the impact of short-term and long-term executive compensation packages on firm risk and also testing how these compensation and risk relationships were impacted by the financial crisis. Their study was conducted using a fixed-effect model specification with panel data from the ExecuComp dataset over the annual sample period from 1992 to 2015 in the United States. The study established the relationship between executive compensation components and firm risk differs across sects of the economy. Specifically, the bonus share of compensation negatively impacted firm risk in the financial services industry, while it positively impacted risk in the transportation, communication, gas, electric and services sectors. Additionally, long-term compensation share exhibits an inverse relationship with firm risk in the financial services, manufacturing and trade industries.

### **Theoretical Review**

Although different theories have been used to explain the relationship between executive compensation and firm performance (such as the Stewardship Theory, Human Capital Theory, and the Agency Theory), the field is still dominated by the perfect contracting approach of the Agency Theory (Nidumolu, 2018). This study is laid on the theoretical foundation of the traditional Agency theory. Agency theory is at the core of any research trying to determine whether a correlation exists between performance and executives' pay. The theory defines how to best categorize relationships in which one party (the principal, defined as the shareholder) determines the work, which another party (the agent, defined as the Chief Executive Officer) undertakes (Eisenhardt, 1989). Amongst other concepts, the theory argues that under difficult monitoring conditions, such as imperfect information and uncertainty, an

agency problem may arise in the form of moral hazard. It is the condition under which the principals cannot be sure if the agent has put forth his best effort. Since the executive's compensation will be the same regardless of how much or how little the shareholder will benefit from his work, a fixed salary might create a disincentive for taking value maximizing risks and putting forth his best effort.

## METHODOLOGY

The correlational research design was adopted in this study so as to reflect the strength and/or direction of the relationship between the variables which can either be positive or negative. The population of the study is comprised of all the 106 non-financial firms listed on the Nigeria stock exchange as at 31<sup>st</sup> January, 2021. The entire population runs across various industries like Agriculture, Construction/Real Estate, Consumer/Industrial Goods, Oil and Gas, Health Care and the Services Sector. The census sampling method was adopted, where all the 106 members of the population were studied. The filtering method was further used as a sieving criterion to select firms that fall within the following characteristics: i) Firms whose annual reports contains all the information needed; ii) Firms whose annual reports is complete within the period under review (2012-2021); and iii) Firms that have not carried out any form of merger or acquisition to the extent of affecting their financial statements.

The study obtained data from secondary sources (that is, annual reports from the documented archives of sample firms). Further extracting variables of the study which are Salary, Bonuses, stock-based compensation and pension as a measure of the independent variable (executive compensation) and the independent variable (return on equity). Firm size, firm age and board size were adopted as control variables to ensure a more robust outcome. To test the study hypothesis which are; H<sub>01</sub>: Executive Salary Emoluments does not exact significant effect on the financial performance of listed non-financial firms in Nigeria.

H<sub>02</sub>: Executive Bonuses does not significantly affect the financial performance of listed non-financial firms in Nigeria.

H<sub>03</sub>: There is no significant effect of Stock-Based compensation on the financial performance of listed non-financial firms in Nigeria.

H<sub>04</sub>: There is no significant effect of Executive pension on the financial performance of listed non-financial firms in Nigeria.

The panel cross sectional and time series secondary data collected were analysed using the Generalized Moment of Methods (GMM). The concept of a dynamic panel data analysis is

to capture the dynamic effect/adjustment speed in the stated model. It is to estimate the rate at which capacity utilization for the firms for the previous year is able to adjust to the equilibrium in the current year. If the coefficient of the lag ( $\alpha > 1$ , it means that it adjusts quickly; if ( $\alpha = 1$ , it means that adjustment is simultaneous and if ( $\alpha < 1$ , it implies that there are no simultaneous adjustments). The decision rule for the rejection or acceptance of any of the postulated null hypotheses is premised on the results of the Probability Value (PV). In the instance where the result shows a PV below 5% or 0.05 (that is,  $PV < 0.05$ ), it would deduce that the regressor in question is statistically significant at 5% level; otherwise, it is not significant at that level.

### Model Specification

This study uses the System Generalized Method of Moment Model for its estimation. The model is adapted from Ingriyani and Chalid (2022) and presented as:

$$\text{PERF}_{it} = \alpha_0 + \beta_1 \text{PERF}_{it-1} + \beta_2 \text{EXSE}_{it} + \beta_3 \text{EXBO}_{it} + \beta_4 \text{EXSTO}_{it} + \beta_5 \text{FSIZE}_{it} + \beta_6 \text{FAGE}_{it} + \beta_7 \text{BSIZE}_{it} + \mu_i + \nu_{it}$$

Where:  $i=1,2,\dots,30$        $t=1,2,\dots, 10$

$\alpha, \beta$  are parameters of the model

$\mu_i$  is the firm specific error term;

$\nu_{it}$  is the composite error term

PERF<sub>it</sub>: Vector of financial performance (i.e. Return on Equity)

EXSE: Executive Salary Emoluments

EXBO: Executive Bonus

EXSTO: Executive Stock-Based Compensation

EXP: Executive Pension

FSIZE: Firm Size

FAGE: Firm's Age

BSIZE: Board Size

## RESULTS AND DISCUSSIONS

### Descriptive Statistics

Descriptive Statistics are used to present quantitative descriptions in a manageable form. Descriptive statistics measures variability. Measures of variability, or the measures of spread, aid in analysing how spread-out the distribution is for a set of data. Variability is the extent to which data points in a statistical distribution or data set diverge from the average, or mean, value as well as the extent to which these data points differ from each other. There are four commonly used measures of variability: range, mean, variance and standard deviation. In this study, the standard deviation was used to determine if the data has a normal curve or other

mathematical relationship. Bigger variances cause more data points to fall outside the standard deviation. Smaller variances result in more data that is close to average and hence normally distributed. Table 1 shows the standard deviations are small compared to their mean values respectively. This implies that the statistical mean provides a good fit of the observed data (Field, 2001), and the data are normally distributed.

Table 1 Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	630	0.9052623	2.051418	-7.901165	39.5
ESE	630	7.71523	0.76101	5.230449	9.96426
EB	630	2.42E+07	6.20E+07	-2.25E+07	6.32E+08
ES	580	-3.318231	2.523233	-13.15436	0.0158891
EP	550	17.32269	1.862401	11.50218	23.54641
FS	630	10.24465	0.8741452	7.680607	12.86243
FA	630	35.00794	20.38559	2	90
BS	630	9.246032	2.911756	4	20

Source: Author's computation using Stata 16 SE, 2022

## Correlation

Correlation implies the degree of association between two variables, in other words correlation coefficient ( $r$ ) is a measure of the direction and strength of a linear relationship among variables. It is important to note that correlation coefficients range from -1 to +1 the positive or negative sign tells us the direction of the relationship and the number tells us the strength the relationship. Therefore, the most common way to quantify this relationship is the Pearson product moment correlation coefficient also called PPMCC or PCC or Pearson's  $r$ . The positive (+1.00) means a perfect positive relationship between the variables, (0.00) means no relationship between the variables while (-1.00) means perfect negative relationship. For this study, result reveals that, Return on Equity (ROE) correlates with Executive Salary Emoluments (ESE), Executive Bonus (EB), Executive Stock-Based Compensation (ES), Executive Pension (EP), Firm Size (FS), Firm's Age (FA), Board Size (BS) by 0.0388, 0.0392, 0.0496, 0.0628, 0.0219, 0.0569 and 0.0187 respectively which indicates no strong correlation with the independent variables (see table). Thus, multicollinearity will not be an issue in the model.

Table 2 Correlation Matrix

VARIABLES	ROE	ESE	EB	ES	EP	FS	FA	BS
ROE	1							
ESE	0.0388	1						
EB	0.0392	0.2786	1					
ES	0.0496	0.0239	0.1166	1				
EP	0.0628	0.1049	-0.1898	-0.0448	1			
FS	0.0219	0.6042	0.1527	-0.0789	0.1516	1		
FA	0.0569	-0.1333	-0.0476	-0.3008	-0.1226	-0.1122	1	
BS	0.0187	0.3883	0.0824	0.0026	0.2546	0.3806	0.0274	1

Source: Author's computation using Stata 16 SE, 2022

### Data Analysis

This study follows a dynamic estimation method of generalized moment of methods (GMM) to ascertain the effect of executive compensation on financial performance. It should be noted that time selection is restricted by data availability. The probability value (p-value) aids the researcher in accepting or rejecting the null or alternative hypothesis. If the P-value is less than or equal to 0.01 (1%) reject the null and accept the alternative hypothesis at 1% level of significance. If the p-value is less than or equal to 0.05 (5%), reject the null and accept the alternative hypothesis at 5% level of significance and if the p-value is less than or equal to 0.10 (10%), reject the null hypothesis and accept the alternative hypothesis at 10% level of significance.

### Determination of GMM Technique

This study will be following Bond (2001) rule of Thumb for deciding between difference and system GMM. First the autoregressive model is estimated by Pooled OLS for the coefficient of lagged dependent variable ( $\phi$ ) which is considered an upper-bound estimate, while the estimated corresponding fixed effects estimate is considered a lower-bound estimate. Tables 3 and Table 4 reports a summary of estimated coefficient of the lagged dependent variable.

Table 3 - Summary: Difference or system GMM  
ROE model

ESTIMATORS	Coefficients
Pooled OLS	0.589*** (0.180)
Fixed Effects	0.0962 (0.0831)
One-Step Diff. GMM	1.698 (1.408)
Two-Step Diff. GMM	0.203 (0.716)
One-Step Syst. GMM	0.287** (0.133)
Two-Step Syst. GMM	0.287** (0.118)

Source: Author's estimation (2022)

Secondly, the difference GMM is estimated for both One-Step Difference and Two-Step Difference GMM, and the results are reported in Table 3. Likewise, system GMM is estimated for both One-Step System and Two-Step System GMM, and the results are reported in Table 3. Based on the underlying assumptions, the estimated coefficient of the lagged dependent variable seems to favour the use of both one-Step System GMM and two-Step System GMM. The coefficient of the estimated lagged dependent variable in both models are more than the coefficient estimated with fixed effect and statistically significant. In other words, the obtained results are above the fixed effects estimate, this suggests that both One-Step Difference and Two-Step Difference GMM estimate are upward biased because of weak instrumentation and therefore a system GMM should be preferred instead.

From Table 3 which summarized the estimated results, there is an indication that both One-Step System and Two-Step System GMM are appropriate for the estimation. In other words, the interpretations of the results and hypothesis will depend on both one-step system and two-step system GMM. To validate the efficiency of the internal instruments that are included in the SGMM technique, and to ensure that such instruments are not over-identified, the test for autocorrelation (AR (1) and AR (2)) and Sargan test for are performed for respectively the absence of autocorrelation and validity of instruments. The instrument ratio for the different estimations is expected to be greater than 1, in order to satisfy the condition that the instruments are not proliferated. This research satisfies the condition in all cases.

### Empirical Results

Assessment of the plausibility of the hypotheses was carried out on the available data, using the GMM panel model regression. One-step system and two-step system GMM were

favoured due to their consistency in the result of lag of the dependent variable. The level of significance is limited to ten per cent in this regression analysis. Table 4 shows result of one-step and two-step generalized moment of methods (GMM) which is used to estimate the dynamic panel data. The table showed the result of Arellano & Bond estimates for the dynamic panel data. The results of Table 4 revealed previous year's performance of the firms impacts positively to its current year. It shows that there is a significant relationship between the firm performance and its lagged value with a coefficient of 0.287 for one step system GMM and 0.287 for two-step system GMM. This means that the executive compensation for the non-financial firms for previous year does adjust at the same time and equally in the current year.

Table 4 - Impact of executive compensation on ROE

VARIABLES	(1)	(2)	(3)	(4)
L.ROE	1.698	0.203	0.287**	0.287**
	(1.408)	(0.716)	(0.133)	(0.118)
ESE	-0.187	0.550	-0.131**	-0.0881**
	(0.714)	(0.528)	(0.228)	(0.259)
EB	-1.12e-09	1.86e-09*	-1.46e-10	-1.40e-10
	(2.79e-09)	(1.39e-09)	(1.05e-09)	(1.03e-09)
ES	-0.0181	0.00516	-0.0245**	-0.0222***
	(0.0359)	(0.0261)	(0.0358)	(0.0511)
EP	-0.152	0.0408	0.0603	0.0597
	(0.201)	(0.0736)	(0.0610)	(0.0651)
FS	-0.658	-0.108	-0.0740	-0.0652
	(0.647)	(0.406)	(0.175)	(0.180)
FA	1.095	0.394	0.00379	0.00370
	(0.754)	(0.366)	(0.00566)	(0.00571)
BS	0.0314	-0.00482	0.0189	0.0145
	(0.0595)	(0.0528)	(0.0380)	(0.0378)
Constant			-2,278	-2,102
			(1,689)	(1,799)
Observations	500	500	563	563
Year Dummies	Yes	Yes	Yes	Yes
Number of Companies (n)	63	63	63	63
AR(1)	0.256	0.268	0.256	0.268
AR(2)	0.527	0.507	0.527	0.507
Sagan Test	0.025	0.025	0.025	0.025
Hansen Test	0.561	0.561	0.561	0.561
Instruments (i)	44	42	48	49
Instrumental Ratio (n/i)	1.4318	1.5	1.3125	1.2857
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. One-step Difference (1), Two-step Difference (2)., One-step System (3) and Two-step System (4)				

$H_{01}$ : Executive salary emoluments does not have significant effect on the financial performance of listed non-financial sector firms in Nigeria.

The one-step system GMM result in Table 4 indicated that Executive Salary Emoluments (ESE) is negative and statistically significant at 5% with coefficient value of -0.131, while the two-step System GMM result in Table 4 (column 4) also indicated that

Executive Salary Emoluments (ESE) is negative and statistically significant at 5% with coefficient value of -0.0881. Both results are statistically significant at 5%. This implies that the Executive Salary Emoluments (ESE) has a negative impact on the Return on Equity (proxy for financial performance); thus, suggesting that, with a percentage increase in the Executive Salary Emoluments (ESE), the Firms will see about 0.131 per cent decrease in performance as explained by their return on equity (ROE). This result is affirmed by two-step system GMM which indicate that a percentage increase in the Executive Salary Emoluments (ESE), the Listed Non-Financial Firms in Nigeria will see about 0.0881 per cent decrease in performance as explained by their return on equity (ROE). Furthermore, the Executive Salary Emoluments (ESE), has a p-value lesser than 0.05 (5%) level of significance which implies that the coefficient is statistically significant at 5%. Hence, the null hypothesis “Executive Salary Emoluments does not have significant effect on financial performance” is hereby rejected. We therefore conclude that the relationship observed between the Executive Salary Emoluments (ESE), and the return on equity (ROE) can be generalizable. The result is consistent with two-step system GMM as an estimator.

H<sub>02</sub>: Executive bonuses does not significantly affect the financial performance of listed non-financial sector firms in Nigeria.

The result in Table 4 indicates with one step system GMM, Executive Bonuses (EB) which is a component of executive compensation shows a negative but not significant impact on Return on Equity (proxy for financial performance), with coefficient value of -1.46e-10 (0.000000000146); while the result under the two step System GMM also shows a negative but significant impact, with a coefficient value of -1.40e-10 (0.00000000014). Both results are not statistically significant. This implies that Executive Bonuses has a negative impact on the Return on Equity; thus, suggesting that, there is a potential decreasing impact of executive bonus but such is not statistically significant given the scope of this research. This result is affirmed by two-step system GMM which also indicate that there is a potential decreasing impact of executive bonus but such is not statistically significant given the scope of this research. Furthermore, Executive Bonuses has a p-value greater than 0.1 (10%) level of significance which implies that the coefficient is not statistically significant. Hence, the null hypothesis “Executive Bonuses does not significantly affect the financial performance of listed non-financial sector in Nigeria” cannot be rejected. We therefore conclude that the Executive Bonuses does not influence Return on Equity but has a potential negatively impact which



cannot be generalised. The result is consistent with two-step system GMM as an estimator with the same coefficient value and level of significance.

H<sub>03</sub>: There is no significant effect of stock-based compensation on the financial performance of listed non-financial sector firms in Nigeria.

The result in Table 4 indicates that Stock-Based compensation under one step system GMM has a negative coefficient value of -0.0245 and statistically significant at 5%, while Stock-Based compensation under the two stem System GMM as reported in Table 2 column 4 in has a negative coefficient value of -0.0222 and statistically significant at 1%. Both results are consistent and statistically significant. This implies that the Stock-Based compensation has a negative impact on the Return on Equity (proxy for financial performance); thus, suggesting that, with a percentage increase in the Stock-Based compensation (ES), the Listed Non-Financial Firms in Nigeria will see about 0.0245 per cent decrease in performance as explained by their return on equity. This result is affirmed by two-step system GMM which indicate that a percentage increase in the Stock-Based compensation (ES), the Listed Non-Financial Firms in Nigeria will see about 0.0222 per cent decrease in performance as explained by their return on equity. Furthermore, the Stock-Based compensation (ES) has a p-value lesser than 0.05 (5%) level of significance which implies that the coefficient is statistically significant at five percent. Hence, the null hypothesis “There is no significant effect of Stock-Based compensation on the financial performance of listed non-financial sector in Nigeria is hereby rejected. We therefore conclude that the relationship observed between the Stock-Based compensation (ES), and the return on equity can be generalizable. The result is consistent with two-step system GMM as an estimator.

H<sub>04</sub>: There is no significant effect of executive pension on the financial performance of listed non-financial sector firms in Nigeria.

From Table 4 there is an indication that with one step system GMM, Executive Pension Payment (EP) which is a component of executive compensation shows a positive but not significant impact on Return on Equity (proxy for financial performance), with coefficient value of 0.0603 while the result under the two step System GMM also shows a positive but significant impact, with a coefficient value of 0.0597. Both results are not statistically significant. This implies that Executive Pension Payment (PP) has a positive impact on the Return on Equity as a measure of performance of Listed Non-Financial Firms in Nigeria; thus, suggesting that, there is a potential increasing impact of executive pension payment but such is not statistically significant given the scope of this research. This result is affirmed by two-step system GMM

which also indicate that there is a potential increasing impact of executive pension payment but such is not statistically significant given the scope of this research. Furthermore, executive pension payment has a p-value greater than 0.1 (10%) level of significance which implies that the coefficient is not statistically significant. Hence, the null hypothesis “There is no significant effect of Executive pension on the financial performance of listed non-financial sector in Nigeria” cannot be rejected. We therefore conclude that the executive pension payment does not influence Return on Equity (ROE) as a measure of performance but has a potential of positive impact which cannot be generalised. The result is consistent with two-step system GMM as an estimator with the same coefficient value and level of significance.

### **Discussion of Findings**

This subsection discusses the findings of this study sequentially, following the tested hypothesis. From the system GMM results for hypothesis one there is an indication that Executive Salary Emoluments (ESE) is negative and statistically significant at five per cent with coefficient value of -0.131, while the two-step System GMM result also indicated that Executive Salary Emoluments (ESE) is negative and statistically significant at five per cent with coefficient value of -0.0881. This outcome is in disagreement with Wu (2021), who examined the relationships among CEO salary, CEO personal characteristics and firm performance. considering salary as the key dependent variables in his study of the relationships among CEO salary. Affirming Executive Salary is designed as a motivating factor to improve the firm performance, hence increasing the firm’s value. Finding that CEO’s salary positively affects firm’s performance. Neither did it agree with the study by (Ahamed, 2022) that suggests the salary of the CEOs has the most positive and significant effect on bank performance.

The second hypothesis tested the significant effect of Executive Bonuses on financial performance. There is an indication that Executive Bonuses shows a negative but not significant impact on Return on Equity but not statistically significant. However, this result is not consistent with Ingriyani and Chalid (2022) that investigated the interactive effect of executive compensation, firm performance, and corporate governance by adding aspects of monitoring and aligning incentives as suggested in agency theory. Measuring Executive Bonuses as an executive compensation, it observed a positive relation with firms’ performance. The result also did not agree with the study by Ma et al. (2022) who examined China’s publicly traded energy companies in Shanghai Stock Exchange and Shenzhen Stock Exchange between a period of 2015 to 2020 to establish the relationship of executive monetary compensation and executive

compensation gap to corporate performance of China's energy listed companies. The results confirmed the positive relationship of executive monetary compensation and executive compensation gap to corporate performance.

The third hypothesis tested the significant effect of Stock-Based compensation on Return on Equity. The result suggests that Stock-Based compensation (ES) has a negative coefficient and statistically significant in both results for one-step and two-step System GMM. This implies that the Stock-Based compensation (ES) has a negative impact on the Return on Equity; thus, suggesting that, with a percentage increase in the Stock-Based compensation (ES), the Firms will see about 0.0245 per cent decrease in performance as explained by their return on equity (ROE). This result is affirmed by two-step system GMM which indicate that a percentage increase in the Stock-Based compensation (ES), the Listed Non-Financial Firms in Nigeria will see about 0.0222 per cent decrease in performance as explained by their return on equity (ROE). Contrarily, Otomasa et al. (2020) considered management earnings forecasts as a performance measure for determining executive cash compensation and confirmed the relationship between executive cash compensation and MFE strengthens/weakens when current realized earnings exceed/fall short of aggressive initial forecasts. This is in disagreement with the findings of Lin and Shi (2020) which contributed to literature by examining "Chief executive officer Compensation, firm performance, and strategic competition: A seemingly unrelated regression and maintained there is a positive relationship.

The fourth hypothesis tested the significant effect of Executive pension on the financial performance. There is an indication that Executive Pension Payment shows a positive but not statistically significant impact on Return on Equity, suggesting that, there is a potential increasing impact of executive pension payment but such is not statistically significant given the scope of this research. This one-step and two-step system GMM are similar. This is in agreement with Morris and Savoie-Comeau (2022) which posits that pension benefits are likely to impact not only total Executive reward but also the pay-performance relation in several ways. Further buttressing, a firm's defined benefit pension can serve as a retention device because the value of a defined benefit pension increases the longer an executive retains that executive status with the firm. Hence, this provides an incentive for high-performing executives to remain and increases the cost to the company of retaining underperforming executives. The result is also in tandem with the study of Kwak (2018) which considered Executive pensions as an important proxy of managerial compensation further concluding executive pensions

motivate executives to manage their firm conservatively to reduce the default risk of their pension plans which invariably improves the financial performance of the firm.

## CONCLUSION

The study concludes that regardless of executive compensation being an incentivizing tool for the executive team, who have a significant impact on company strategy, decision-making, and value creation as well as enhancing executive retention, different components of executive compensation exert different effect on the financial performance of firms as confirmed by this research. Thus, the efforts on improving general firm should be reliant on how best to utilize the most effective variables of executive compensation possessing the most influence on performance.

In recommendation for further studies, a mixture of analysis from other geographical coverage should be encouraged for robust analysis. It is pertinent that future researchers in the regards, measure and compare the effect of Executive compensation on the financial performance of listed non-financial firms in Nigeria and other countries.

As earlier highlighted the study gave specific consideration on Executive compensation from the perspective of Salary Emolument, Bonuses, Pension and Stock-based compensation as independent variables and financial performance measured by the Return on Equity as dependent variable. It is pertinent that future research make comparison with other measure of financial performances.

The study also covered only sixty-three (63) listed Non-Financial Firms which plays a pivotal role in stimulating economic performance of the country, Nigeria. However, there is need for future researchers to expand the number of firms and make comparison with output from the financial sectors.

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