



## Sensitivity of Corporate Performance and the Executive Directors' Compensation of listed Financial Services Firms

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### Abstract

*The study investigates the sensitivity of corporate performance to executive directors' compensation of listed financial services firms in Nigerian stock market, an emerging capital market from 2008 to 2018. Using the entire samples of forty 42 financial service firms, the Generalised Method of Moment (GMM) was the statistical technique deployed to test the stated hypotheses and to achieve stated objectives. The results show that Revenue Per Employee (RPEY) has a positive and sensitive nexus with executive directors' compensation, even though Profit Per Employee (PPEY) has a negative and sensitive association with explained variable, lastly, Tobin Q has a positive and insensitive causality with executive directors' compensation and they are all statistically significant at 5% of level of significance. Our results suggest insight to the responsiveness of performance to executive compensation could be achieved by using non-traditional performance metrics such as responsibility accounting, this gives as a paradigm shift from traditional accounting-based metrics.*

**Keywords:** Optimal contracting theory, executive directors, managerial power theory, Responsibility Accounting.

**JEL Classifications:** M12; M14; M21

### 1. Introduction

The current coronavirus (COVID-19) pandemic that broke out in Wuhan in China in 2019 has started ravaging the world with attendant negative externalities on the global economy. This is one of the external environmental factor norms or business risks that cannot be ruled out in business domains. Like the liquidity crisis that ravaged the financial services industry in 2008 which led to global financial crisis and economic crisis that heated the Nigerian economy and slipped the economy into economic recession in 2016 (Bussin, 2015).

These are uncertainties associated or common in the feasibility of any business, business managers must ensure all resources employed are productive, and that the productivity is always at a higher side, especially in corporate entities where divorcement between capital owners and capital users exists- Agency Theory (Murphy, 1999). The separation between business owners and business managers has heightened the tension to agency problems, which demand solutions that can minimise the agency problem. These crises have short-run and long-run ripple effects that are galvanised into corporate failure, market failure and financial crises of the ventures of corporate entities locally and internationally.

Though COVID-19 pandemic is a health-related disease, it has metamorphosed to economic pandemics ravaging the global economy. The COVID-19 pandemic spill over has started evident in the financial market, corporate organisations, investors and government. Globally, stock markets have fallen, the rate of unemployment is growing exponentially in advanced economies, and governments of wealthy countries have to roll out bailout packages to emerging economies. The effect of this coronavirus crisis became obvious in African countries, Nigeria inclusive. The aforementioned state of affairs implies that pandemic have started ravaging the global economic with unquantifiable estimation.

These necessitate a call for proactiveness of stakeholders rather than their reactivity in the corporate world. These stakeholders need to take some proactive measures, in order to stem down the perceived negative influences that might emerge in the near future as aftermath of these pandemics. One of the existences of corporate entities is wealth maximisation of the



capital providers by capital users. This aim calls for concerted efforts on the part of capital managers for optimal utilisation of this shareholders' wealth with minimise cost in order to align with this goal congruence.

Compensation in corporate entities is crucial because of its multifunction it performs as a corporate governance mechanism that has the capability to discipline, monitor, motivate and enhance performance in corporations and again it is capable of minimising agency problems (Ataay, 2018). Ataay (2018) explored the competing models of corporate compensation hinged on agency theory, optimal contracting theory and managerial power theory. These theories underpin the basis for a compensation template that will align encouragement to performance which also will align interest of shareholders (Jensen & Murphy, 1990; Jensen & Meckling 1976; Fama & Jensen 1983). Extant literature has established that compensation forms a chunk of direct and indirect expenses of any corporations. Based on this fact, capital users must ensure that the amount of compensation paid must be productive. Pfeffer and Salancik (1978) opined that efficiency of compensation paid must generate high performance, this is called Compensation-Performance-Sensitivity (CPS). According to literature, compensation paid in corporate entities is paid to three categories of employees (CEO, Top Management Team (Executive Directors) and other staff compensations), but the study is only focusing on Executive Directors.

Against these backdrops, the study is investigating first, the trend of executive directors' compensation with emphasis on the period of global financial crisis and economic recession and forecast of compensation for financial services sector second the TMT Compensation-Performance-Sensitivity (CPS) in the financial services sectors of quoted entities in Nigerian Stock Exchange market for the period of fifteen years.

## 2. Theoretical framework and hypotheses

Agency theory hypothesises divorcement of interest between capital managers (agents) and capital owners (principal), thus necessitating effective discipline and monitoring. Based on the assumption that executive compensation is one of the major apparatus to converge the divergent interests of capital owners (principals) with those of capital users (agents) (Jensen & Murphy, 1990).

Hence, compensation of the executive directors is the consideration furnished for the contract that subsists between the shareholders as the principals and executive directors as agents. The component of this compensation is a function of many factors such as industry, demographic, economy, market, profit, etc. However, the corporate performances have been solely on the shoulders of executive directors, whereas, in other firms, employees are part of the drivers of performance (Deckop, 1988). Existing literature has affirmed the executive directors' compensation extraction is due to the fact of the number of the incumbent power inherent in executive directors, including executive directors' duality, ownership and tenure, that have important an influence on the corporate performance-sensitivity. It has been deduced from the theory of Managerial Power Theory that the role of executive directors' tenure and duality engendered a greater control over the board of directors, the nomination committee and compensation committee to negatively influence the compensation setting process, which end up in suboptimal compensation practices (Conyon & He, 2011, 2012). On the other hand, where there is a separation of two roles and tenure is short, this can improve monitoring and reduce power concentration that facilitate arbitrary power rent extraction that is considered detrimental to compensation-performance-sensitivity (Conyon, 1997).

When compensation arrangement is designed on the principle of an arms-length transaction with management and workforce, the productivity of such compensation is always associated with higher productivity or sensitivity; this will provide incentives for corporate employees to reduce the moral hazard problem arising from divorcement between capital owners and capital users. But the series of empirical evidence predicted a positive and insignificant relationship with Executive directors' compensation and corporate performance (Murphy, 1999; Bayless, 2009; Buck, Liu & Skovoroda, 2008; Conyon & He, 2011; Conyon & He, 2012; Ozkan, 2011). These findings were consistent and that agency theory did not minimise rivalry between



principal and agent. Hence, opposing theories emerge in response to find out whether compensation-performance-sensitivity. The theories are Optimal Contracting Theory (OCT) and Managerial Power Theory (MPT) (Bebchuk & Fried, 2003). The MPT tends to dominate compensation arrangements when Executive directors behave as opportunists, this leads to rent extraction through a compensation arrangement that is much more at the detriment of shareholders' interest. With the power of Executive directors increased, the board of directors and compensation committee, under the undue influence of Executive directors, compromised their fiduciary obligations and settled on excessive Executive directors' compensation that likely did not connect the corporate performance.

The previous study of Core, Holthausen and Larcker, (1999) considered corporate governance, chief executive officer compensation. It was discovered from the result of the study, that corporations with dysfunctional corporate governance structure is associated with greater agency problems; that the level of executive directors' compensation at such corporate entities of greater agency conflict receive higher compensation and, the corporate performance of such institutions is insignificant, that is, compensation-performance-insensitive. This study is focusing on the relation that has been called as the sensitivity of executive remuneration to corporate performance or compensation performance sensitivity. Quantum of empirical studies has examined the influence of series of financial and operational corporate performance metrics on compensation of executive with the conclusion that the state of sensitivity of compensation to corporate performance increases, which aligned the managerial interests and capital owners' interests to convergent point and grows stronger (Jensen & Murphy, 1990; Murphy, 2013). And again, the magnitude of positivism of past studies was not considered, thus this study will consider the magnitude to serve as a knowledge gap the study bridge.

Majority of empirical studies in this area of corporate performance and compensation sensitivity has been dissected on corporate firms in advanced economies (Colpan & Yoshikawa, 2012; Conyon, 2014; Devers *et. al.*, 2008). Few studies in this area in an evolving market such as (Bryson *et al.*, 2014; Conyon & He, 2011; Hearn, Strange, & Piesse, 2017; Zhou, Fan, An, & Zhong, 2017). Hence, the study aims to be inclusive in the emerging market and narrow down to the financial services sector of Nigerian stock market, in order to understand the corporate performance sensitivity of executive compensation of financial services in Nigeria. The study put forward that multidimensional agency theory problems could prompt the corporate entity to benefit from performance related compensation. With these assumptions we hypothesises

**Hypothesis 1:** *corporate performance has a positive and significant influence on executive compensation sensitivity*

## 2.1 Empirical review

The first, classical and influential study that was carried out in America by Jensen and Murphy (1990) on the study that examined CEO compensation and corporate performance. The research was based on the large numbers of American corporations 1974 to 1986, for the period that spanned twelve years with the primary objective of establishing whether CEO remuneration can be sensitive to corporate performance. Jensen and Murphy (1990) estimate compensation-performance-sensitivity (CPS), where the compensation encompasses salary, bonus, fringe benefits, etc. plus the increase in the value of derivatives options and stocks. The merit of this study is the easy economic interpretation that represents the share of the CEO is the wealth added value of the company.

Another fit of the study is that JM-measure of salary and bonus can be summed to the stock ownership structure of the CEO to calculate the total sensitivity of performance to corporate compensation. The conclusion is that the association between CEO compensation and firm performance is positive, but insignificant. Moreover, CEOs hold a median of 0.25% of their corporation's stock. This means that per \$1000 change in corporation value, the value of the stock owned by the CEO fluctuates with \$2, 50. Furthermore, the study found one of the crucial determinants of compensation-performance- sensitivity (CPS) is the firm size.



Nevertheless, the result is a positive, statistically and substantial association between CEO remuneration and corporate performance, but the association is small enough to play a crucial role as a remedy to the principal-agent problem. Because the compensation received by the CEO (agent) outweighed the value created to shareholders' wealth (principal).

Olalekan and Bodunde (2015) examined the effect of CEO pay on banks' performance in Nigeria with the critique of finding out whether bank size, corporate governance apparatus, and corporate performance can predict the remuneration of chief executive officers. General method moment Ordinary Least Square was deployed to analyse the secondary data, where measurement indices for corporate size were gross earnings and market capitalization, and corporate performance was proxy by ROE, ROA, and EPS and corporate governance were proxies by board size, board independence, and CEO ownership. The outcome of the research revealed that only corporate performance has a significant relationship in predicting Nigerian bank chief executive officer remuneration while governance apparatus (board size, board independence, and CEO ownership) did not predict endogenous variables (CEO compensation).

Olaniyi, Obembe and Oni (2017) investigated the causality that is presumed to subsist by analysis of the nexus between CEO pay and performance of non-financial listed firms in Nigeria. The study covered the period of 1998 to 2010 of 63 non-financial listed companies. The result revealed a bi-directional causality between CEO compensation and corporate performance and concluded that stakeholders vigilant on the component of CEO remuneration as a corporate governance apparatus must be enhanced to reduce agency problems in the non-financial sector of listed companies in Nigeria.

Raithatha and Komera (2016) investigated the nexus between executive compensation and firm performance in Indian corporations. The study domiciled on the emerging economic system. The corporate performance of these firms was measured by market-based and accounting-based measures. The researchers' methodologically deployed System Generalized Method of Moments (GMM) as an estimating instrument. The result revealed significant persistence in chief executive officer remuneration among the sampled firms and affiliated group corporations. The finding casts doubt over the corporate performance-based on chief executive compensation practices of emerging business.

Kato and Long (2006) examined the relationship that subsists between Chief Executive Officers' compensation, corporate performance, and corporate governance of listed corporations in the Shanghai and Shenzhen Stock Exchanges China from 1998 to 2002. The findings have shown statistically significant sensitivities and elasticity of executive compensation of the top with respect to shareholder value in China. Where individual exogenous variables showed a different relationship, sales growth and ownership structures were linked to the performance of China's listed corporations which was weakening the pay-performance link for top managers, therefore making China's listed corporations less effective in solving the agency problem.

The study investigated the empirical relationship between the structure of the board, CEO remuneration, and corporate performance, using panel data of 462 manufacturing companies of listed firms from India for the period 1997-2002. There were two specific issues the study hinged on. First, investigated corporate board structures in terms of size and fraction of non-executive directors that influence corporate performance. Second, the study examined the different components of executive compensation and level of influence on corporate performance. The empirical result indicates the size of the board and the ratio of non-executive directors have a nonlinear association with corporate performance and the result has a threshold level of on the size of the board at 11 and the proportion of non-executive directors at 73 percent beyond that the corporate performance of the firm will experiencing slow down and the relation between executive remuneration and corporate performance was non-linear (Ghosh, 2003).

Ciftci, Tatoglu, Wood, Demirbag and Zaim (2019) examined the contextual relationship between internal corporate governance mechanisms and corporate performance in Turkey,



where family capitalism featured in the corporate world of listed firms. The sample size of 745 firms across the entire sectors of the market period of 2003 to 2015. The study result revealed more concentrated ownership, that is, controlling families bear more of the risk of weak and poor productivity. Large board size and foreign ownership have a positive influence on firm performance, while a higher ratio of family members on the board had no discernible effect on corporate performance.

Aslam, Haron and Tahir (2019) studied how the director remuneration influences firm performance in Pakistan. GMM was used to estimate the problem of potential endogeneity and unobserved heterogeneity due to potential reverse causality of the sample of the non-financial firm listed in the KSE between the periods of 2009 to 2016. The study showed support and provided evidence that corporate performance framework is weakly aligned with tournament theory, where executive officers remuneration sensitivity is also weakly enhanced with performance and concluded that chief executive officer compensation have a long-run equilibrium association with performance.

Aslam, Haron and Tahir (2019) empirically examined how director compensation influences firm performance in Pakistan as an emerging economy. They employed a GMM statistical model to analyse causality between compensation and corporate performance of non-financial corporate entities in the KSE. The result revealed that compensation-performance framework with agency theory were weakly related to compensation paid to CEOs and board of directors and the CEO and board of directors compensation of high volume will adjust in the long-run to be symmetry.

Tosi, Werner, Katz and Gomez-Mejia (2000) investigated CEO compensation studies. The investigators deployed meta-analytic analysis to X-ray various determinants of CEO compensation and hypothesised the relationship between firm performance and CEO compensation. The result revealed that firm performance explained for less than 5% of the change in CEO compensation and showed that compensation sensitivities are relatively small to the financial performance of less than 4%. The meta-analysis suggested that moderator variables can play a crucial role in moderating compensation-performance-sensitivity.

In view of the above empirical studies on the influence of the efficiency of the corporate compensation usually called compensation as a financial return/reward for the past performance and an extant inducement to reduce the rate of labour turnover among the executive officers (Gupta & Wowak, 2017; Devers, Cannella Reilly & Yoder, 2007). And again, the compensation that is efficacious in a solid structure and strategic can link to the performance that can mitigate and solve agency conflict between the principal (shareholders) and agent (managers) (Hüttenbrink, Oehmichen, Rapp & Wolff, 2014; Qin, 2012). Again, this can stimulate management to adopt corporate strategies that will propel a higher value for the corporation while reducing risks. This is called the sensitivity of TMT compensation to corporate performance.

Extant literature has projected that corporate governance has taken the responsibility of monitoring and restricting managerial opportunism behaviours which have been affirmed in the managerial power theory, so that the stakeholders' interest converges toward value maximization (Fama & Jensen 1983; Core, Holthausen & locker, 1999; Van Essen, Otten, & Carberry, 2012; Sun, Zhao and Yang, 2010; Devers, Cannella Reilly & Yoder, 2007).

### **2.1.1 Methodological review**

This section critically examines the diverse performance metrics used in the extant literature. The common and main categories of performance metrics include accounting metric, market metric, economic metric and relative performance metric. The conceptualisation of accounting measure and Market measure are commonly used as a performance metrics domicile in these studies (Bebchuk & Grinstein, 2005; Carpenter & Sanders, 2002 and David, Kochhar & Levitas, 1998). The use of accounting profit as a measurement of performance has been favoured because, it has been seen as return or reward on the shareholders wealth as managers



incentives on their efforts is also remuneration as their reward. The crux of the study is managerial reward and shareholders reward has been assumed empirically that the sensitivity of executive directors' reward to profitability of the firm is relatively small and insignificant. This could be as a result of disadvantages of accounting metrics. One, management always influences the accounting profit in a financial statement (Earnings Management) to achieve a target purpose, this stands against the truism of accounting information. Second, market-based metrics is with the criticism that link between top managers and pay-performance is upon market capitalisation, where the market capitalisation is based on asymmetric information (Efficient Market Hypothesis). Quantum empirical investigation on executive directors' compensation, there is no common ground on the optimal measurement of performance in corporate entities. Studies have operationalised corporate performance in diverse ways. Hence, the metrics of corporate performance can be dissected into three categories: market performance metrics (performance within equity markets); absolute financial performance metrics (audited metrics within a specific year) and financial performance ratio (ratio generated from absolute performance metrics) (Bussin, 2015).

Other investigations on the executive directors' compensation and corporate performance have indicated the metrics that based on accounting and market bear semblance to the economic reward generated by the corporate entity, for instance, accounting based metrics do not cater for associated risk that inherent in business incurred by executive directors in their goal congruence pursuance toward profitability and growth. In order to divert from the aforementioned performance metrics, there are two suggested additional performance metrics that are fitting in to investigate association between executive directors' compensation and risk-adjusted entity performance metrics, namely Profit per Employee (PREY) and Revenue per Employee (RPEY).

This performance measurement in the contemporary business environment has a complete departure from conventional accounting based and market-based metrics to Activities Based Costing (ABC) and Responsibility Accounting (AB) of evaluating the remuneration of employees in corporate entities. Extant literature has extensively established on the theoretical and practical aspect of Revenue Per Employee (RPEY) and Profit Per Employees (PPEY) as a performance measurement that is more evident of evaluating efficiency and productivity vis-à-vis of compensation paid to corporate employees (Berman & Evans, 2010; Bryan, 2007; Levy & weitz, 2007; Lichtenstein et al., 2010; Ilic, 2012; Gauri, 2013; Teng, 2014; McGoldrick, 2002). Revenue per employee and profit per employee have been affirmed in practice as performance measurement and employee productivity metrics. Investigation has revealed that in order to compute these performance metrics, the following factors which affect them are sales revenue, number of employees, average compensation cost and earnings before interest and tax (Lukic, 2015). The measurement will provide the basis to anticipate and take appropriate measures to increase revenue and profit per employee, as a very significant indicator of operational efficiency that can respond proportionally to compensation expenses in corporate entities.

In sum, both accounting-based and stock market-based measures have adequate use in the literature but, revenue and profit per employee as a performance metrics have not been domesticated empirically in the context of Nigerian corporate world, nevertheless the metrics is bedevilled with the issue of when it is appropriate to be used. It is only appropriate to be used when the entire corporate compensation is considered (executive directors' compensation and other staff compensation). Hence, Tobin Q is used in this study.

## 2.2 Gap in literature

The findings of extant literature, empirical, theoretical and methodological reviews revealed that there exists a positive nexus between corporate compensation and corporate performance, but value added is relatively small, in terms of performance and insignificant. Some facts were deduced from literature which are capable and responsible for these caveats in the literature, which include: firstly, compensation conceptualised in the past studies were skewed toward only CEOs' compensation. Secondly, performance metrics operationalised in those studies

were historical in nature such as accounting-based measures and market-based measures. Thirdly, the theoretical framework that underpinned the compensation template has fundamental flaws. Lastly, studies from developed economies holistically researched the entire listed companies while evolving economies sectoralised the studies into either financial or nonfinancial sectors.

### 3. Data and Methods

The aim of the study is achieved through a series of procedural modalities, the modalities are considered in this section. The population under the purview of the study is the all listed financial industry services. The data of these financial industry services are extracted from the audited annual financial statement range from the period 2008 to 2018. The listed companies in Nigerian stock market are made up of 168 firms, but the study made use of data retrieved from audited financial statements of forty two listed companies in financial firms (Banks, Insurance, Leasing, Assets Management Companies) of Nigerian stock market over the period of 2008-2018.

The study used key research variables that need discussion, the remuneration of board of directors comprises (basic salary, bonuses, medical and other fringe benefits). Responsibility Accounting-based performance metrics were used (Revenue Per Employee Performance and Profit Per Employee Performance), while one accounting-based performance metric was used (TOBQ). Moreover, other explanatory others were deployed to as control variables that can impact the explained variable. The instrument variables were introduced in order to identify the hidden (unobserved) correlation that allows you to see the true correlation between the explanatory variable and response variable, Y. (STCOST and DETA).

#### 3.1 Model specification

The generalised method of moment (GMM) is the statistical technique deployed to test the stated hypotheses and achieve stated objectives. According to Sheikh et al., (2018) GMM is used to examine the interconnectivity among dependent variables, explanatory variables, endogenous variables and instrument variables. GMM is capable of controlling the problem of endogeneity as a result of probable reverse causality between endogenous variable and exogenous variables, that is, Executive Directors Compensation and Performance Metrics (TOBQ, PPEY and RPEY). Haron, (2018), Raithatha and Komera (2016) and Sheikh et al., (2018) further elaborate that, the ability of GMM to resolve the associated problem of the unobserved heteroscedasticity that do popup due to the time invariant variables like TOBQ, debt to equity ratio (DETA).

The GMM model for the study is stated below:

$$\text{Endogenous repressor: } Y_{it} = \alpha Y_{it-1} + \beta X'_{it} + \gamma \beta_{it} + U_{it} \dots \dots \dots (1)$$

Y and U are N x 1 vectors;  $\beta$  is a K x 1 vector of unknown parameters;

X is a N x K matrix of explanatory variables

(X' : Explanatory variables,  $\beta$  : control variables;  $\alpha$  : coefficient)

Where:

$Y_{it}$  is dependent variable

$\alpha Y_{it-1}$  = is the lagged of dependent variable and its parameter

$\beta X'_{it}$  = explanatory variables and its parameter

$\gamma \beta_{it}$  = control variables and its parameter

$DIRREM_{it} = \alpha_1 L.DIRREM_{it} + \alpha_2 RPEY_{it} + \alpha_3 PPEY_{it} + \alpha_4 TOBQ_{it} + \alpha_5 STCOST_{it} + \alpha_6$

$NSTAFF_{it} + \alpha_7 CEOTEN_{it} + \alpha_8 DRSAC_{it} + \alpha_9 DETA_{it} + \alpha_{10} FIRA_{it} + \alpha_{11} EMSAC_{it} + \alpha_{12} FSIZE_{it}$

$+ \mu_{it}$



**Table 1: Measurement of variables**

Variables	Definition of measurement
<b>Dependent variables</b>	
DIRREM	Directors Remuneration
<b>Independent variables</b>	
L.DIRREM	Lagged of Directors Remuneration
RPEY	Revenue Per Employee_Performance Data
PPEY	Profit Per Employee_Performance Data
TOBQ	Tobin Q_Performance Data
NSTAFF	Number of Staff
<b>Instrument variables</b>	
STCOST	Staff Cost
DETA	Debt to Asset Ratio_Capital Structure
<b>Predetermined variables</b>	
DIRREM	Directors Remuneration
<b>Endogenous variable</b>	
STCOST	Staff Cost
<b>Control variables</b>	
FSIZ	Log of Total Asset_Firm Size Data
DRSA	Director Cost to Revenue_Agency Cost Data
FIRA	Firm Listing Age_Firm Age Data
EMSA	Employæ Cost to Revenue_Agency Cost Data

Sources; Author's Compilation (2021)

#### 4. Data Analysis and Discussion of findings

The empirical analyses of the study are discussed in the section. Table 2 shows correlation coefficient of the variables used in the study and table 3 illustrates the descriptive statistics, table 4 presents the regression analysis for the model one, it demonstrates the exogenous variables, explained variable and control variables.

**Table 2: Correlation Matrix**

	SCOST	DIRREM	NSTAFF	CEOTEN	DRSAC	DETA	FAGE	TOBQ	FSIZE	RPEY	PPEY	EMSAC
SCOST	1.0000											
DIRREM	0.8075*	1.0000										
NSTAFF	0.8955*	0.7392*	1.0000									
CEOTEN	0.0139	-0.0090	0.0479	1.0000								
DRSAC	-0.3920*	0.0153	-0.3657*	-0.0977*	1.0000							
DETA	0.6093*	0.4986*	0.5672*	0.0726	-0.1799*	1.0000						
FAGE	0.4943*	0.3514*	0.3993*	0.0403	-0.2701*	0.3259*	1.0000					
TOBQ	-0.0046	0.0345	0.0623	-0.0028	0.0932*	0.4117*	-0.1746*	1.0000				
FSIZE	0.8602*	0.7702*	0.7908*	0.0605	-0.3870*	0.5038*	0.4009*	-0.0243	1.0000			
RPEY	0.3340*	0.2869*	0.1090*	0.1258*	-0.4288*	0.2378*	0.3406*	-0.1650*	0.3505*	1.0000		
PPEY	0.3816*	0.3627*	0.2758*	0.0720	-0.3374*	0.0549	0.1497*	-0.1080*	0.4951*	0.4832*	1.0000	
EMSAC	0.2334*	0.1853*	0.2488*	-0.1653*	0.2973*	0.1574*	-0.0165	0.1892*	0.1363*	-0.6609*	0.2412*	1.0000

Source: Author's Compilation (2021)



Table 2 presents the correlation coefficient for the variables with the view to confirm whether there is presence of multicollinearity in the midst of the variables. It is observable that RPEY and PPEY are positively associated with DIRREM, while TOBIN Q has negative association with the explained variable. Hence, the bivariate correlation amongst entire variables is fundamentally small and suggests that these variables are multicollinearity free and not statistically harmful.

**Table 3: Summary descriptive statistics**

VARIABLES	N	Mean	Min	Max	St.Dev	Skewness	Kurtosis
DIRREM	455	275000	113,000	6884000	623000	5.959	48.566
PPEY	455	1848.533	-81299	101000	13491.92	-1.294	19.862
RPEY	455	33440.29	2811.06	330000	41274.9	4.158	23.826
TOBQ	455	1.024	-0.27	11.25	1.287	5.5	36.913
STCOST	450	9422605	3,107,000	109000000	1800000	2.53	9.519
NSTAFF	450	1504.229	3	13820	2693.296	2.52	9.226
CEOTEN	455	.659	0	2	.479	-.612	1.539
DRSAC	455	.018	0	.252	.029	4.026	24.315
DETA	455	72.781	4.46	888.19	85.38	5.951	46.594
FIRA	455	15.635	10	50	12.118	1.058	3.357
FSIZE	455	7.645	5.58	10.77	.977	.738	2.413
EMSAC	455	.215	0	1.318	.149	2.171	11.427

**Source: Author's Compilation (2021)**

The study used four hundred fifty-five observations from four six companies that offer financial service in Nigerian economy and are listed in Nigerian Stock Market over ten years. The average of Executive Directors' compensation is ₦ 275,000 with maximum and minimum compensation standing at ₦ 6,884,000 and ₦ 113,000 respectively. The Compensation of Executive Directors skewed positively with these associated kurtosis values 48.566, the standard deviation ₦ 623,000. The Profit Per Employees (PPEY) has average of ₦ 1,848.553, which means, this is the profit generated averagely in the finance sector of the economy, with associated maximum and minimum profit stand at ₦ 101,000 and ₦ 81,299 and standard deviation is ₦ 13,491.92. But the profit per employee skewed negatively with 19.862. The Revenue Per Employee (RPEY) has a mean value of ₦ 33,440.29, the value showed the earnings capacity of per employee in financial sectors.

The other parameters are maximum, minimum value and standard deviation with these values ₦ 333,000, ₦ 2,811.06 and ₦ 41,274.90 respectively. The associated skewness is positive with a value of 23.826. The average of TOBQ as performance metric stands at 1.024 with associated minimum and maximum values are -0.27 and 11.25 respectively and the standard deviation stands at 1.287 and TOBQ is positively skewed with a kurtosis value of 36.913. The staff strength on the average in financial entities stands at 1504 with maximum and minimum value standing at 13,820 and 3 correspondingly. The standard deviation stands at 2,693 and the staff strength is positively skewed and the kurtosis value is 9.226. The average compensation of staff in financial services sectors stands at ₦ 9,422,605 with standard deviation of ₦ 18,000,000, the associated minimum and maximum value of staff compensation stand at ₦ 310,000 and ₦ 109,000,000 correspondingly, while staff cost skewed positively with kurtosis value of 9.519.

#### **4.1 Compensation-Performance-Sensitivity (CPS)**

Compensation-performance-sensitivity measures the degrees of responsiveness of corporate performance to the changes in compensation of executive directors. That is, it shows how changes in the compensation of executive directors will affect the quality and quantity of corporate performance by the executive directors. When there is a small increase in compensation of corporate entities and that brings about a greater increase in corporate performance, this is said to be compensation-performance-sensitive. That is compensation paid brings high yield in term of performance. On the other hand, when there is greater increase



in the compensation of corporate entities and that brings about small change in the corporate performance, which is said to be compensation performance insensitive.

Therefore, the result of GMM regression showed the interrelationship between Executive Directors' Compensation and Performance metrics proxy as Revenue Per Employees (RPEY), Profit Per Employee (PPEY) and TOBQ.

In testing the stated hypotheses, the study provides below specific analysis for each of the explanatory variables using GMM regression. Revenue Per Employees (RPEY) {GMM = 2.61,  $pv = (0.000)$ } as exogenous variables to executive compensation (DIRREM). It showed that Revenue Per Employees has a positive relationship and statistically significant influence on executive directors' compensation at 5% level of significance. In terms of sensitivity of the compensation to performance, it revealed that when one naira (? 1:00) is paid as compensation to executive directors, two-naira sixty-one kobo (? 2:61) is generated as Revenue Per Employee. This showed that the executive compensation paid is efficient and sensitive to performance.

When Profit Per Employee (PPEY) as explanatory variable {GMM = -1.85,  $pv = (0.000)$ } to executive compensation (DIRREM). This revealed that profit per employees has a negative nexus and statistically significant impact on executive directors' remuneration at 5% level of significance. The sensitivity of compensation to performance, this showed that when compensation of one naira (? 1:00) is paid as compensation, one naira and eighty-five (? 1.85) is generated as Profit Per Employee. This pinpointed that executive compensation is achieved by shareholders' wealth maximisation and also sensitivity.

When a market-based performance metric is considered, that is Tobin Q (TOBQ) as an independent variable to executive compensation (DIRREM). Tobin Q, the explanatory variable (TOBQ){GMM = 0.0005,  $pv = (0.000)$ } to executive compensation. The result revealed TOBQ has a positive association and statistically significant influence on executive directors' compensation at 5% level of significance. The result revealed that when one naira (? 1:00) is paid as a compensation to executive directors the value of added to the wealth of shareholders is (? 0.0005). The implication of this is that the compensation paid to executive directors is insensitive and inefficient as a result of ? 0.0005 kobo added to the value of shareholders' wealth.

From the regression result in table 4, Lagged of Director Remuneration (LDIRREM), Profit Per Employees (PPEY), Revenue Per Employees (RPEY) and TOBQ are the independent variables on consideration with the Director Remuneration as dependent variable. In estimating the compensation performance sensitivity, we deployed GMM regression analysis in order to estimate empirically the coefficient of the parameters in the model and to test stated hypotheses. The GMM regression results showed that the predetermined executive directors' compensation has a negative and significant impact on the current lagged of executive directors' compensation. The implication is that the compensation committees may not consider previous compensation determination mechanisms in the consideration of current directors' compensation based on their decisions on the current compensation template in the financial services sector, this finding is inconsistent with the findings of (Raithatha & Komera 2016). The performance metrics in this study are different for the conventional accounting-based, but market-based and responsibility accounting-based used: TOBQ, Profit Per Employee (PPEY) And Revenue Per Employee (RPEY). The diagnostic test Arellano-Bond authenticates the deployment and the use of second and difference of the explained variable and AR (2) are statistically insignificant for the second order association in error terms. Again, Wald test of Hansen j-statistics of over identification result is statistically significant.

The performance metrics of RPEY and TOBQ gave positivity connection with executive directors' compensation, these outcomes are consistent with earlier studies compensation performance sensitivity in terms of positivism (Conyon, 1997; Ntim, 2017; Ozkan, 2011) while the other side, PPEY has a negativity nexus with executive directors' compensation. The three performance metrics are statistically significant at 5% level of significance.

Table 4: Regression Result

VARIABLES	(1)	(2)	(3)	(4)
L.DIRREM	-5.78e-08** (0)	-8.87e-10** (0)	0** (0)	-1.86e-08** (0)
DIRREM	1.000** (0)	1** (0)	1.000** (0)	1.000** (0)
STCOST	-1.24e-09** (0)	0** (0)	-0** (0)	0** (0)
RPEY		4.12e-08** (0)	4.23e-09** (0)	2.61e-08** (0)
PPEY			2.51e-09** (0)	-1.85e-08** (0)
TOBQ				0.000514** (7.61e-10)
NSTAFF	-5.41e-06** (0)	-4.15e-07** (0)	-6.62e-08** (0)	1.01e-05** (0)
CEOTEN	0.00893** (7.10e-10)	1.71e-05** (4.12e-10)	-0.000140** (6.49e-10)	0.00362** (1.12e-09)
DRSAC	0.00259** (4.27e-09)	-0.0140** (2.15e-08)	-0.00516** (2.71e-08)	-0.00660** (1.01e-08)
DETA	0.000106**	-4.15e-06**	1.36e-06**	4.93e-05**
FIRA	-0.00120** (1.05e-10)	0.000148** (6.56e-10)	-0.000237** (1.04e-09)	-0.000251** (2.63e-10)
EMSAC	0.00567** (7.59e-10)	0.00221** (8.81e-09)	-0.000527** (2.67e-09)	-0.00175** (3.24e-09)
FSIZE	-0.00218** (5.68e-10)	6.38e-05** (9.73e-09)	-0.00295** (1.06e-08)	0.0152*** (9.07e-09)
AR (1)	0.000	0.000	0.000	0.000
AR (2)	0.580	0.652	0.601	0.788
SARGAN test	0.801	0.654	0.536	0.651
Hansen j	0.911	0.901	0.899	0.991
Observations	366	366	366	366
Number of cid	42	42	42	42

Standard errors in parentheses

\*\* p<0.05, \* p<0.1

**Sources: Author's Compilation (2020)**

## 5. Conclusion and Recommendations

This study investigates the critical issue of whether an assessment of sensitivity of corporate performance on the executive directors' compensation deploying a sample of 42 Nigerian publicly listed companies from 2008 to 2018 of financial services sector of the capital market with 455 observations. The study considered the effect of compensation of executive directors on the pay performance sensitivity deploying the total remuneration of top management terms and performance metrics.

The results of the study extend to frontier of knowledge by contributing to the extant empirical and theoretical literature. Past empirical studies considered the connection between compensation of executive and firm performance on a general perspective with constant result of a positive and relatively small compensation performance sensitivity (Gomez-Mejia & Wiseman, 1997; Tosi, Werner, Katz, & Gomez-Mejia, 2000; van Essen, Otten, & Carberry, 2015). These studies provide a theoretical framework that underpinned managerial power theory (MPT), which states that influential executive directors use their powerful influence to bargain excessive rent extraction at the detriment of capital owners which will result in suboptimal compensation negotiation. Conversely, optimal contracting theory (OPT)



governances that compensation templates are guarded and guided with good governance of arm-length transactions that stimulate improvement of compensation performance sensitivity even should in case executive incentive agreements are by hook or by crook suboptimal (Bechuk, Fried & Walker, 2002; Bertrand & Mullainathan, 2001; Kuo, Lin, Lin, Wang & Yeh, 2014).

These previous studies examined the effect of compensation incentive alignment and monitoring apparatus on the compensation performance sensitivity, in measuring their performance metrics they used accounting-base measurements such as ROA, ROI, ROE, Tobin Q etc. (Li & Srinivasan, 2011; Wowak *et. al.*, 2011). But in contrast, this study idiosyncratically examines the executive compensation vis-à-vis firm performance metrics used are Revenue Per Employees (RPEY), Profit Per Employees (PPEY). Hence, the findings of the study are consistent in contributing the extant literature that evident of positive but change the narrative of relatively small (inefficient) pay performance sensitivity to higher (efficient) pay performance sensitivity, thereby aligning a support for the optimal contracting theory (OCT).

Another contribution of the study to the existing literature when the study considered Tobin Q as a performance metrics, the finding evident that a positive, but relatively small compensation performance sensitivity and hence aligning with the managerial power theory (MPT). Here, the compensation to executive directors' vis-à-vis firm performance is inefficient.

The findings of the study have crucial policy to regulatory bodies in financial services sector and society and others in the current covid-19 pandemic that is revenging not only financial services but all sectors in global economy should pursue compensation incentive and corporate performance that will enhance and obtain maximisation of shareholders wealth. The theory of optimal contracting should govern a compensation template that can guarantee and recommend pay to contribute a substantial portion of executive directors' compensation in order to converge executive directors' interests with capital owners. Methodologically, the study evident that using only traditional accounting-based performance metrics cannot robustly modelled compensation performance sensitivity, but the use of non-traditional like responsibility accounting can robustly improve scholar findings and expand the horizon of frontier of knowledge.

The study focuses on financial services sector on Nigerian stock market, hence, findings generalisability is limited, for that reason, future scholars in this domain may be able to deliver new insights, when future researchers could apply this study framework to cut across all listed companies in the Nigerian market or to cross country data, exclusively evolving countries in Africa. Moreover, the future studies can methodologically cave in insight by carrying out in-depth into the domain this study with introduction of corporate governance mechanisms, pay and compensation performance sensitivity.





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