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EFFECT OF ACCOUNTING CONSERVATISM ON INVESTMENT EFFICIENCY OF LISTED CONGLOMERATE FIRMS IN NIGERIA

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Abstract

This study explores the relationship between Accounting conservatism and investment efficiency in Nigeria. The study model examined the relationship between the independent variables (Accounting conservatism) and the dependent variable of investment efficiency, by applying the simple regression analysis of 10 years data Ordinary Least Squares (OLS) which cover the period of 2006-2015.All of tests have been done using stata11 statistical software. The results obtained from this research indicate that there is a significant relationship between accounting conservatism and investment efficiency. The study concluded that there is a positive relationship between Accounting conservatism and investment efficiency in Nigerian coglomerate firms. The study suggests that the management of conglomerates firms in Nigeria need to embrace the element of conservatism in to the accounting policies and regulatory framework as it plays a significant role in constraining

managers to act efficiently in respect of an investment monitoring and decision makingg.

Keywords: *Accounting conservatism, investment efficiency, coglomerates firms.*

1. Introduction

The predicted relationship between the accounting conservatism and firm investment based on accounting literature is mixed.In line with agency theory, managers have more information about the expected benefit, project delivery time, and investments in hand (Lambert, Leuz & Verrecchia, 2007). Thus, they can make investment decisions which may harm the interests of investors (Jensen & Meckling, 1976). Accounting conservatism, through the Quick recognition of economic losses in the income statement, is predicted to increase firm investment efficiency through three main channels; by decreasing the negative effects of information asymmetries and facilitating the monitoring of managerial investment decisions; by increasing managerial incentives to abandon poorly performing projects earlier and to undertake fewer negative net present-value investments; and by facilitating access to external financing at lower cost (Lalbar, Ghaemmaghami, Pourmansoor & Karamali, 2012).

Several studies have examined accounting conservatism in different economic and financial environments (Ahmed, Billing, Morton & Stanford-Harris, 2002; Ahmed & Duellman, 2007a, 2007b; Basu, 1997; Ball, Kothari & Robin, 2000; Ball & Shivakumar 2005; Biddle & Hilary, 2006; Biddle, Hilary, & Verdi, 2009; Brochman, Liu, & Ma, 2010; Bushman, Piotroski & Smith, 2007; Bushman & Smith, 2001; Gary, Mary & Franek, 2010; Geimechi & Khodabakhshi, 2015; Ghavi, Najafi & Arfai, 2013; Guay & Verrecchia, 2007; Hope & Thomas, 2008; Jensen, 1986; Jensen & Meckling, 1976; Julio, 2007; Lafound & Watt, 2008; Lara, Osma, & Penalva, 2009, 2010a, 2010b; lalbar *et al* 2012; Lambert*et al*2007; Mahmoodabadi & Mehtari,2012; Mansoori & Kiamehr, 2014; Mcnichols & Stubben, 2008; Myers, 1977; Myers & Majluf, 1984; Nakano, Ostubo & Takasa, 2014; Naunprdit & Boomlert-U-Thai, 2013; Schleicher, Tahoun & Walker, 2008; Suijs, 2008; Stein, 1989; Verdi, 2006; Xu, Wang & Han, 2012). Despite the relevance of the studies so far, they have examined the relationship between Accounting conservatism and investment efficiency in different geographical environments. That is, there are no empirical studies so far on the effect of accounting conservatism on firm investment in Nigeria. This study fills this gap and makes initial effort to examine the effect of accounting conservatism on firm investment efficiency in Nigerian conglomarate firms. In line with the

objective of the paper, it is hypothesised that accounting conservatism has no significant relationship with investment efficiency.

2. Review of Related Empirical Studies

An efficient investment policy can be defined as one in which all positive NPV investmentprojects are identified, funded and implemented, while all negative NPV projects are rejected (Julio, 2007). Agency theory predicts that whilst managers may be well informed about theexistence of profitable investment opportunities, they might not always pursue them because of, first, moral hazard problems that derive in managerial expropriation of firm cash flows, myopicbiases and inefficient selection of investment opportunities (Jensen& Meckling, 1976; Jensen, 1986; Stein, 1989); and secondly, lack of available funding derived from high cost of externalfinancing. This high cost of equity capital can be due to the firm capital structure, which might drive a wedge between the overall return to investment and the return accrued to shareholders;but it can also be partly attributable to information asymmetries and complications in theestimation of the firm's future cash flows(lara*et al,* 2009).

Accounting information plays an important role in monitoring senior managers (Bushman& Smith, 2001), contributing toward making moral hazard problems better and to decrease theproblems created by information asymmetries (lara *etal* 2009), and, as shown by Lambert *et al* (2007) itfacilitates the estimation of firms' future cash flows. As suggested by Bushman and Smith (2001) and Lambert *et al* (2007), these effects are expected to increase firm value by improvingfirm's investment decisions. Empirical research by Biddle and Hilary (2006), McNichols andStubben (2008), Biddle *et al* (2009) and Hope and Thomas (2008) confirms that the quality ofaccounting information and disclosure affects investment efficiency. In particular, Biddle andHillary (2006) document a positive association at the country- and firm-levels betweeninvestment-cash flow sensitivity and information fact of being opaque. In a similar vein, Schleicher, Tahoun and Walker(2008) show that IFRS adoption in Europe contributes to lower investment cash-flow sensitivity,Biddle *et al* (2009) find that increased accruals quality is associated to lower over- and underinvestmentand McNichols and Stubben (2008) show that firms that manipulate their reportedearnings make suboptimal investment decisions during the misreporting period. Finally, Hope and Thomas (2008) demonstrated that not disclosing geographic segment information has anegative effect on the efficiency of foreign investment.

Bushman *et al* (2007) provide evidence consistent with a negative relation between country-level measures of investment cash flow sensitivity and country-level measures of conservatism. From a different methodological perspective,

Ahmed and Duellman (2007) find evidence that more conservative firms present higher future profitability measures like gross profit margins and cash flows, and less special item charges. They interpret this evidence as indicative of more conservative firms investing more efficiently.

Accounting literatures argues conservatism influences firm investment efficiency in three main ways, Firstly, conservatism emerges as a reaction to information asymmetry. Conservatism mitigates the existing information asymmetries between managers and external investors by narrowing managerial skills and providing higher stability and high quality financial reporting (LaFond& Watts 2008).This is in consistent with the work of Ahmed and Duellman (2009) that conservatism is associated with strong corporate governance mechanisms that decrease the CEO's power and improve monitoring.

Secondly, by requiring early recognition of poor realizations, conservatism plays a significant role in resolving managerial agency conflicts. As argued by Ball and Shivakumar (2005), because losses have to be recognised in a timelier manner, managers are aware that they will not be able to defer the earnings consequences of their investment decisions to the next generation of managers; i.e., managers have to bear the consequences of their investment decisions during their tenure. This is predicted to limit managerial investments in ex ante negative net present value (NPV) projects, reducing the likelihood of managers engaging in empire building strategies, 'pet' projects or 'trophy' acquisitions. Similarly, conservatism is predicted to trigger the early abandonment of ex post poorly performing projects and deter strategies of continuing (over) investment in under performing projects. Under conservative reporting, because loss recognition cannot be deferred, managers opt to abandon negative NPV projects earlier. Thus, timely loss recognition is expected to increase managerial incentives to react quickly to negative realizations, limiting losses on projects that do not perform (lara*et al* 2009).

Thirdly, conservatism reduces the conflicts between the bondholders (the financiers) and shareholders over share dividends, and it also results in lower cost of financing through borrowing, hence less risk in debt collection (Myers 1977, 1984 and lalbar *et al* 2012). This, by itself, reduces the debt caused by negative effect on investment efficiency (Ahmed, Billings, Morton, & Stanford, 2002). It is predicted that conservative accounting will mitigate the cost of equity capital (Guay&Verrecchia, 2007; Suijs, 2008).It is also expected that these reductions in the costs of debts and equity capital, will facilitate the opportunities of financial investment (lalbar *et al* 2012).

According to Kieso, Weygandt and Warfield (2001), relatively associated with minimum unwanted consequences, accounting conservatism is an approach to take when in doubt about choosing a procedure that would not unfavorably reflect the assets and profit higher than the actual values. From the viewpoint of Pure (1998), conservative behavior is an approach that prioritizes lower incomes (compared to higher incomes), and higher costs (compared to lower costs), and thus while identifying the unpredicted losses, it does not identify the unrealized profits. Conservative accounting results in an increase in the firm's liquid assets, by reducing the outflow and increasing the inflow of liquidity through a decrease in cash investments, avoiding from investing in negative net present valueprojects, keeping the agency cost at a low level, and increasing the savings level (Gary*et al,* 2010).

Lalbar *et al*, (2012) describes investment efficiency as the deviations from the expected investment in a project that predicts the expectedinvestments as a function of growth opportunity. Consequently, the investments below (negative deviations from theexpected investment) and above the standard level, will be associated with investment inefficiency.

The contribution of this study to the literature consist among, suggestion that eliminating conservatism from accounting regulatory frameworks by financial Reporting Council and International Financial Reporting Standard Board, may cause undesirable economic outcomes, especially to the developing economy like Nigeria, considering statistically positive significance of conservatism on investment efficiency . Again, the most profitable and fast growing Nigerian conglomarate firms are more conservative firms investing more efficiently to the benefit of both the international and local investors.

3. Methodology and Model Specification

This study is quantitative in nature (positivism paradigm) and secondary data is used. Correlational research design is used to describe the statistical association between two or more variables. The regression analysis is used to test the relationship between variables of the model. The sample of the study consists of all the 8 conglomarate firms listed on the Nigerian Stock Exchange (NSE) for the period 2006 to 2015 making 80 observations.

The variables are measured as follows:

Dependent Variable: This study adopted Mansoori and Kiamehr (2014) model for measuring investment efficiency in which investment has been considered as the

cash paid for acquisition or construction of fixed assets; intangible assets or other noncurrent assets (COF) divided by total assets at the beginning of period (TA).

Independent Variable: The study adopted Lalbar *et al* (2012) model in which conditional conservatism is used as Accounting conservatism proxy, since the lower the value of non-operating accrual the higher the level of firm conservatism (Lalbar *et al*, 2012).

Control Variables: the Control variables of this study are firm size and firm levarege, in which firm size is the Natural logarism of firm Total asset at the end of period and firm levarege is the firm total debt to the total assets at the end of period.

The model designed for the study is given as:

$$\boldsymbol{INVEFF_{it} = \alpha + \beta_1 CON_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon}$$

Where:

INVEFF: Investment efficiency = $^{COF}/_{TA}$, as dependent variable
i:firm
t:period/time
α: Constant value.
$\beta_{1\text{-}3}$: coefficient of independent variable.
CON: Accounting Conservatism (conditional) = $NoACC_{it}/TA_{it}(-1)$, as Independent variable.
SIZE: firm size =log(Asset), as Control variable.
LEV: firm levarege = The total debt to the total assets at the end of period, as Control variable.
ε = Error term.
Non-operating accruals *(NoACC)* can be calculated by the following relations:
$ACC = NI + DEP - CFO$
$oACC = \Delta I + \Delta AR + \Delta PE - \Delta AP - \Delta TP$
$NoACC = ACC - oACC$
in which:
ΔI : Change in Inventory
ΔAR : Change in Accounts Receivable
ΔPE : Change in Prepaid Expenses
ΔAP : Change in Accounts Payable
ΔTP: Change in Taxes Payable
NoACC: Non-operational Accruals
ACC: Total accruals

NI:Net profit before Items
DEP: Depreciation Expense Payable
CFO: Cash Flow from Operations
oACC: Operational Accruals

The tests of robustness include multicollinearity, heteroscedasticity, and test of serial correlation conducted in order to improve the validity of all statistical inferences for the study.

4. Result and Discussion

In this section, the study's results are presented and discussed. The discriptive statistics are first presented, followed by the regression results.

Table 1: Descriptive Statistics

VARIABLE	**Mean**	**Std Dev**	**Min**	**Max**	**N**
INVEFF	0.5332762	0.2048363	0.0538	0.9479	80
CON	0.0234287	0.1866834	0.4951	0.9022	80
LEVR	0.1992225	0.0951834	0.0446	0.6546	80
SIZE	6.77342	1.076371	3.6762	7.8591	80

Source: STATA 11

Table 1 show that our measure of Investment efficiency (INVEFF), cash paid for acquisition or construction of fixed assets scaled by total assets has an average value of 0.5332762 with standard deviation of 0.205, and minimum value of 0.0538 and 0.9479 as the maximum value. This is an indication that the data is normally distributed and is fit to produce a reliable result, because the mean is greater than standard deviation. The table also shows that the Accounting conservatism (CON) have an average value of 0.0234 with standard deviation of 0.1867, and the minimum and maximum value of 0.4951 and 0.6546 respectively. This shows that the data is dispersed from the mean because the standard deviation is higher than the mean. Finally, the average firm size, which is the nature log of total assets is 6.77342, ranging from 3.68 to 7.86. Here also, there is anindication that the data are not positively skewed and are fit to produce result that is reliable.

The correlation matrix on table 2 shows the relationship between all variables in the study model. The result reveals that firm size is positively correlated with all other variables. While the firm leverage appear to have negative correlation with each of both the investment efficiency and Accounting conservatism. This calls

for an investigation of the possibility of multicollinearity.The multicollinearity test using the variance inflation factor (VIF) indicates that the autocorrelation level within the period of the studymay not have any statistically significant impact as all VIF are above 1.0 and tolerance values (1/VIF) are lessthan 1.0. The mean of the VIF is 1.02. Further, the diagnostic statistics obtained from Breusch-pagan/cook-weisberg test for heteroskedasticity indicate that the regression model performs properly, as the chi2 is 1.16 at 0.2813 level of significant.

Table 2: Correlation Matrix

VARIABLE	INVEFF	CON	LEVR	SIZE
INVEFF	1			
CON	0.0602	1		
LEVR	-0.6687	-0.0466	1	
SIZE	0.0413	0.2596	0.0671	1

Source: STATA 11

Table 3. Summary of Regression Results

Variable	**Coefficient**	**Std. Err.**	**T. Test**	**P>|T|**
Constant	-0.2397473	0.1321221	-1.81	0.074
CON	0.0370639	0.0164381	2.25	0.027
LEVR	-0.5204242	0.0612899	-8.49	0.000
SIZE	0.0273472	0.015295	1.79	0.078
R2				0.5198
Adj. R2				0.5008
F-Statistic				27.42
Prob. of F				0.000

Source: STATA 11

The table 3 is a summary of regression output of the dependent variable (INVEFF) on the explanatory variable (CON) and the Control variables (LEVR, SIZE) presented**.** From the table, the result indicates that Accounting conservatism is positively related toInvestment efficiency with the t-statistic of 2.25 and is significant at 5%, which implies that for every 1% increase in level of Accounting conservatism, investment efficiency would increase with about 3.7%. This gave us basis to strongly belief that there is significant and positive relationship between accounting conservatism and investment efficiency. Thus, we reject the null hypothesis that says there is no significant relationship between accounting conservatism and investment efficiency. This result extend the findings of Verdi (2006), Biddle (2006), McNichols and Stubben (2008), Lara *et*

al (2009, 2010a, 2010b), Brockman, Liu and Ma (2010), Lalbar *et al* (2012), Mahmoodabadi and Mehtari (2012), Nuanpradit and Boonlert-u-Thai (2013), Ghavi, Najafi and Arfai (2013), Nakano, Otsubo and Takasu (2014), Mansoori *et al* (2014).

From the result,the cumulative R^2(0.52) which is the multiple coefficient of determination gives the proportion of the total variation in the dependent variable explained by the explanatory variables jointly. Hence, it signifies 52% of total variation in investment efficiency of Nigerian listed conglomerate firms is caused by their level of accounting conservatism, copula with level leverage and total assets. The Adjusted Coefficient of determination Adj R^2(0.50) indicates the explanatory power of the independent variables which are able to describe 50% of dependent variable changes too and the F-statistic value is 27.42 and is significant at 1%. This indicates that the model is fit and the explanatory variable are properly selected, combined and used, thus, the study findings can be reliable.

The findings of the study have several theoretical, practical and regulatory implications. These implications represent the contributions of the study which are expected to benefit the existing body of knowledge within the accounting research, regulators, providers of accounting services and investors.Our findings have important policy implications since they suggest the need to encourage applying Accounting conservatism principles by institutions and individual mangers to provide effective monitoring of investment level in the nigerian coglomerate firms, especially those with a large amount of leverage, that is, the large the leverage the lower investment efficiency. This suggests that similar efforts in other sectors especially financial institutions would be good help in controlling theirinvestment decisions in order to promote economic efficiency and resolve the conflicts between the bondholders (the financiers) and shareholders over share dividends.

Furthermore, in line with Suijs (2008), Lara*et al* (2010) and Laibar*et al* (2012) this study suggest that Accounting conservatism do more good than harm to the Accounting practices and principles, therefore eliminating the element of accounting conservatism by Financial Reporting Council/International Financial Reporting Standard Board is similar to pursuing the adverse economic consequences.

Finally, our findings shed more light on Accounting conservatism and investment efficiency studies in the sense that nigerian coglomerate firms are more conservative in nature, thus firm commitment to conservatism can lead to a direct

benefit to international and local investors in the form of more efficient investments.

5. Conclusion and Recommendation

Conclusively, the study has provided both empirical as well as statistical evidence on the Accounting conservatism in explaining and predicting Investment efficiency of the Nigerian listed conglomerate firms. Thus, Conservatismis influencing Investment efficiency of Nigerian conglomerate firms. It is therefore recommended that conditional conservatism used in this study as proxy of Accounting conservatism should be encouraged by the regulating bodies/standard setters and all other stakeholders especially, those in the Nigerian conglomerate firms because of the role that the Accounting conservatism play in constraining managers to act efficiently in an investment monitaring and decision making.

Finally, this study comfirm thataccounting conservatism can reduce cost of capital (Lara *et al* 2009, Xu, Wang and Han 2012). However, the study does not investigate whether the reduced costs of capital will translate into increased capital investments, which is one of the limitations of this study as sugested for further research.

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Appendix:

```
. describe

Contains data
  obs:            80
 vars:             6
 size:         1,840 (99.9% of memory free)
-------------------------------------------------------------------------------
              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------
firms           byte   %8.0g                  FIRMS
year            int    %8.0g                  YEAR
inveff          float  %8.0g                  INVEFF
con             float  %8.0g                  CON
levr            float  %8.0g                  LEVR
size            float  %8.0g                  SIZE
-------------------------------------------------------------------------------
Sorted by:
     Note:  dataset has changed since last saved
```

```
. summarize inveff con levr size
```

Variable	Obs	Mean	Std. Dev.	Min	Max
inveff	80	.5332762	.2048363	.0538	.9479
con	80	.0234287	.1866834	-.4951	.9022
levr	80	.1992225	.0951834	.0446	.6546
size	80	6.77342	1.076371	3.6762	7.8591

```
. correlate inveff con levr size
(obs=80)
```

	inveff	con	levr	size
inveff	1.0000			
con	0.0602	1.0000		
levr	-0.6687	-0.0466	1.0000	
size	0.0413	0.2596	0.0671	1.0000

```
. swilk inveff con levr size

                    Shapiro-Wilk W test for normal data

    Variable |   Obs        W          V        z       Prob>z
-------------+--------------------------------------------------
      inveff |    80    0.96804      2.194    1.721    0.04260
         con |    80    0.98520      1.016    0.034    0.48646
        levr |    80    0.92553      5.112    3.575    0.00018
        size |    80    0.70459     20.277    6.594    0.00000

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
        levr |      1.03    0.973862
        size |      1.02    0.978224
         con |      1.02    0.981197
-------------+----------------------
    Mean VIF |      1.02

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of inveff

         chi2(1)      =     1.16
         Prob > chi2  =   0.2813


. regress inveff con levr size

      Source |       SS       df       MS              Number of obs =      80
-------------+------------------------------           F(  3,    76) =   27.42
       Model |  1.72283229     3   .57427743           Prob > F      =  0.0000
    Residual |  1.59184237    76  .020945294           R-squared     =  0.5198
-------------+------------------------------           Adj R-squared =  0.5008
       Total |  3.31467466    79  .041957907           Root MSE      =  .14472

------------------------------------------------------------------------------
      inveff |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         con |   .0370639   .0164381     2.25   0.027     .0043246    .0698032
        levr |  -.5204242   .0612899    -8.49   0.000    -.6424935   -.3983549
        size |   .0273472    .015295     1.79   0.078    -.0031154    .0578097
       _cons |  -.2397473   .1321221    -1.81   0.074    -.5028913    .0233966
------------------------------------------------------------------------------
```