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Overhead Costs and Financial Performance of Selected Deposit Money Banks in Nigeria

Eneh Edith Nkeiruka

Ph.D. Student, Department of Accountancy,
Enugu State University of Science and Technology, Agbani, Enugu, Nigeria

Nnadolfeanyi Celestine

Reader, Department of Accountancy,
Enugu State University of Science and Technology, Agbani, Enugu, Nigeria

Okwo Mary Ifeoma

Professor, Department of Accountancy,
Enugu State University of Science and Technology, Agbani, Enugu, Nigeria

Ozouli Caroline Nkechinyere

Reader, Department of Accountancy,
Enugu State University of Science and Technology, Agbani, Enugu, Nigeria

Abstract:

The study empirically evaluated the sensitivity of financial performance to overhead cost of deposit money banks in Nigeria. It adopted the ex post facto research design as secondary data were used. It spanned a 12 year period (i.e. 2009 to 2020). Specifically, it attempted to ascertain the extent and nature of the relation between the predictors (audit fees, director's remunerations and salaries and wages) and return on equity. Diagnostic tests carried out indicated presence of unit roots and heteroskedasticity. Panel least squares regression analysis (Random Effects GLS Regression) showcased the statistical relevance of these associations. While audit fees and natural logarithm of total assets positively exerted very strong and insignificant impacts on return on equity, salaries and wages and director's remunerations negatively exerted very strong and insignificant impacts on return on equity. Financial firms' profits are highly influenced by these overhead expenses as they mimic heavy personnel and other costs culture of governments locally. Various components of overhead costs including audit fees, director's remunerations and salaries and wages incurred in the banking system should be given due priority so as to achieve the desired financial performance.

Keywords: Overhead cost, remunerations, salaries, performance

1. Introduction

Cost effectiveness can lead to rapid improvement of firm's financial performance (Kinyugo, 2014; Liu, Wu, Zyong and Liu, 2020). There exists a direct relationship between effective management of direct and indirect costs and profitability of listed non-financial firms in Nigeria (Oluwagbemiga, Olugbenga and Adeoluwa, 2014; Okezie, Okezie and Ogbu, 2017). However, overhead expenses are either affected by fluctuations in the volume of productions or sales activities (direct/variable overhead) or otherwise (fixed overhead). They are generally of fixed nature. Ogbadu (2009) observed that the increasing trend of overhead costs has been the leading challenge of consumer and industrial goods firms which gulp business profits. This observation also applies to the banking sector and has led to the continuous closure of banking firms and other manufacturing companies in Nigeria. Anup and Nagarajan (1990) opined that profitability is the profit earning capacity of the firm, which is considered to be the key factor in influencing the reputation of the firm. The borrowing capacity of firms has been linked to depend on the level of profit achieved as at the end of the financial year. Profitability inspires public investments, increases market value of firms, provides return (dividend) to shareholders and makes a provision for the future expansion of the firm that would generate a better profit (Sitienei and Memba, 2015).

The incessant shutdowns, unemployment, redundancy and low capacity utilization by banking firms resulting in high cost of inputs hinders the financial performance of the industry. The justification or otherwise of overhead costs in driving the financial performance and indeed other corporate value indices of banking firms in Nigeria has constituted a challenging academic puzzle and dilemma in the past few decades. Numerous empirical studies on the association between overhead costs and the profitability and other performance indicators of banking firms in Nigeria arrived at differing and conflicting results. While some showcased that overhead costs exerted no significant effect on profitability of banking firms, others indicated overhead costs as having significant effect on profitability, although carried out using specific variables and tools. This study, therefore, becomes imperative as their relationship has an obvious research gap giving the divergence in results. Further, banking firms in Nigeria are diversifying to subsectors with even higher overhead

and more importantly, we are in an era where overhead costs are considered key and fundamental to banking firms' performance. It is in the right of the above submissions that this paper appraises the effect of overhead cost on financial performance of firms in Nigeria using deposit money banks.

The study examined empirically the sensitiveness financial performance of selected listed deposit money banks in Nigeria to overhead costs. Specifically, it tried:

- To ascertain the effect of audit fee on return on equity of selected listed deposit money banks in Nigeria.
- To assess the effect of directors remuneration on return on equity of selected listed deposit money banks in Nigeria.
- To evaluate the effect of salaries and wages on return on equity of selected listed deposit money banks in Nigeria.

The study covered a period of twelve years (2009-2020); and made use of five universal banks in the industry which are listed on the Nigeria Stock Exchange as at 31st December, 2020 and still have their shares actively participating in trading activities on the floor of the Exchange. They include Access Bank Plc, Guarantee Trust Bank Plc, Fidelity bank Plc, First Bank Plc, and Zenith Bank Plc. The study period was chosen based on data availability and consistency. The predictor variables are proxied by director's remunerations, audit fees, salaries and wages in lieu of overhead costs while return on equity is proxy for financial performance.

2. Review of Related Literature

2.1. Conceptual Framework

2.1.1. Costs and Overheads

According to Adeniyi (2009), Cost is the total amount of resources sacrificed or foregone towards achieving a stated objective. Cost management efficiency is very vital for the successful functioning of banking firms in Nigeria. The various components of costs that are incurred in the banking firms are referred generally in accounting parlance to as "Overhead costs". Overhead costs are the total costs incurred in formulating policies, managing operations of an enterprise and motivating its personnel (via goal congruence) towards attainment of her goals. These costs are related directly or indirectly to research or development activity, production, selling, distribution, and so on. These are incurred for the business concern as a whole. However, the indirect overhead / expenses are not affected by any fluctuations in the volume of productions or sales activities giving their fixed nature. Overhead costs include utilities, office rent, insurance, travel expenses, advertising expenses, salaries and wages, accounting and legal fees, taxes and rates, directors' emoluments, auditor's remunerations, printing and stationeries, courier services, telephone expenses, fax and telex expenses, postage expenses, bank charges and office supplies. The term 'costs' means sacrifice in terms of money or comforts which are made to produce goods and services. Overhead cost refers to the cost of overhead items such as labor and material used in the production of goods or services (Booze, 2009; Sangosanya and Awoyemi, 2011). To this extent, overhead cost can be defined as cost not directly related to production, direct or indirect materials rather they are other costs incurred for the general functioning and maintenance of a business (Nweze, 2016).

2.1.2. Audit Fees

Remuneration of Auditors (apart from the first auditor) of the company is determined by stakeholders in general meeting as given in section 142 of Companies and Allied Matters Act, 2013. The remuneration of the auditor of the company is debated and fixed in the annual general meeting or in a special resolution as the situation demands. The board of directors may fix, in the first instance, the remuneration(s) of the first auditor appointed by them. The remunerations should include the fees payable to the auditor, expenses that are incurred by the auditor as regards to the statutory and other audits of the company, and any facility / provisions extended to him by the Act. The expenses, which are paid to the auditors, are in addition to the audit that he carries out in the Company.

2.1.3. Directors' Remunerations

These are mainly applied as incentives that affect strategies and decisions made and employed by directors which exerted statistical significance on firms' profitability. In other words, it is also known as a reward to the directors in realization of their efforts and hence it can motivate directors to perform their duties well and work harder for the realization of increased market value of share (market capitalization). Remuneration not only motivates directors and managers towards goal congruency but also helps to retain talents via attractive remunerations since directors/top management are seen as rare assets (Razali, Yee, Hwang, Tak, and Kadri, 2018).

2.1.4. Salaries and Wages

Salary is a fixed amount of money or compensation paid to an employee by an employer in return for work performed. It is commonly paid in fixed intervals, for example, monthly payments of one-twelfth of the annual salary. It is also the regular payment (with annual incrementals) that is paid most commonly on a monthly basis. All remunerations paid to the personnel during the accounting period are included, all gratuities, workplace and performance extras, ex gratia payments, 13th lunar month pay (and similar fixed bonuses), payments made to employees in consideration of dismissal, lodging, transport, cost of living, family allowances, commissions, attendance fees, overtime, night work, and so on. It also includes taxes, social security and pension contributions and other amounts owed by the employees and retained at source by the employers. Also included are the social security costs of the employer. These include employer's social security contributions to schemes for retirement disability, diseases and occupational accidents, sickness, maternity,

unemployment, pensions, family allowances and so on. These costs should be added even if they are collectively agreed, voluntary, statutory, contractual (Horngren, Foster and Datar, 1997).

2.1.5. Financial Performance

This is a measure, albeit subjective of how well a firm uses its assets from ordinary business activities to generate revenues. It also measures broadly a firm's overall financial health position as at the financial year end, and is employed to compare similar firms (using ratio analysis) within the same industry or across industries and so on. Evaluating performance of firms is critical in order to ascertain whether the business is viable (Pandey, 2008; Enyi, 2011; Ademola, 2014). The financial and other performance measures concept had shown that employees cum management enhance firm value by increasing its future cash flows, accelerating the receipt of same cash flows through sound credit policy/management, making them more certain and/or less risky. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Some of the indicators of financial performance are return on asset, return on equity, liquidity ratios, asset management ratios, profitability ratios, leverage ratios and market value ratios.

2.1.6. Return on Equity

This is a measure of a firm's financial performance and profitability in relation to shareholders' fund, otherwise, equity. ROE indicates a company's ability to turn equity capital into net profit. An increase on return of equity indicates that the firm is doing well and it also indicates how well a company's management deploys shareholder capital. ROE is used to compare a company to its competitors and the overall market. ROE can also be calculated at different periods to compare and contrast its change in value over time. The ROE equation is often used to calculate capital efficiency over a fiscal year. However, it could also be applied to different periods of time. It is calculated by dividing net income by shareholders' equity. The basic formula for calculating ROE is: Return on Equity = Net Income or Profits/Shareholder's Equity.

2.2. Theoretical Framework

This study is theoretically underpinned on the *Kaizen Costing System*. Kaizen, a term with Japanese origin (Sani & Allahverdizadeh, 2012), was launched by Masaaki Imai (Rof, 2012). It is derived from two Japanese words: KAI (Change) and ZEN (for better). Subsequently, Yashuhiro Monden from Japan established Kaizen Costing as the costing counterpart to the Kaizen approach. It is also known as the process of 'continuous improvement' (Rof, 2012; Sani & Allahverdizadeh, 2012). The underlying principle is centered on achieving small, steady but constant improvements in the production process at least cost possible (Rof, 2012). Ellram (2000) observed that Kaizen Costing ensures that products at least met customers' demands/expectations for 'functionality, quality and prices' in order to retain the product's market share. This, according to Rof (2012), can be achieved through ensuring that for all processes, marginal expenses equal marginal revenues, otherwise the process is eliminated.

Efficiency theory posited that management plan, execute and control expenses (overheads) by arming themselves with better and timely information on when and where costs occur and what costs add to the value of a product. Fixed cost remains constant within relevant range while variable costs change proportionately with changes in the activity driver (Stelarios, 2006).

2.3. Empirical Reviews

Okwo and Ugwunta (2012) carried out a research study on the impact of firm's overhead cost on firm's Profitability: Evaluation of the Nigerian Brewery industry. The Nigerian Brewery Plc and Guinness Nigerian are the focus of this research. This study measures the effect of overhead costs on the performance of the Nigerian brewery industry. A cross sectional data from listed brewery firms in Nigeria during the period 1999 to 2010 provided the basis for the econometric analysis. It showcased that ratio of selling and general administrative expenses (RSGAE) designated to capture the effect of a company's operating expenses on profitability exerted statistically significant and positive influence on profitability of these sampled firms. Otete (2018) studied determinants of external auditors' remuneration from the Ugandan insurance sector. The study made use of a sample of 74 insurance firms in Uganda. It spanned a four year panel study period 2014-2017 and selected data extracted from the audited annual reports for the relevant years. The study showed that both the client's annual income and total assets exerted statistically significant impacts on auditor's remunerations. It also discovered that auditor's size had statistically significant effect on the auditor's remuneration and the choice of the auditor is affected by the size of the company.

Egbunike and Abiahu (2017) studied audit firm report and financial performance of deposit money banks in Nigeria. The study employed ex-post facto and correlational research design. All deposit money banks in existence as at 2015 financial year end made up the study population. It discovered that audit quality exerted significant effect on return on assets of Nigerian banks; audit fee and audit report lag are not significantly related to earnings per share, return on assets and net profit margin of Nigerian banks. Aliyu, Musa and Zacharia (2015) observed the impact of audit quality on earnings management of listed deposit money banks in Nigeria. The study was carried out using a sample of 10 quoted deposit money banks for a period of 8 years (2006-2013). It used secondary data and analysis done through correlational research design. It, further, employed the Ordinary Least Squares (OLS) regression technique of data analysis and revealed that audit quality and auditor's financial independence has significant positive impacts on the earnings management of listed deposit money banks in Nigeria during the period of the study.

Ugwu, Aikpitanyi and Idemudia (2020) carried out a study on the effect of audit quality on the financial performance of deposit money banks in Nigeria. Employing secondary data, which were extracted from the audited financial statements of the listed DMBs for the 8 year study period (2011-2017), correlation and ex-post facto research designs and multiple regressions, it revealed negative and significant relationship between joint audit and ROA, significant and positive relationship between audit firm size and ROA and negative and insignificant relationship between audit fee and ROA. Farouk and Hassan (2014) investigated the relationship between audit quality and financial performance of listed firms in Nigeria. The study adopted descriptive statistics, correlational and ex-post facto designs. Data were obtained basically from the audited annual reports and accounts and notes to the financial statements of the four firms that represent the sample of the study. The collated data were tabulated and further analyzed using multiple regression analysis, specifically, SPSS Version 15.0. The results showed that audit firm size and independence exhibited significant impact on the financial performance of listed cement firms in Nigeria.

Isah and Muhammed (2019) examined the sensitivity of financial performance to audit quality of listed deposit money banks (DMBs) in Nigeria. Data was collated from the audited financial statements and annual reports of 14 quoted DMBs in Nigeria over the 11 year study period (2007-2017). Generalized Least Square Regression was used to analyze the data and test the hypotheses. The results indicated the existence, on one hand, a significant and positive relationship between audit fee and financial performance of these DMBs, and on the other, a significant but negative relationship between audit report timeliness and financial performance of the same DMBs. The study averred that audit fee and audit report timeliness were key drivers of financial performance of listed DMBs in Nigeria. Alajo and Nzewi (2020) critically examined the impact of external audit fees determinants on audit fees of deposit money banks in Nigeria. Secondary data were collated from the audited annual reports and financial statements of 15 deposit money banks selected out of fifteen covering the period 2009 – 2018. The findings revealed that board size and client complexity exerted significant impacts on the audit fees of these banks.

Ogbodo and Akabuogu (2018) looked at the relationship between audit quality and the corporate performance of selected listed banks in Nigeria. In particular, the study investigated the effect of audit firm size on return on asset of Nigerian universal banks. The study population is made up of 16 deposit money banks quoted on the Nigerian Stock Exchange. Data were collated from the audited financial statement of these banks for the 10 year period (2008-2017). The Scientific Package for Social Sciences (SPSS) Version 20 was used to analyze the data and test the stated hypotheses. The study revealed that both audit committee independence and firm size exerted significant influence on return on assets of these sampled banks. Further, audit committee size has significant impact on profit margin of the sampled banks. The study, hitherto, recommended inter alia, that banks should make use of the services of audit firms with indisputable track records of audit quality and reputation. Razali, Yee, Hwang, Tak and Kadri (2018) investigated the relation between directors' remunerations and financial performance of the consumer products sector focusing particularly on Malaysian listed companies. Their study employed a sample of 40 Malaysian quoted firms for the relevant period of 2012 to 2014. After controlling for CEO duality, firm age, board size, firm size and leverage; the panel least squares regression results showed that director remuneration has positive association with firm performance (proxied by ROE and ROA). The result shows that all variables affect firm performance differently.

Ololade, Olusegun, Abiodun and Olalekan (2015) examined the connection between human resource development and financial performance of the banking industry in Ogun State. Both primary and secondary data were used in the study. While primary data were collected from the sampled commercial banks' staff in Abeokuta metropolis, secondary data were collated from audit 2012 and 2013 financial statements of commercial banks. Data were analyzed via ordinary least squares (OLS) regression and chi-square analyses. The study indicated a significant positive relationship between expenditure on human development and each of the financial performance indicators. Benssong, Effiok and Edet (2012) examined the relation between human resource development and the performance of selected banks in Nigeria. The study collated data from banks listed in the Nigeria Stock Exchange (NGSE) using a survey design. The data were then tabulated and analyzed using Ordinary Least Square (OLS). The study discovered that all the variables of human resource development used are statistically significant.

Abidemi, Ganiyu and Ilo (2018) examined firm-specific and macro-economic determinants of firm profitability for 114 firms quoted on the Nigerian Stock Exchange (NGSE) for the 15 year study period from 1998 to 2012 employing the Generalized Method of Moments (GMM). The results showed that lagged profitability exerts significant positive effect on profitability of these sampled firms. However, short-term leverage, inflation rate, interest rate and financial risk have significant negative effects on firm profitability. Manukaji, Osisioma, and Okoye (2019) examined the effect of human resources development on the performance of listed firms in Nigeria. The study adopted ex post facto research design. A total of 5 firms quoted on the Nigerian Stock Exchange were examined using their 2014 to 2018 annual reports and accounts. Data were sourced on employee remunerations, training and development costs, size of the employee while return on assets served as proxy for performance. The data generated were analyzed using descriptive statistics, correlation test and ordinary least square estimation technique. The study found that employee remuneration and training and development cost have significant effect on performance of quoted companies in Nigeria. Size of employees was found to have insignificant effect on performance of these companies.

3. Methodology

Creswell (2014) opined that ex-post facto research guarantees research problems influenced by the environment are systematically and empirically solved. The associations between the variables studied in lieu of the banking industry were tested using adjusted *Panel Least Squares Regressions*. Panel data (use of both time series and cross sectional data) are employed in most researches as it can diminish the impact of a single variable, multiple observations that ensure

better management of unobservable firm characteristics, and so on (Baltagi, 2005; Saunders, Lewis & Thornhill, 2009, Gujarati and Porter, 2009). Further, panel multiple correlations and regressions used are modifications of the variants adopted by Borici and Krujer (2016). Data are extracted from the audited annual reports and accounts of five (05) sampled banks for the twelve (12) year period (2009 to 2020). *The dependent variable in this study is proxied by return on equity (ROE), while the independent variables are made up of audit fees (AUDFE), directors' remunerations (DIREM) and salaries and wages (SALW). These predictor variables are divided by the entered control variable, natural logarithm of total assets (LnTA) to linearize the data. The regression equation becomes*

$$ROE_{it} = \beta_0 + \beta_1AUDFE_{it} + \beta_2DIREM_{it} + \beta_3SALW_{it} + \beta_4LnTA_{it} + C_{it} + \epsilon_{it}$$

Where ROE = Return on Equity = Profit for the Year / Shareholders' Fund

AUDFE = Audit Fees = Annual Audit Fee / Total Assets = audfetta

DIREM = Directors' Remunerations = Directors' Remunerations / Total Assets = diremtta

SALW = Salaries and Wages = Salaries and Wages / Total Assets = salwtta

LnTA = Natural Logarithm of Total Assets used as proxy for size = lnta

β_0 is the constant term or intercept for firm i in the year t. $\beta_1, \beta_2, \beta_3$ and β_4 , are linear regression coefficients to be estimated.

C_{it} is the non-observable individual effect while ϵ_{it} is the disturbance or error term for firm i in the year t.

4. Results

| Var | Obs. | Mean | Std. Dev | Std. Err | Prob(Skew) | Prob(Kurt) | Min | Max |
|----------|------|---------|----------|----------|------------|------------|---------|---------|
| roe | 60 | 0.1472 | 0.0792 | 0.0102 | 0.4713 | 0.1143 | 0.0111 | 0.3208 |
| audfetta | 60 | 0.0002 | 0.0001 | 0 | 0.0001 | 0.0065 | 0.0001 | 0.0003 |
| diremtta | 60 | 0.0005 | 0.0004 | 0.0001 | 0 | 0.0071 | 0.00003 | 0.0018 |
| salwtta | 60 | 0.0152 | 0.0062 | 0.0008 | 0 | 0.0013 | 0.0068 | 0.0397 |
| lnta | 60 | 14.7699 | 0.7056 | 0.0911 | 0.1563 | 0.5586 | 13.0849 | 15.9765 |

Table 1: Descriptive Statistics
Source: Authors' STATA 14.2 Outputs

The above figures as computed via software (STATA and EXCEL) depicted that the mean is an approximate measure of the true population (all quoted Deposit Money Banks in Nigeria). Both the standard deviations and standard errors showed of all entered variables are very small in comparison to their respective means. Particularly, the standard errors are quite small and aligned to theory that it becomes smaller as a normal sample approaches the true population. Except for return on equity and natural logarithm of total assets, the probabilities of both moments for the remainder (i.e. predictors) are below 1%. The range (difference between maximum and minimum values) is undulating for the study period. In other words, the values are approximately normally distributed.

```

. pwcorr roe audfetta diremtta salwtta lnta, sig listwise star(5)
-----+-----
                roe  audfetta  diremtta  salwtta  lnta
-----+-----
    roe          1.0000
    audfetta     0.3024*   1.0000
                0.0189
    diremtta     -0.3076*  -0.0507   1.0000
                0.0168   0.7007
    salwtta      -0.6045*   0.0384   0.2021   1.0000
                0.0000   0.7707   0.1215
    lnta         0.3386*  -0.1999   0.0584  -0.6587*   1.0000
                0.0081   0.1258   0.6574   0.0000
    
```

Table 2: Correlation Matrix with P-Values Involving 60 Observations
Source: Authors' STATA 14.2 Outputs

All the entered explanatory variables exerted strong influence on the regress and (roe) as depicted on table 2 above. While audit fee and natural logarithm of total assets exerted positive and significant influence on return on equity, directors' remuneration and salaries and wages exerted significant but negative effect on the dependent variable. *However, there exists perfect relationship between natural logarithm of total assets and salaries and wages (presence of collinearity). It is easily adjusted using collinearity diagnostics in so far as both lagged values and dummy variables are absence (see appendices I & II).*

Levin-Lin-Chu unit-root test for all the Variables based on Augmented Dickey-Fuller tests

Ho: All panels contain unit roots

Number of panels (N) = 05

Ha: Panels are stationary

Number of periods (T) = 12

Asymptotics: N/T → 0

| Var. | Unadjusted t | Adjusted t* | 1% | 5% | P-values) | Lags (Order of Integration) |
|----------|--------------|-------------|-------|-------|-----------|-----------------------------|
| roe | -5.9371 | -3.5715 | -2.58 | -1.95 | 0.0002 | 1 |
| audfetta | -3.3228 | -0.5487 | -2.58 | -1.95 | 0.2916 | 1 |
| diremtta | -5.1494 | -1.2115 | -2.58 | -1.95 | 0.1129 | 1 |
| salwtta | -3.0629 | -1.4151 | -2.58 | -1.95 | 0.0785 | 1 |
| Inta | -2.3366 | -1.9535 | -2.58 | -1.95 | 0.0254 | 1 |

Table 3: Panel Data Stationarity Tests

Source: Authors' STATA 14.2 Outputs

From appendices, it can be deduced that major diagnostic tests include variance inflation factor (VIF = absence of multi-collinearity) test, Heteroskedasticity test and Levin-Lin-Chu unit root tests depicting presence of at least, a unit root (see table 3 above). That is, the three predictors (audfetta, diremtta and salwtta) contain unit root indicating unstableness of the distribution albeit approaching normal distribution. Hence, random effect model or error correction model is best suited panel least squares regression, specifically, Random-Effects GLS regression.

```

. xtreg roe audfetta diremtta salwtta Inta, re

Random-effects GLS regression              Number of obs   =           60
Group variable: firm                      Number of groups =            5

R-sq:  within = 0.1738                    Obs per group:  min =           12
        between = 0.9311                    avg =           12.0
        overall = 0.5022                    max =           12

corr(u_i, X) = 0 (assumed)                Wald chi2(4)    =           55.49
                                                Prob > chi2     =           0.0000

```

| roe | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|----------|-----------|-----------|-------|-------|----------------------|
| audfetta | 472.9826 | 142.3153 | 3.32 | 0.001 | 194.0497 751.9155 |
| diremtta | -35.38436 | 19.24533 | -1.84 | 0.066 | -73.10451 2.335792 |
| salwtta | -6.951198 | 1.72535 | -4.03 | 0.000 | -10.33282 -3.569574 |
| Inta | .0064622 | .0150887 | 0.43 | 0.668 | -.023111 .0360355 |
| _cons | .10253 | .2452543 | 0.42 | 0.676 | -.3781596 .5832197 |

```

sigma_u  0
sigma_e  .04350112
rho      0 (fraction of variance due to u_i)

```

Table 4: Random – Effects Gls Regression

Source: Authors' Stata 14.2 Outputs

The table above depicts that the overall influence of the predictors on the dependent variable is statistically very significant at P-value = 0.0000. As regards hypothetical tests, influence of audit fees (audfetta) on return on equity (roe) is very significant at P-value = 0.001 < 0.05 level of significance and t-statistic = 3.32 > |2|. Further, the sensitivity of return on equity to salaries and wages (salwtta) is also statistically very significant at P-value = 0.000 and t-statistic = -4.03 > |2|. However, both director's remunerations (diremtta) and natural logarithm of total assets exhibited insignificant relationships with return on equity given the P-values (0.066 and 0.668) and t-statistics (-1.84 and 0.43) respectively. The coefficients of the independent variables are quite large. For instance, 1% increase in audit fees increases return on equity by 47,298%; 1% increase in directors' remunerations decreases return on equity by 3,538% and so on.

5. Conclusion

The study examined the degree of sensitivity of financial performance to overhead (variable and fixed) costs of listed universal banks in Nigeria. Variable overhead costs are traced directly to output unlike fixed overhead that emanate from apportionment of costs that cannot be easily traced to product/output. It made use of data already in existence. The later (panel data) was analyzed to surmise the statistical relevance of the association between variables entered. While audit fees and natural logarithm of total assets positively exerted very strong and insignificant impacts on return on equity, salaries and wages and director's remunerations negatively exerted very strong and insignificant impacts on return on equity. Financial firms' profits are highly influenced by these overhead expenses as they mimic heavy personnel and other costs culture of governments locally. The study suggests an in-depth examination of relationship between overhead costs and other value drivers of these firms such as economic value added, return on investment, market capitalization and so on.

6. References

- Abidemi, I. O., Ganiyu, O. Y. & Ilo, B. M. (2018). Determinants of firm profitability in Nigeria: Evidence from dynamic panel models. *SPOUDAI Journal of Economics and Business*, 68(1), 43-58.

- ii. Ademola, S. (2014). Working capital management and profitability of selected quoted food and beverages manufacturing firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 2 (3), 10 – 21.
- iii. Adeniyi, A. A. (2009). *Cost accounting: A managerial approach*, (1st ed.). Lagos: EL-TODA Ventures Ltd.
- iv. Alajo, F. K. & Nzewi, U. C. (2020). Effect of external audit fees determinants on audit fees in deposit money banks in Nigeria. *International Journal of Advanced Academic Research (Social and Management Sciences)*, 6(10), 269-286.
- v. Aliyu, M. D., Musa, A. B. & Zacharia, P. (2015). Impact of audit quality on earnings management of listed deposit money banks in Nigeria. *Journal of Accounting and Financial Management*, 1(8), 20-32.
- vi. Anup, A. & Nagarajan, N. (1990). Corporate capital structure, agency costs, and ownership control: The case of all equity firms. *The Journal of Finance*, 45(4), 1325-1331.
- vii. Baltagi, B. (2005). *Econometric analysis of panel data* (3rded.). New York: John Wiley & Sons.
- viii. Bessong, P. K., Effio, S. O. & Edet, O. U. (2012). Human resource valuation and the performance of selected banks in Nigeria. *Global Journal of Social Sciences*, 11 (2), 133-140.
- ix. Booze, C. (2009). Overhead cost: Relief on barley, aluminum and logistics. Just around the corner. *Black Book - European Beverage*. <http://www.google.al.logistics.com>
- x. Borici, A. & Kruja, A. (2016). Determinants of firm's cash holding: Evidence from Shkodra region, Albania. *International Journal of Economics, Commerce and Management*, 4 (4), 41-52.
- xi. Creswell, J. W. (2014). *Research design: Qualitative and Quantitative Approaches* (5th ed.). London: UK: Sage Publications.
- xii. Egbunike, F. C. & Abiahu, M. C. (2017). Audit firm report and financial performance of money deposit banks in Nigeria. *The Nigerian Accountant*. January/March, 25-39.
- xiii. Ellram, L. M. (2000). Purchasing and supply chain management's participation in the target costing process. *Journal of Supply Chain Management*, 36, 39–51. <http://dx.doi.org/10.1111/j.1745-493X.2000.tb00076.x>
- xiv. Farouk M.A. & Hassan, S. U. (2014). Impact of audit quality and financial performance of quoted cement firms in Nigeria. *International Journal of Accounting and Taxation*. 2 (2), 1-22.
- xv. Gujarati, D. N. & Porter, D. C. (2009). *Basic econometrics* (5thed.). New York: McGraw-Hill Irwin.
- xvi. Isah, A. I. & Muhammed, L. (2019). Impact of audit quality on financial performance of listed deposit money banks in Nigeria. *Usmanu Danfodiyo University, Sokoto Journal of Management Studies*. 18 (1), 141-157.
- xvii. Kinyugo, J.M. (2014). The Effect Of Cost Efficiency On Financial Performance Of Companies Listed On Nairobi Securities Exchange. *Unpublished MBA Dissertation, University of Nairobi*.
- xviii. Liu, H., Wu, S., Ziyong, C. & Liu, Y. (2020). The sustainable effect of operational performance on financial benefits: Evidence from Chinese quality awards winners. *Sustainability*, 12(2), 1-23.
- xix. Manukaji, I. J., Osisioma, B. C. & Okoye P.V.C. (2019). Effect of human resource development on performance of quoted companies in Nigeria. *Journal of Accounting and Financial Management*. E-ISSN 2504-8856 P-ISSN 2695-2211. 5(3) 2019 www.iiardpub.org
- xx. Ogbadu, E. B. (2009). Profitability through effective management of materials. *Journal of Economics and International Finance*. 1 (4), 99-105.
- xxi. Ogbodo, O. C. & Akabuogu, N. J. (2018). Effect of Audit Quality on the Financial Performance of Selected Banks in Nigeria. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 3(1), 99-113.
- xxii. Okezie, R. A., Okezie, B. N. & Ogbu, U. G. (2017). Indirect costs and firm performance of quoted companies in Nigeria. *FUNAI Journal of Accounting*, 1(1), 151-160.
- xxiii. Okwo, I. M. & Ugwunta, D. O. (2012). Impact of firm's input costs on profitability: Evaluation of the Nigerian brewery industry. *Research Journal of Finance and Accounting*, 3(6), 78-89.
- xxiv. Ololade, S. S., Olusegun, E. I., Abiodun, S. M. & Olalekan, O. F. (2015). Human resource development as a correlate of performance of the banking industry in Ogun State, Nigeria. *Journal of Economics and International Finance*, 7(5), 112-126.
- xxv. Oluwagbemiga, O. E., Olugbenga, M. O. & Adeoluwa, S. Z. (2014). Cost management practices and firm performance of manufacturing organizations. *International Journal of Economics and Finance*, 6 (6), 234-240.
- xxvi. Otete A. R. (2018). Determinants of external auditors' remuneration from the Ugandan insurance sector. *European Journal of Accounting, Auditing and Finance Research*, 6(9), 52-68.
- xxvii. Pandey, I. M. (2015). *Financial management* (11th ed.). New Delhi: Vikas Publishing House PVT Ltd.
- xxviii. Razali, M. W., Yee, N. S., Hwang, J. Y., Tak, A. H. & Kadri, N. (2018). Directors' remuneration and firm's performance: A study on Malaysian listed firm under consumer product industry. *International Business Research*, 11(5). 102-109.
- xxix. Rof, M. L. (2012). Kaizen Costing Method and Its Role in the Management of an Entity. *Revista Tinerilor Economisti (The Young Economists Journal)*, 104–109.
- xxx. Sangosanya, A. & Awoyemi, O. (2011). Firm's growth dynamics in Nigeria's manufacturing industry: A Panel Analysis. *A Journal of Applied Econometric Review*. 2(3), 3-6.
- xxxi. Sani, A. A., & Allahverdizadeh, M. (2012). Target and Kaizen Costing. Retrieved from <http://www.waset.ac.nz/journals/waset/v62/v62-10.pdf>.
- xxxii. Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students* (5thed.). Edinburgh Gate, England: Pearson Education Limited, 614P

- xxxiii. Sitienei, G. & Memba, F. (2016). The effect of inventory management on profitability of cement manufacturing companies in Kenya. A case study of listed cement manufacturing companies in Kenya. *International Journal of Management and Commerce Innovations*, 3(2), 111-119.
- xxxiv. Ugwu, C. C, Aikpitanyi, L. N. & Idemudia, S. (2020). The effect of audit quality on financial performance of deposit money banks: Evidence from Nigeria. *Journal of Economics and Business*, 3(1), 270-281.

Appendix

| YEAR | FIRM | AUDFE | DIREM | SALW | PFTY | EQUITY | TA | YEAR | FIRM | ROE | AUDFETTA | DIREMTTA | SALWTTA | LnTA |
|------|-------------------|-------|-------|--------|---------|-----------|-----------|------|------|----------|----------|----------|----------|----------|
| 2009 | ACCESS | 125 | 504 | 10,726 | 20,814 | 184,160 | 710,326 | 2009 | 1 | 0.113021 | 0.000176 | 0.00071 | 0.0151 | 13.47348 |
| 2010 | | 279 | 532 | 15,200 | 11,068 | 175,371 | 804,824 | 2010 | 1 | 0.063112 | 0.000347 | 0.000661 | 0.018886 | 13.59838 |
| 2011 | | 180 | 1,320 | 20,304 | 15,378 | 192,065 | 1,629,003 | 2011 | 1 | 0.080067 | 0.00011 | 0.00081 | 0.012464 | 14.30348 |
| 2012 | | 340 | 2,511 | 26,862 | 38,405 | 240,990 | 1,745,177 | 2012 | 1 | 0.159363 | 0.000195 | 0.001439 | 0.015392 | 14.37237 |
| 2013 | | 308 | 675 | 29,568 | 36,298 | 244,482 | 1,835,466 | 2013 | 1 | 0.148469 | 0.000168 | 0.000368 | 0.016109 | 14.42281 |
| 2014 | | 434 | 714 | 29,885 | 42,976 | 277,411 | 2,104,361 | 2014 | 1 | 0.154918 | 0.000206 | 0.000339 | 0.014201 | 14.55952 |
| 2015 | | 379 | 788 | 39,187 | 71,439 | 367,801 | 2,591,330 | 2015 | 1 | 0.194233 | 0.000146 | 0.000304 | 0.015122 | 14.76768 |
| 2016 | | 460 | 795 | 47,951 | 65,869 | 454,495 | 1,483,866 | 2016 | 1 | 0.144928 | 0.00031 | 0.000536 | 0.032315 | 14.21016 |
| 2017 | | 529 | 857 | 51,643 | 60,088 | 511,195 | 4,102,243 | 2017 | 1 | 0.117544 | 0.000129 | 0.000209 | 0.012589 | 15.22704 |
| 2018 | | 613 | 930 | 54,209 | 94,981 | 490,512 | 4,954,157 | 2018 | 1 | 0.193636 | 0.000124 | 0.000188 | 0.010942 | 15.41574 |
| 2019 | | 820 | 892 | 73,155 | 94,057 | 751,041 | 7,143,157 | 2019 | 1 | 0.125236 | 0.000115 | 0.000125 | 0.010241 | 15.78167 |
| 2020 | | 1,017 | 1,142 | 68,951 | 106,010 | 606,740 | 8,679,748 | 2020 | 1 | 0.174721 | 0.000117 | 0.000132 | 0.007944 | 15.9765 |
| 2009 | GTB | 176 | 140 | 16,644 | 23,687 | 192,245 | 1,066,504 | 2009 | 2 | 0.123213 | 0.000165 | 0.000131 | 0.015606 | 13.8799 |
| 2010 | | 312 | 459 | 16,926 | 38,347 | 210,826 | 1,152,002 | 2010 | 2 | 0.181889 | 0.000271 | 0.000398 | 0.014693 | 13.95701 |
| 2011 | | 285 | 467 | 20,210 | 51,742 | 230,393 | 1,608,653 | 2011 | 2 | 0.224581 | 0.000177 | 0.00029 | 0.012563 | 14.29091 |
| 2012 | | 321 | 345 | 20,757 | 87,296 | 283,441 | 1,734,878 | 2012 | 2 | 0.307986 | 0.000185 | 0.000199 | 0.011965 | 14.36645 |
| 2013 | | 335 | 366 | 22,479 | 90,024 | 332,353 | 2,102,846 | 2013 | 2 | 0.270869 | 0.000159 | 0.000174 | 0.01069 | 14.5588 |
| 2014 | | 400 | 512 | 25,981 | 98,695 | 374,333 | 2,355,877 | 2014 | 2 | 0.263656 | 0.00017 | 0.000217 | 0.011028 | 14.67242 |
| 2015 | | 503 | 542 | 26,090 | 99,437 | 413,562 | 2,524,594 | 2015 | 2 | 0.24044 | 0.000199 | 0.000215 | 0.010334 | 14.74159 |
| 2016 | | 596 | 670 | 27,375 | 132,281 | 504,903 | 3,116,393 | 2016 | 2 | 0.261993 | 0.000191 | 0.000215 | 0.008784 | 14.95219 |
| 2017 | | 712 | 879 | 30,337 | 167,913 | 619,400 | 3,351,097 | 2017 | 2 | 0.27109 | 0.000212 | 0.000262 | 0.009053 | 15.0248 |
| 2018 | | 791 | 586 | 32,714 | 184,640 | 575,567 | 3,287,343 | 2018 | 2 | 0.320797 | 0.000241 | 0.000178 | 0.009952 | 15.00559 |
| 2019 | | 858 | 787 | 33,320 | 196,849 | 687,337 | 3,758,919 | 2019 | 2 | 0.286394 | 0.000228 | 0.000209 | 0.008864 | 15.13964 |
| 2020 | | 1,180 | 701 | 33,494 | 201,440 | 814,396 | 4,944,653 | 2020 | 2 | 0.247349 | 0.000239 | 0.000142 | 0.006774 | 15.41382 |
| 2009 | FIDELITY | 66 | 14 | 14,431 | 1,431 | 129,419 | 506,267 | 2009 | 3 | 0.011057 | 0.00013 | 2.77E-05 | 0.028505 | 13.13482 |
| 2010 | | 73 | 222 | 14,756 | 6,108 | 136,053 | 740,941 | 2010 | 3 | 0.044894 | 9.85E-05 | 0.0003 | 0.019915 | 13.51568 |
| 2011 | | 84 | 207 | 19,137 | 5,361 | 137,359 | 481,615 | 2011 | 3 | 0.039029 | 0.000174 | 0.00043 | 0.039735 | 13.0849 |
| 2012 | | 113 | 282 | 22,649 | 17,924 | 161,455 | 914,360 | 2012 | 3 | 0.111015 | 0.000124 | 0.000308 | 0.02477 | 13.72598 |
| 2013 | | 125 | 328 | 25,629 | 7,721 | 163,455 | 1,081,217 | 2013 | 3 | 0.047236 | 0.000116 | 0.000303 | 0.023704 | 13.8936 |
| 2014 | | 150 | 355 | 23,674 | 13,796 | 173,111 | 1,187,025 | 2014 | 3 | 0.079695 | 0.000126 | 0.000299 | 0.019944 | 13.98696 |
| 2015 | | 150 | 346 | 25,062 | 13,904 | 183,516 | 1,231,722 | 2015 | 3 | 0.075765 | 0.000122 | 0.000281 | 0.020347 | 14.02392 |
| 2016 | | 568 | 1,565 | 58,860 | 8,972 | 496,311 | 4,213,460 | 2016 | 3 | 0.018077 | 0.000135 | 0.000371 | 0.01397 | 15.25379 |
| 2017 | | 618 | 929 | 62,944 | 95,695 | 543,010 | 5,391,850 | 2017 | 3 | 0.176231 | 0.000115 | 0.000172 | 0.011674 | 15.5004 |
| 2018 | | 200 | 262 | 21,434 | 22,926 | 194,416 | 1,719,883 | 2018 | 3 | 0.117922 | 0.000116 | 0.000152 | 0.012462 | 14.35777 |
| 2019 | | 200 | 443 | 21,129 | 28,425 | 234,030 | 2,114,037 | 2019 | 3 | 0.121459 | 9.46E-05 | 0.00021 | 0.009995 | 14.56411 |
| 2020 | | 200 | 789 | 22,118 | 26,650 | 273,533 | 2,758,148 | 2020 | 3 | 0.097429 | 7.25E-05 | 0.000286 | 0.008019 | 14.83007 |
| 2009 | FIRST BANK | 149 | 652 | 45,819 | 12,569 | 337,405 | 2,009,914 | 2009 | 4 | 0.037252 | 7.41E-05 | 0.000324 | 0.022796 | 14.5136 |
| 2010 | | 193 | 3,669 | 52,138 | 33,411 | 340,626 | 2,305,258 | 2010 | 4 | 0.098087 | 8.37E-05 | 0.001592 | 0.022617 | 14.6507 |
| 2011 | | 193 | 3,294 | 48,655 | 18,636 | 368,580 | 2,860,169 | 2011 | 4 | 0.050562 | 6.75E-05 | 0.001152 | 0.017011 | 14.86639 |
| 2012 | | 284 | 3,537 | 47,916 | 75,670 | 438,847 | 3,186,129 | 2012 | 4 | 0.172429 | 8.91E-05 | 0.00111 | 0.015039 | 14.97432 |
| 2013 | | 488 | 6,884 | 55,370 | 70,631 | 471,777 | 3,869,001 | 2013 | 4 | 0.149713 | 0.000126 | 0.001779 | 0.014311 | 15.16851 |
| 2014 | | 530 | 6,795 | 75,011 | 82,839 | 522,890 | 4,342,666 | 2014 | 4 | 0.158425 | 0.000122 | 0.001565 | 0.017273 | 15.284 |
| 2015 | | 731 | 6,333 | 77,115 | 15,148 | 578,800 | 4,166,189 | 2015 | 4 | 0.026171 | 0.000175 | 0.00152 | 0.01851 | 15.24251 |
| 2016 | | 803 | 3,483 | 78,828 | 12,243 | 582,575 | 4,736,805 | 2016 | 4 | 0.021015 | 0.00017 | 0.000735 | 0.016642 | 15.37087 |
| 2017 | | 856 | 5,081 | 74,072 | 37,708 | 673,719 | 5,236,537 | 2017 | 4 | 0.05597 | 0.000163 | 0.00097 | 0.014145 | 15.47117 |
| 2018 | | 910 | 4,077 | 81,875 | 59,667 | 530,647 | 5,568,316 | 2018 | 4 | 0.112442 | 0.000163 | 0.000732 | 0.014704 | 15.5326 |
| 2019 | | 977 | 3,491 | 80,528 | 73,665 | 661,125 | 6,203,526 | 2019 | 4 | 0.111424 | 0.000157 | 0.000563 | 0.012981 | 15.64063 |
| 2020 | | 950 | 3,852 | 89,259 | 89,730 | 765,171 | 7,689,028 | 2020 | 4 | 0.117268 | 0.000124 | 0.000501 | 0.011609 | 15.8553 |
| 2009 | ZENITH | 200 | 745 | 43,057 | 20,603 | 337,793 | 1,659,703 | 2009 | 5 | 0.060993 | 0.000121 | 0.000449 | 0.025943 | 14.32215 |
| 2010 | | 243 | 604 | 32,327 | 37,414 | 363,561 | 1,895,027 | 2010 | 5 | 0.10291 | 0.000128 | 0.000319 | 0.017059 | 14.45474 |
| 2011 | | 254 | 742 | 39,104 | 48,704 | 394,268 | 2,326,695 | 2011 | 5 | 0.12353 | 0.000109 | 0.000319 | 0.016807 | 14.65996 |
| 2012 | | 320 | 726 | 39,613 | 100,881 | 462,956 | 2,604,504 | 2012 | 5 | 0.217906 | 0.000123 | 0.000279 | 0.015209 | 14.77275 |
| 2013 | | 420 | 675 | 47,974 | 95,318 | 509,251 | 3,143,133 | 2013 | 5 | 0.187173 | 0.000134 | 0.000215 | 0.015263 | 14.96073 |
| 2014 | | 460 | 630 | 55,689 | 99,455 | 552,086 | 3,755,264 | 2014 | 5 | 0.180144 | 0.000122 | 0.000168 | 0.01483 | 15.13867 |
| 2015 | | 546 | 1,145 | 56,595 | 105,663 | 594,353 | 4,006,842 | 2015 | 5 | 0.177778 | 0.000136 | 0.000286 | 0.014125 | 15.20351 |
| 2016 | | 626 | 1,057 | 60,536 | 129,652 | 704,465 | 4,739,825 | 2016 | 5 | 0.184043 | 0.000132 | 0.000223 | 0.012772 | 15.37151 |
| 2017 | | 693 | 1,479 | 53,397 | 173,791 | 812,116 | 5,595,253 | 2017 | 5 | 0.213998 | 0.000124 | 0.000264 | 0.009543 | 15.53743 |
| 2018 | | 822 | 1,418 | 57,957 | 193,424 | 815,751 | 5,955,710 | 2018 | 5 | 0.237112 | 0.000138 | 0.000238 | 0.009731 | 15.59986 |
| 2019 | | 892 | 2,448 | 65,831 | 208,843 | 941,886 | 6,346,879 | 2019 | 5 | 0.221729 | 0.000141 | 0.000386 | 0.010372 | 15.66347 |
| 2020 | | 786 | 1,674 | 67,558 | 230,565 | 1,117,473 | 8,481,272 | 2020 | 5 | 0.206327 | 9.27E-05 | 0.000197 | 0.007966 | 15.95337 |

Table 5: Raw & Processed (Panel) Data of Selected 5 DMBs (All Figures are in Millions of Naira)