

Fund Traits and Corporate Value of Pension Fund Administrators in Nigeria

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Abstract

This study empirically analyses the effect of fund traits on corporate value of pension fund administrators (PFAs) in Nigeria. The issue of the potential nexus between fund characteristics and performance/value which has received vast empirical examination in Western academe has not been adequately investigated in Nigeria. With the evolution of the pension industry and tremendous rise in pension funds, this study therefore sought to provide empirical evidence on the whether selected traits significantly impact on corporate value of PFAs in Nigeria. A sample of twenty out of the twenty one licensed PFAs as at December 2017 were examined. Data for the study were sourced solely from annual reports of the studied PFAs for the period 2008 to 2017. In order to address endogeneity concerns, this study used an Arellano-Bond estimation which demonstrates that fund size, and Age and Contribution density are significant factors in predicting corporate value of PFAs.

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1. Introduction

Pension schemes are basically divided into two plans: The Pay As You Go otherwise referred to as the defined benefits plan (DBS) and the defined contribution plan otherwise known as defined contributory scheme (DCS). While the defined benefit design permits a liability arrangement which must be projected and funded entirely by the employer, the defined contribution design permits a liability only to the extent that an investment is made.

Until the Pension Reform Act of 2004, Nigeria had practiced a defined benefit pension plan for her public service retirees. A major drawback of this pension administration style was non-payment or delay in pension payment by constituted Federal or State Government authorities. To corroborate this assertion, Orifowomo

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(2006) documents that as at December 2005, pension backlog was put at about N 2.56 trillion with the delayed or non-payment of deserving retirees. It was against this backdrop that the Pension Reform Act (PRA) of 2004 was signed into law. With the signing into law of the PRA 2004, the old Pay-As –You Go system was replaced by a new scheme, the defined contributory scheme. The Act was aimed at guaranteeing that retirees get their benefits when due. As such, the Act translated the Nigerian pension scheme from the DBS to the DCS where the government provides 8% of the monthly remuneration while the employer funds 10% of the monthly remuneration into a retirement savings account (RSA) administered by a Pension Fund Administrator (PFA). Fund Administrators under the new structure create retirement savings account for employees, invest and administer the funds in a manner set by the National Pension Commission (PenCom), provide regular information to participating employees and pay retirement benefits to such employees.

Following the introduction of the Defined Contributory Scheme (DCS) which replaced the Defined Benefit scheme (DBS), pension assets rose from about N270 billion in 2006 to N9.58 trillion in 2019. Also, registered contributors have risen from 932,000 in 2006 to 8.9 million in 2019 (PENCOM, 2019).

Pension funds in Nigeria are progressively increasing which is causing the speedy growth of the Nigerian pension industry. Pension funds play a very central role in the Nigerian economy.

It is imperative that pension funds are managed in the most effective way possible so that they can yield good return on investments for pensioners in the future. It is also vital that pension funds measure their financial performance against long-term optimal targets (Oluoch, 2013). The extent to which a retiree enjoys his life after retirement vis-à-vis pension benefits administration is incumbent on these fund administrators, thus placing a weight of responsibility on them. This is obviously because the corporate value of funded pensions can depend critically on the funds' investment performance which is hypothesized to be incumbent on certain fund traits.

There are certain pension fund characteristics which signpost good financial performance of pension funds. The overall objective of this study is to establish the impact of selected pension fund characteristics on the corporate value of pension fund administrators in Nigeria.

2. Prior Research and Hypotheses Development

2.1 Fund Size and Corporate Value

The consideration of firm size in predicting corporate value has enjoyed popularity in the corporate finance research environment. Prior research suggests that firm size is a chief element that explains success and firms' corporate worth. This arises due to the gains in enhanced production (Mule, Mukras & Nzioka, 2015). This is explained by the fact that as compared to smaller businesses production could be

implemented with reduced costs by larger businesses and consequently a positive relationship is expected (Tangen, 2003).

Nirresh and Velnamp (2014) demonstrated the relevance of financial prudence of scale and other efficiencies in large businesses. One possible explanation behind this is that larger companies usually have access to larger resources to allocate for production, and the costs involved are lesser due to the economies of scale (Weekes–Marshall, 2014).

In the same vein, Berger and di Pati (2006) show that size is a vital corporate value predictor. The study argued that grander organizations are more varied, better administered and can tolerate risks better. While smaller firms might find it challenging addressing the information asymmetry concern which in result might worsen financial performance (Berger & di Pati, 2006).

Kigen (2016) analyzed the effect of fund size on the financial performance of pension fund in Kenya. Specifically the study determined the impact of size measured as number of contributors on the financial performance of pension funds. The study which was conducted through the use of a descriptive survey design had a target population which comprised all the 1232 registered pension schemes in Kenya. A sample size of 93 registered pension schemes was selected for the study through purposive sampling and the findings of the applied random effect model demonstrated that the fund size had impact on sample firms' financial performance. The use of random effect model is adjudged not to be potent enough for a study of this nature as it permits large standard errors and assumes exogeneity of all variables.

Another research perspective has demonstrated that there exists an optimal fund size. Indro, Jiang, Hu and Lee (1999) observe that funds reach a least possible size so as to attain optimal yields. The study as well observes that marginal yields appear adverse after a fund surpasses the optimal size. In their investigation of six hundred and eighty three dynamically managed equity funds for period 1993-1995, the study found that the three year average returns for the study sample increased monotonically as the net worth size improved. Contrarily, marginal return decreased as asset base improved. This requires further investigation and identification of the specific optimal size. How this pertains to other funds is also a research concern.

Smits (2011) investigates the influence of pension fund size on pension fund performance using a sample out of a dataset of all Dutch pension funds. The regression analysis employed showed evidence that there are positive significant relationships between the pension fund size and the absolute /relative performance of Dutch pension funds. The use of 45 out of 600 pension funds and coefficient of determination (R^2) of 1.47% and 4.03% leaves one with cautionary acceptance of results.

In investigating the returns and size traits of eighty-one US mutual funds, Chen, Lee, Rahman and Chan (1992) documented a progressive link on fund value and size where the investment tactic engaged was stock choice. Outcomes ran conversely when the investment tactic utilised was that of market timing. The study observed that it is important for large funds to focus on security choice rather than adjusting beta in expectation of forthcoming market activities.

Chen, Hong, Hang and Kubic (2004) investigated three thousand and thirty nine US funds between 1962 to 1999. Results from their empirical investigation showed that fund size increase reduced performance. This impact as documented by the authors is obvious for funds that capitalized in minor caps shares, showing illiquidity was core reason behind the erosion in performance. Essentially, the investment strategy and selection were factors that explained the effect of size on performance.

Other empirical findings (Tran, 2005; Surajit & Saxeena, 2009) demonstrate that a bigger firm can identify better approaches to tackle market risks and uncertainties and have better opportunities to handle random losses and perform better. Also, size offers increased negotiating influence on suppliers as well as competitors, a large company can purchase the finest tools and know-how due to its hold above the industry.

This study hypothesizes a positive relationship between fund size and corporate value.

2.2 Firm Age and Corporate Value

Following Arrow's study (1962) on the effects of learning in firms, the age of firms has been an issue in various studies related to such effects. Over the years, firms tend to improve their value by increasingly enhancing their practices, reducing costs and optimizing processes, and as such becoming more flexible and efficient in their production (Arrow, 1962).

There exist several theoretical grounds to assume that older companies are more likely to do better than younger ones. Over time, firms are likely to identify their strengths that could bring about efficiency (Arrow, 1962; Jovanovec, 1982; Erikson & Pakess, 1995). As firms age, they concentrate and specialize on approaches to homogenize, organize and hasten business processes so as to lessen costs and enhance excellence. Furthermore, Agarwal and Goort (2002) document that old age could turn understanding, capabilities, and talents outmoded and also prompt organizational deterioration. Loreder and Waelchili (2009) conduct an experiential study to capture the direct relationship between age and firm value. The study views the lack of flexibility to innovations as a direct effect of aging and thus concludes that firms tend to face serious problems with aging which presents a negative impact and a positive concavity. Loreder and Waelchili (2009) show efficiency deterioration due to aging which results in increasing costs and narrow profit margins. They conclude that generally, firms listed at the stock exchange for over 15 years are unable to keep up with good results showed by younger firms.

According to Uwuigbe, Uwuigbe, Adeyemo and Ogunbanjo (2016), there are two faces to the age factor. On one side, older firms are seen to be more skilled, have enjoyed the gains of learning, are not vulnerable to the liabilities related to newness and as such can therefore enjoy better performance. In this light, older firms may enjoy the 'status effect' which ushers in an improved margin on sales (Almajali, Alamro & Soub, 2012). On the other face, Uwuigbe et al. (2016) observe that older

firms are vulnerable to inertia and administrative ossification which is linked with aging; they usually develop routines which are misaligned with changes in market conditions. Therefore a negative association between age and value could be observed.

Petraki (2012) in a study of UK personal pension funds investigated the relationship between fund performance and firm age. The study tests whether the performance of pension fund is age dependent, and in particular, whether funds perform better when they are young than when they 'mature'. Results of the investigation revealed that fund performance changes with fund's age but in most cases, this relationship depends on the age of the fund provider. The study ignores the endogeneity concern which has been identified in literature to be a plague to performance studies.

There is not much theoretical work on this nexus; however, the erstwhile conviction would appear that age is beneficial to organisational excellence and corporate value. First and foremost, businesses improve on capacities with age. Second, the existing experiential proof reveals that life expectancy and proficiency rises as businesses get older.

This study thus hypothesizes that firm age positively impacts corporate value.

2.3 Contribution Density

The weight of contributions collected by pension funds from retirement savings account holders is argued to be a pivotal predictor of their corporate worth. Oluoch (2013) argued that where there are numerous contributors with the capability to channeling enormous capital to the system, there will be adequate capital to put in which will eventually aid the trust to make increased proceeds and value. The contrary will probably occur where volume of contributions expected from account holders is not substantial to embark on meaningful asset investment (Bodie, Detemple & Rindisbacher, 2009). In a study of the performance of pension funds in Kenya, Oluoch (2013) demonstrated that the relationship between fund performance measured by Return on Assets and contribution density was frail and statistically immaterial contrary to hypothesis. As such, performance of pension funds is not reactive to the contributions of contributors. The researcher in a study of 29 registered pension schemes in Kenya concluded that contributions are not utilized for value creation undertakings and recommended that the contributions of pensioners be put into more prolific investments instead of just keeping the funds safely for retirees. A sample of 29 of the 1216 pension arrangements in Kenya would be too trivial to draw up a conclusion for the entire population. This is a fundamental drawback of this study.

The study by Tonks (2005) on pension fund management and investment performance established that value of the fund will rise with time due to weight of contributions. According to Tonks (2005), at the buildup phase, the pension fund will

likely grow in value due to the added contributions made into the fund as well as the investment yields created by the fund's assets.

Kigen (2016) using fixed effects model estimation documented a positive and statistically significant coefficient of contribution density on fund performance of 93 pension schemes in Kenya from 2011 to 2015. The short study period and use of 93 out of 1232 registered pension schemes in Kenya might demand the results to be embraced with caution.

This current study hypothesizes a positive relationship between the density of contributions and corporate value, since firms have more funds at their disposal for investment and value creation.

2.4 Theoretical Issues

This study is situated within a signaling theory framework. It is founded on the ground-breaking effort of Spence (1973) who through the labor market model demonstrated how high quality job candidates signal potential employers through weighty certificates and resumes and by so doing separate themselves from low-quality applicants. The signaling theory shares a similar underpinning with the signaling hypothesis of dividend policy which presupposes that dividends are used as an ex-ante signal of future cash flows. Both the theory and the hypothesis are anchored on the signaling concept that efforts undertaken by economic agents are principally triggered by the desire to send a positive signal to other agents rather than by their professed purpose.

3. Methodology

3.1 Population, Sample and Sampling Technique

The target population of this study is all the 21 pension fund administrators operating in Nigeria as at 2017. The sample of the study however consists of the 20 pension fund administrators that operated in Nigeria between 2008 and 2017 (the NPF pensions was formed in 2014). The study covers a period of 2008 through 2017. This period marked the introduction of the PENCOM Code for licensed pension operators.

3.2 Model specification/Measurement of variables

The research on the impact on economic profit is often plagued by endogeneity concerns (Eugster, 2014). As a general rule, when a variable is endogenous, it will be correlated with the error term thereby causing estimates to be biased. Taking this limitation into consideration, this study adopts the Arellano-Bond estimation to address the endogeneity concern. The Arellano-Bond GMM estimator tackles endogeneity from both unobserved heterogeneity and simultaneity by permitting the introduction of lags of the dependent variable in addition to lags of

potentially endogenous variables into the estimated function and also controls for both year and company effects. The method has been preferred in the areas of finance and economics for estimating causal effects where the problem indicates a dynamic relationship between dependent and independent variables (Wintoki, Linck & Netter, 2012).

The primary specification of the model that was tested in the study is as follows:

$$\text{Corporate Value} = f(\text{Fund traits}) \quad (1)$$

An extended form of the model is as shown below:

$$\text{CV}_{it} = \alpha_0 + \alpha_1 \ln \text{SIZ}_{it} + \alpha_2 \text{AGE}_{it} + \alpha_3 \ln \text{CD}_{it} + \mu_{it} \quad (2)$$

Where:

CV = Corporate Value measured as Market-to-Book Ratio which relates the fund's market value (fund price) to its book value (net asset value).

$\ln \text{SIZ}$ = Fund Size (natural logarithm of number of contributors)

AGE = Fund age (number of years the Fund has been in operation)

$\ln \text{CD}$ = Contribution Density (natural logarithm of total contribution)

μ = Random disturbance term.

4. Results and Discussions

Table 1. Arellano Bond Estimation

Arellano-Bond estimates using 194 observations

Dependent variable: CV

	<i>Coefficient</i>	<i>Std. Error</i>	<i>z-stat</i>	<i>p-value</i>	
DCV(-1)	0.139899	0.046139	3.0321	0.00243	***
Const	-1.76965	0.610360	-2.8993	0.00374	***
AGE	0.043056	0.016420	2.6221	0.06874	*
$\ln \text{SIZ}$	0.001214	0.001345	0.9030	0.08651	*
$\ln \text{COND}$	0.224073	0.069070	3.2441	0.00118	***

Sum squared resid	1292.744		S.E. of regression	2.975637
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Test for AR(1) errors: $z = -1.22796$ [0.2195]

Test for AR(2) errors: $z = -0.955926$ [0.3391]

Sargan over-identification test: Chi-square(142) = 158.633 [0.1611]

* specifies significance at 10% (i.e $p < 0.10$), ** specifies significance at 5% (i.e $p < 0.05$), *** specifies significance at 1% (i.e $p < 0.01$)

Source: Gretl Software Version 1.8.0csv output

Wintoki, Linck and Netter (2012) argue that researchers make efforts to address endogeneity, but ignore the fact that the relation between the left hand side and right hand side variables is likely dynamic. The lag of the endogenous variables have been introduced into the model as is typical of the Arellano-Bond GMM estimation which allows the introduction of a lag of the dependent variable in addition to lags of potentially endogenous variables into the estimated function as instruments (Flannery & Hankins, 2013).

Table 1 reports the results of the Arellano-Bond generalized method of moments (GMM) estimation of the effect of governance disclosures on corporate value of the studied PFAs using Gretl 1.8.0. The specification test for the validity of the arellano-bond dynamic model shows the desirable statistically significant AR (1) and AR (2). The first and second order auto-regressive tests AR (1) and AR (2) results reported coefficients of -1.22796 and -0.955926 respectively. Both tests yield p-values of 0.2195 and 0.3391 for the AR (1) and AR (2) statistic respectively. These p-values demonstrate that the null hypotheses of no first-order serial correlation and second-order serial correlation cannot be rejected. As such, there is no first-order and second-order autocorrelation. Thus, the AR tests provide no evidence of misspecification which confirms that the model is well fitted.

The Sargan over-identification test of instrument validity is insignificant for the Arellano-bond model which confirms the overall validity and choice of instrument variables. The Chi-square value stands at 158.633 with a p-value of 0.1611; this confirms that the lag best addresses the trade-off between instrument strength and exogeneity

Results from Table 1 report that the estimated lag of the dependent variable (CV-1) is positive and significant at the 1% level. Thus, it is found that previous year's corporate value of the PFAs positively and significantly affected current year's corporate value as well.

Table 1 shows that the Age of PFAs has a positive impact on corporate value. This impact is significant at the 10% level. The positive significant coefficient sign of Age on corporate value in the tests signifies that as PFAs grow older; their corporate values tend to increase. This result negates the findings of Loreder and Waelchili (2009) who argue that efficiency deterioration is due to firm aging which eventually results in increasing costs and narrow profit margins. The documented positive relationship shows that older PFAs are likely to have better corporate value than younger ones. In agreement with the above, Almajali, Alamro and Soub (2012) observe that older firms enjoy the 'status effect' which ushers in an improved margin on sales.

PFA size (number of contributors) has a positive effect on corporate value though the result is only statistically significant at the 10% level. Findings of this study depict that size is a positive significant predictor of corporate value. The rational explanation to this finding is the position of some scholars that larger firms can identify superior ways and approaches to tackle risks and uncertainties and have

more likelihoods to handle unexpected losses and perform healthier (Tran, 2005, Surajit & Saxena, 2009). According to Weekes–Marshall (2014), larger companies usually have access to larger resources to allocate for production, and the costs involved are smaller arising from economies of scale. Thus the findings of this study are in agreement with Mule, Mukras and Nzioka (2015) who demonstrate that firm size is a key element in determining the firm’s value due to economies of scale. Finally, Contribution density has a positively significant impact on corporate value at the 1% level. The findings of this study confirm the findings of Bodie, Detemple and Rindisbacher (2009) and Kigen (2016) who found that density of contributions is fundamental in the performance of pension funds as such funds will have enough to invest which eventually would impact on value.

5. Conclusions

The study assesses the nexus between certain pension fund traits and corporate value in Nigeria. These traits (fund age, fund size and contribution density) were incorporated into the model because standard economic theory argues for their relationship with firm performance and because they have enjoyed popularity over the years (Mohammed, 2017). Arising from the findings of the study, results indicate that funds size is positively related with corporate value. Bigger Funds perform better suggesting the manifestation of significant economies of scale.

It is also concluded that as Fund administrators grow older; their corporate values tend to increase. The documented positive relationship shows that older Funds are likely to have better corporate value than younger ones. Additionally, the study’s findings buttress the argument that older firms enjoy the ‘status effect’ and as they grow older, they perform better and also have improved Corporate Value. This is also logically explained as older funds would tend to have more contributors (fund size) and then potentially more contribution (contribution density) to invest and eventually improve value.. Finally, the study demonstrates that size is a key element in determining firm value arising from economies of scale.

The study thus concludes that Fund size, Fund Age and Contribution density play significant roles in enhancing corporate value of Pension Fund Administrators in Nigeria; as such, Funds that hope to improve value must take advantage of the interrelationships between these traits.

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