Evaluating the Role of Dividends Paid Out Ratio as a Signal of Quality of Selected Banks Listed on Nigerian Stock Exchange

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Abstract
This study examined the relationship between bank dividend policy and bank quality rating. Empirical evidence shows that bank management uses its dividend policy as a vehicle for signaling its financial health to the investing public. Using the regression models, this study showed that an inverse relationship exists between quality and dividends as a percent of earnings, because those banks like Zenith and UBA despite lower dividends as a percent of earnings exhibited better quality. The result clearly points to the facts that retained earnings are a key source of capital for banking institutions and that capital position provides information about institutional soundness or, alternatively, risk. This study also recommends that depositors, shareholders, and creditors can acquire information about the overall quality of a bank by examining both aspects of a bank’s dividend policy.

Keywords: Evaluation, dividends payout ratio, signaling, quality, banks, Nigerian stock exchange
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1. Introduction
During the decade of the 1980s, the U.S. banking industry experienced a slow erosion in its financial health. While recent evidence indicates a reversal in the fortunes of the banking industry, long-term secular forces suggest a continued erosion in earnings in the banking industry and a greater potential for increased risk taking (Barth, Brumbaugh, & Litan, 1992). With the secular deterioration in the banking industry’s financial health, there was renewed emphasis on the recapitalization of the banking industry. The process has continued into the 1990s, with the industry’s capitalization ratio reaching its highest level in 30 years.

The primary venue available for banks to raise capital is through retained earnings. The Federal Deposit Insurance Corporation (FDIC) reported that in 1993, the banking industry paid out 50.7% of its earnings in cash dividends (FDIC, 1994). This is lower than the banking industry’s 80% payout rate in the first quarter 1991 but much higher than 27.5% payout rate in 1985 (FDIC, 1991; FDIC, 1985). Given this more recent liberal dividend payout ratio, especially in light of anticipated long-term decline in earnings, the ability of banks to expand their capital base must be questioned.

A fundamental tension associated with bank dividend policy is thus apparent. As bank earnings are squeezed, banks must choose between maintaining stable dividend payments per share versus a constant dividend payout ratio from earnings. Both policy decisions can provide information about the existing and future soundness of the bank. Yet, there is some concern as to whether the financial markets incorporate this information. The financial literature is replete with studies which have examined the impact of dividends as an investor signal (Eades, 1982; Aharony & Swary, 1980). Generally, an unexpected increase in dividends is viewed as conveying positive information about the financial health of the firm while negative information about asset quality is imparted by an unexpected cut in dividends. According to Keen (1983), a central tenet of bank financial management is to avoid a cut in cash dividends because a dividend cut connotes a weakening in the soundness of a bank.

Furthermore, Bhattacharya (1979) argues that due to informational asymmetries, cuts in dividends will have a greater negative impact on shareholder’s wealth than will positive effects associated with dividend increases. While cash dividends paid provides information about the future well-being of a bank, dividend payout as a percent of earnings (i.e., dividend payout ratio) also yields valuable information. Mayne (1980) points out that in the mid-1970s retained earnings constituted 56% to 76% of the net growth in bank equity; currently, they represent about 30%. One may hypothesize that changes in the dividend payout ratio can potentially affect the capital position of a depository institution, the ability of banks to meet new opportunities, and, foremost, the potential soundness of the institution.

Ideally, if a bank increases its dividends, this should send a signal that management expects superior future cash flows. A high cash dividend indicates a reduced probability of failure, and this should improve the value of shareholders’ wealth. Therefore, the dividend policy provides public information to the capital markets. Additionally, false signaling will be discouraged by the financial markets because this will lead to higher transaction costs since the bank’s cash flow will be insufficient to maintain its stated dividend policy.

However, a potential problem of high dividend payouts from earnings may jeopardize the future safety of a bank. The dividend payout ratio should provide information about the safety of a banking entity. A managerial incentive model, developed by Bar-Yosef and Huffman (1986), indicates that there is an inverse relationship between the dividend payout ratio and risk. As risk increases, the dividends paid as a percent of earnings will...
and quality. Thus, more earnings are being committed to improving a bank’s capital position.

However, it is suspected that in the banking industry there is a direct relationship between the dividend payout ratio and risk. Additionally, since risk or quality is generally unobservable to the public, the causation of the signaling argument should run from the dividend payout ratio to risk, not vice versa as the managerial incentive model contends.

Therefore, the signaling argument suggests a high dividend payout reflects an increase in the level of risk being assumed by a bank. Thus, both dividends paid per share and dividends as a percent of earnings provide signals to the capital markets concerning the soundness and safety of depository institutions.

The purpose of this study, therefore, is not only to define a bank management’s dividend policy but also to describe the role of dividends payout ratio as a signal of market quality. Market quality refers to the future expected cash flow from an asset.

2. Motivation and Hypotheses of the Study
Prior literature on management disclosure (Healy and Palepu 2001) suggests that disclosure decisions reflect both informational motivations (that is, managers use these decisions to inform financial statement users about the underlying economics of their firms) and opportune motivations (that is, managers use these decisions to bias users’ perspectives). Prior research on disclosure choices to emphasize financial performance metrics has generally focused on alternative settings, particularly pro forma reporting. A number of papers provide evidence consistent with management reporting in this context reflecting opportunism. Schrand and Walther (2000) examines earnings press releases, and documents that managers are more likely to separately announce a prior-period gain from the sale of assets than a loss, consistent with managers opportunistically selecting the prior-period earnings amount used as a benchmark to evaluate current-period earnings. Weiss (2001) examines the reporting effects of the 1993 change in corporate income tax rates, and similarly finds that managers are more likely to separately disclose negative than positive non-recurring items in press releases, consistent with managers attempting to highlight the negative items as transitory or non-core expenses. McVay (2006) provides similar evidence, documenting that managers opportunistically shift reported expenses from core expenses (such as cost of goods sold) to special items, thereby overstating “core” earnings. Taken together, these papers suggest that managers use certain presentation decisions – particularly in the context of “pro forma” reporting – in an opportunistic fashion.

Other research provides evidence that “pro forma” reporting reflects elements of both underlying economic performance and opportunistic behavior. Lougee and Marquardt (2004) finds that firms with low Generally Accepted Accounting Principles (GAAP) earnings informativeness are more likely to disclose pro forma earnings consistent with motivations to accurately reflect the firm’s performance; however, the direction of the GAAP earnings surprise is also an important determinant of this decision, consistent with opportunistic motivations. Similarly, Bowen et al. (2005) provides evidence that managers emphasize metrics that portray more favorable firm performance; however, these same metrics are also more value relevant. While several studies provide evidence that investors are misled, at least temporarily, by such opportunistic presentation behavior (e.g., Schrand and Walther 2000), some research concludes otherwise (e.g., Johnson and Schwartz 2005). Bhattacharyya et al. (2007) reveals that less sophisticated investors react to such pro forma disclosures, suggesting consideration of investor type may partially reconcile these differing conclusions.

However, it is suspected that in the banking industry there is a direct relationship between the dividend payout ratio and risk. Therefore, the purpose of this study is to investigate the role of dividends payout ratio as a signal of market quality where market quality refers to the future expected cash flow from an asset.

The following hypotheses were formulated to guide the researcher in achieving the objectives of this study:

\( H_0: \) There is no significant relationship between the assets and the dividends paid out ratio of the selected banks.

\( H_1: \) There is a significant relationship between the assets and the dividends paid out ratio of the selected banks.

\( H_0: \) There is no significant relationship between the share capital to assets ratio and the dividends paid out ratio of the selected banks.

\( H_1: \) There is a significant relationship between the share capital to assets ratio and the dividends paid out ratio of the selected banks.

\( H_0: \) There is no significant relationship between the annual assets growth and the dividends paid out ratio of the selected banks.

\( H_1: \) There is a significant relationship between the annual assets growth and the dividends paid out ratio of the selected banks.

\( H_0: \) There is no significant relationship between dividends paid out ratio and the quality of an institution.

\( H_1: \) There is a significant relationship between dividends paid out ratio and the quality of an institution.

3. Methodology
The empirical analysis used in this study differs from most studies concerning the information content of a bank’s dividend policy in three aspects. First, the data is cross-sectional rather than longitudinal. Second, this analysis is not an event study which examines the reaction of stock prices to changes in dividend policy. Third in this study, the key explanatory variable is dividend policy—that is, dividends paid out ratio (DPR). The signaling principles indicates that dividends should provide the relevant information about the future earnings of the bank and hence, the quality of the bank. So, one would hypothesize a positive relationship between dividends paid out ratio (DPR) and quality.
3.1 Formulation of Regression Model for Dividends paid out ratio

Using sample data, model parameters can be estimated using the coefficients $b_0, b_1, b_2, b_3, \ldots, b_k$ of the regression equation, associating response variable $Y$ with its control variables $x_1, x_2, x_3, \ldots, x_k$ as shown below:

$$Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + \ldots + b_k x_k$$

(1)

Where; $b_0$ is intercept of the model of the sample data, $b_1$ is regression coefficient associated with the control variable $x_1$ of the sample data, $b_2$ is regression coefficient associated with the control variable $x_2$ of the sample data and $b_3$ is regression coefficient associated with the control variable $x_3$ of the sample data. The regression models have been used in previous studies to examine rating schemes of bonds (Ederington, 1985; Farnham & Cluff, 1985). The control or independent variables in this study include a bank’s share capital to asset ratio (SCR), bank size as measured by total assets (AS), and the annual assets growth rate (AAG).

The dividends paid out ratio (DPR) model can therefore be given as follows:

$$DPR = b_0 + b_1 AS + b_2 SCR + b_3 AAG$$

(2)

3.2 Data

The data in this study were extracted from the annual reports of four selected banks listed on Nigerian Stock Exchange and the data covered a period of fourteen (14) years from 2005 to 2018. This period was chosen based on the fact that there was availability of data that are relevant in investigating the impact of dividend policy in signaling the quality of a bank. The four selected banks based on the availability of the relevant data include Zenith Bank Plc., United Bank for Africa (UBA), Access Bank Plc., and Sterling Bank Plc.

Table 1: Data of selected variables for Access Bank Plc.

| Year | Asset | Earnings per share | Dividend payout ratio (%) | Share capital | Share capital to asset ratio (%) | AAG (%) |
|------|-------|--------------------|--------------------------|---------------|----------------------------------|---------|
| 2005 | 174553.870 | 0.00 | 0.00 | 6,978,160 | 3.998 | 0.00 |
| 2006 | 174553.870 | 0.07 | 0.00 | 6,978,160 | 3.998 | 0.00 |
| 2007 | 328615.190 | 0.87 | 0.00 | 3,489,080 | 1.062 | 88.26 |
| 2008 | 1031842.020 | 1.73 | 23.12 | 8,071,250 | 0.782 | 214.00 |
| 2009 | 647574.720 | 0.05 | 1400 | 8,131,020 | 1.256 | -37.24 |
| 2010 | 726960.580 | 0.72 | 27.78 | 8,944,130 | 1.230 | 12.26 |
| 2011 | 949382.100 | 0.76 | 65.79 | 8,944,130 | 0.942 | 30.60 |
| 2012 | 1515754.460 | 1.57 | 38.22 | 11,441,460 | 0.755 | 59.66 |
| 2013 | 1704094.010 | 1.15 | 30.43 | 11,441,460 | 0.671 | 12.43 |
| 2014 | 1981955.730 | 1.75 | 20.00 | 11,441,460 | 0.577 | 16.31 |
| 2015 | 2411944.061 | 1.74 | 17.24 | 212,438,802 | 8.808 | 21.70 |
| 2016 | 3094960.515 | 2.21 | 18.10 | 212,438,802 | 6.864 | 28.32 |
| 2017 | 3499683.980 | 1.77 | 22.60 | 212,438,802 | 6.07 | 13.08 |
| 2018 | 3968114.608 | 2.54 | 15.75 | 212,438,802 | 5.35 | 13.38 |

Source: Security and Exchange Commission (2010) and Access Bank Annual Reports 2005 to 2018
### Table 2: Data of selected variables for Sterling Bank Plc.

| Year | Asset | Earnings per share | Dividend payout ratio (%) | Share capital | Share capital to asset ratio (%) | AAG (%) |
|------|-------|---------------------|---------------------------|---------------|-------------------------------|--------|
| 2005 | 19435.29 | 0.00 | 0.00 | 2386.99 | 12.28 | 0.00 |
| 2006 | 100664.43 | 0.09 | 0.00 | 5276.42 | 5.24 | 417.95 |
| 2007 | 145974.67 | 0.06 | 0.00 | 5276.42 | 3.62 | 45.01 |
| 2008 | 236502.92 | 0.52 | 19.23 | 6281.55 | 2.66 | 62.02 |
| 2009 | 205640.83 | 0.53 | 0.00 | 6281.55 | 3.06 | -13.05 |
| 2010 | 259579.52 | 0.33 | 0.00 | 6281.55 | 2.42 | 26.23 |
| 2011 | 504427.74 | 0.53 | 18.87 | 7851.93 | 1.56 | 94.32 |
| 2012 | 580225.94 | 0.44 | 45.45 | 7851.93 | 1.35 | 15.03 |
| 2013 | 707971.18 | 0.52 | 48.08 | 10796.41 | 1.53 | 21.99 |
| 2014 | 824539.43 | 0.42 | 14.29 | 14396.21 | 1.75 | 16.5 |
| 2015 | 799451.00 | 0.36 | 25.00 | 14395.00 | 1.80 | -3.04 |
| 2016 | 830803.00 | 0.18 | 0.00 | 14395.00 | 1.73 | 3.92 |
| 2017 | 1068798.0 | 0.28 | 7.14 | 14395.00 | 1.35 | 28.65 |
| 2018 | 1085876.0 | 0.33 | 0.00 | 14395.00 | 1.33 | 1.60 |

Source: Security and Exchange Commission (2010) and Sterling Bank Annual Reports 2005 to 2018

### Table 3: Data of selected variables for Zenith Bank Plc.

| Year | Asset | Earnings per share | Dividend payout ratio (%) | Share capital | Share capital to asset ratio (%) | AAG (%) |
|------|-------|---------------------|---------------------------|---------------|-------------------------------|--------|
| 2005 | 332885.00 | 1.36 | 51.47 | 3000.00 | 0.901 | 0.00 |
| 2006 | 610769.00 | 1.91 | 57.59 | 4587.00 | 0.751 | 83.48 |
| 2007 | 883941.00 | 1.89 | 52.91 | 4633.00 | 0.524 | 44.73 |
| 2008 | 1680032.00 | 3.45 | 49.28 | 8372.00 | 0.498 | 90.06 |
| 2009 | 1573196.00 | 0.73 | 61.64 | 12559.00 | 0.798 | -6.36 |
| 2010 | 1798679.00 | 1.06 | 80.19 | 15698.00 | 0.87 | 14.33 |
| 2011 | 2169073.00 | 1.32 | 71.97 | 15698.00 | 0.72 | 20.59 |
| 2012 | 2436886.00 | 3.05 | 52.46 | 15698.00 | 0.64 | 12.35 |
| 2013 | 2878693.00 | 2.66 | 65.79 | 15698.00 | 0.55 | 18.13 |
| 2014 | 3423618.00 | 2.95 | 59.32 | 15698.00 | 0.46 | 18.94 |
| 2015 | 3750327.00 | 3.15 | 57.14 | 15698.00 | 0.42 | 9.54 |
| 2016 | 4283736.00 | 3.62 | 49.72 | 15698.00 | 0.37 | 14.22 |
| 2017 | 4833658.00 | 4.87 | 50.31 | 15698.00 | 0.32 | 12.84 |
| 2018 | 4955445.00 | 5.27 | 47.44 | 15698.00 | 0.32 | 2.52 |

Source: Security and Exchange Commission (2010) and Zenith Bank Annual Reports 2005 to 2018

### Table 4: Data of Selected variables for United Bank for Africa (UBA)

| Year | Asset | Earnings per share | Dividend payout ratio (%) | Share capital | Share Capital to asset ratio (%) | AAG % |
|------|-------|---------------------|---------------------------|---------------|-------------------------------|------|
| 2005 | 248928.00 | 2.49 | 24.10 | 1530.00 | 0.61 | 0.00 |
| 2006 | 851241.00 | 1.86 | 53.76 | 3530.00 | 0.41 | 241.96 |
| 2007 | 1102348.00 | 2.41 | 49.79 | 5748.00 | 0.52 | 29.50 |
| 2008 | 1520919.00 | 3.05 | 8.20 | 8622.00 | 0.57 | 37.90 |
| 2009 | 1400879.00 | 0.60 | 125.00 | 10778.00 | 0.77 | -0.08 |
| 2010 | 1432632.00 | 0.08 | 125.00 | 12934.00 | 0.90 | 2.27 |
| 2011 | 1655465.00 | 0.51 | 9.80 | 16168.00 | 0.98 | 15.55 |
| 2012 | 1933065.00 | 1.44 | 3.47 | 16491.00 | 0.85 | 16.77 |
| 2013 | 2217417.00 | 1.41 | 35.46 | 16491.00 | 0.74 | 14.71 |
| 2014 | 2338858.00 | 1.22 | 40.98 | 16491.00 | 0.71 | 5.48 |
| 2015 | 2216337.00 | 1.36 | 29.41 | 18140.00 | 0.82 | -5.24 |
| 2016 | 2539585.00 | 1.31 | 41.98 | 18140.00 | 0.71 | 14.58 |
| 2017 | 2931826.00 | 1.17 | 55.56 | 17100.00 | 0.58 | 15.45 |
| 2018 | 3591305.00 | 1.20 | 54.17 | 17100.00 | 0.48 | 22.49 |

Source: UBA Annual Reports 2005 to 2018

### 4. Comparative Analysis of the Selected Banks
Figure 1: Assets (sizes) of the four selected banks compared

Figure 2: Earnings per share of the selected banks

Figure 3: Share capital to asset ratio of the selected banks
Difference was discovered between the mean earnings per share for the selected banks in Nigeria as shown in Figure 2. Also, the share capital to asset ratios are also different with the Sterling Bank having the highest followed by Access, UBA and Zenith Banks respectively as shown in Figure 3.

The data in Table 1 indicate that Sterling and Access Banks are yet to recover from the global and local economic shocks of the mid-1990s to date. Additionally, Access Bank possesses higher dividend payout ratios than the industry norm as indicated in Figure 4. This higher dividend payout ratio may account for the lower market value capitalization position for depository institution, and it provides initial support for the lower assets or size of the bank. Additionally, it is possible that management was reluctant to reduce dividends (in the face of lower earnings per share) because of the negative effects of signaling. This indicates a strong positive association between these two variables, which are both used to measure bank soundness. So, the maximization of quality should be consistent with the goal of maximizing shareholder wealth.

5. Hypotheses Testing
5.1 Testing model validity: for a relationship between Bank assets, Share capital to asset ratio, Annual assets growth for the period and dividends paid out ratio (DPR) of the selected banks:

\[ H_0 : \beta_{jDPR} = 0, \ j=1,2,3 \]

If \( H_0 \) is rejected then \( H_1 : \text{at least one } \beta_{jDPR} \neq 0 \) (3)

This hypothesis is intended to test validity of the presence of a relation between dividends paid out ratio (DPR) of the selected banks and the independent variables. If the null hypothesis is rejected, then there are some independent variables that do actually affect DPR.

5.2 Individual testing of coefficients of the multiple linear regression model: for any independent variable is as presented in equation 4.

\[ H_0 : \beta_{1-3DPR} = 0 \ \ vs \ \ H_1 : \beta_{1-3DPR} \neq 0 \] (4)

The null hypothesis assumed that there was no statistically significant relationship between dividends paid out ratio and any of the independent variables (Assets, Share capital ratio and Annual assets growth for the period).
5.3 Statistical Analysis Results and Hypotheses Testing

Table 5: Regression results of Access Bank using Dividends Paid out Ratio (DPR) as a dependent variable based on the formulated model

| Parameter | Value  | Parameter | Condition index | Coefficients | T-Statistic | Sig. | Durbin-Watson stat | VIF |
|-----------|--------|-----------|-----------------|--------------|-------------|------|---------------------|-----|
| R²        | 0.215  | Constant (b₀) | 1.00            | 358.743      | 1.874       | 0.090 | 1.682               | Mean 0.00 |
| F-Statistic | 0.915  | AS (b₁)    | 1.821           | -3.344E-5    | -0.329      | 0.749 | 1.513               | Std. dev. 0.877 |
| Significance of F-statistic | 0.468  | SCR (b₂)   | 3.810           | -32.299      | -0.687      | 0.508 | 1.612               | |
| Adjusted R² |        | AAG(b₃)   | 4.176           | -2.607       | -1.439      | 0.181 | 1.081               | |

Table 6: Regression results of UBA using Dividends Paid out Ratio (DPR) as a dependent variable based on the formulated model

| Parameter | Value  | Parameter | Condition index | Coefficients | T-Statistic | Sig. | Durbin-Watson stat | VIF |
|-----------|--------|-----------|-----------------|--------------|-------------|------|---------------------|-----|
| R²        | 0.004  | Constant (b₀) | 1.00            | 46.773       | 0.619       | 0.550 | 1.723               | Mean 0.00 |
| F-Statistic | 0.004  | AS (b₁)    | 1.906           | -2.200E-6    | -0.152      | 0.882 | 1.141               | Std. dev. 0.877 |
| Significance of F-statistic | 0.998  | SCR (b₂)   | 4.955           | 6.703        | 0.078       | 0.940 | 1.504               | |
| Adjusted R² |        | AAG(b₃)   | 14.798          | -0.014       | -0.057      | 0.956 | 1.649               | |

Table 7: Regression results of Sterling Bank using Dividends Paid out Ratio (DPR) as a dependent variable based on the formulated model

| Parameter | Value  | Parameter | Condition index | Coefficients | T-Statistic | Sig. | Durbin-Watson stat | VIF |
|-----------|--------|-----------|-----------------|--------------|-------------|------|---------------------|-----|
| R²        | 0.149  | Constant (b₀) | 1.00            | 20.911       | 1.256       | 0.238 | 1.195               | Mean 0.00 |
| F-Statistic | 0.681  | AS (b₁)    | 1.692           | -0.018       | -0.378      | 0.713 | 1.169               | Std. dev. 0.877 |
| Significance of F-statistic | 0.640  | SCR (b₂)   | 2.195           | -2.164       | -0.954      | 0.358 | 1.734               | |
| Adjusted R² |        | AAG(b₃)   | 7.175           | -1.527E-6    | -0.081      | 0.937 | 1.952               | |

Table 8: Regression results of Zenith Bank using Dividends Paid out Ratio (DPR) as a dependent variable based on the formulated model

| Parameter | Value  | Parameter | Condition index | Coefficients | T-Statistic | Sig. | Durbin-Watson stat | VIF |
|-----------|--------|-----------|-----------------|--------------|-------------|------|---------------------|-----|
| R²        | 0.498  | Constant (b₀) | 1.00            | -1.054       | -0.041      | 0.968 | 1.716               | Mean 0.00 |
| F-Statistic | 3.306  | AS (b₁)    | 2.256           | 6.534E-6     | 1.797       | 0.103 | 6.761               | Std. dev. 0.877 |
| Significance of F-statistic | 0.066  | SCR (b₂)   | 3.485           | 68.312       | 2.685       | 0.023 | 5.665               | |
| Adjusted R² |        | AAG(b₃)   | 27.173          | 0.099        | 0.917       | 0.381 | 2.163               | |

Table 9: Regression results of Access Bank using Dividends Paid out Ratio (DPR) as a dependent variable based on the formulated model

| Parameter | Value  | Parameter | Condition index | Coefficients | T-Statistic | Sig. | Durbin-Watson stat | VIF |
|-----------|--------|-----------|-----------------|--------------|-------------|------|---------------------|-----|
| R²        | 0.215  | Constant (b₀) | 1.00            | 358.743      | 1.874       | 0.090 | 1.682               | Mean 0.00 |
| F-Statistic | 0.915  | AS (b₁)    | 1.821           | -3.344E-5    | -0.329      | 0.749 | 1.513               | Std. dev. 0.877 |
| Significance of F-statistic | 0.468  | SCR (b₂)   | 3.810           | -32.299      | -0.687      | 0.508 | 1.612               | |
| Adjusted R² |        | AAG(b₃)   | 4.176           | -2.607       | -1.439      | 0.181 | 1.081               | |

5.4 Analysis of the effects of assets, share capital to asset ratio and annual asset growth on dividends paid out ratio of Access Bank Plc, Sterling Bank, UBA and Zenith Bank.

The Access, Sterling, Zenith and UBA Banks data presented in tables 1 to 4 respectively were analyzed by using the relationship as stated by model for DPR as a dependent variable with the aid of Statistical Package for Social Sciences (SPSS version 16.0). The results obtained for each bank are presented in tables 5, 6, 7 and 8 respectively. Testing the model, for Access Bank, from table 5 the coefficient of determination R² was 0.215, for UBA (table
With respect to the formulated model, assets size, share capital to assets ratio, annual assets growth and dividends relationship between the annual assets growth and the dividends paid out ratio of the banks for the period of study explaining the variation in the dividends paid out ratio of the banks. We can conclude that there is a significant relationship between the size (assets) of the four banks and their dividends paid out ratio of the four banks. For hypothesis three, the regression coefficients associated with the share capital to assets ratio (SCR) and annual assets growth (AAG) could account for 21.5%, 0.4%, 14.9% and 49.8% of the changes in the dividends paid out ratio of the Access Bank, UBA, Sterling Bank and Zenith Bank respectively. In addition to the co-efficient of determination ($R^2$) if adjusted from 21.5% to -2%, from 0.4% to -29.5%, from 14.9% to 10.7% and from 49.8% to 34.7% could create more room or chances for other independent variables in the regression model, hence increase the line of fit of the model. To test for the individual statistical significance of the regression parameters, the t-statistic of the respective variables were used. The coefficients $b_0$, $b_1$, $b_2$ and $b_3$ shown in Tables 5, 6, 7 and 8 are 358.743, $-3.344E-5$, -32.299 and -2.607 for Access bank model; 46.773, -2.200E-6, 6.703 and -0.014 for UBA model; 20.991, -0.018, -2.164 and -1.527E-6 for Sterling bank model; -1.054, 6.534E-6, 68.312 and 0.099 for Zenith bank model. The results of the test indicated that regression coefficients $b_1$, $b_2$ and $b_3$ were statistically significant and not equal to zero (as given by hypothesis ii) at 0.05 level of significance and 3:13 equal to 1.771 (Neave, 1978). The decision rule for no autocorrelation in the residuals of the model is that the calculated DW value must be greater than DL (table value). Given that, the calculated DW statistic = 1.682, 1.723, 1.195 and 1.716 for Access, UBA, Sterling and Zenith banks respectively while DL = 0.859 and DU = 1.848. Since $K = 4$ variables and $n = 14$ years and at five percent level of significance, it can be concluded therefore that the models are free from autocorrelation of the residual. Co-linearity is the undesirable situation where the correlations among the independent variables are strong. The condition indices are 1.00, 1.821, 3.810 and 4.176 for Access bank model; 1.00, 1.906, 4.955 and 14.798 for UBA; 1.00, 1.692, 2.195 and 7.175 for Sterling bank model; 1.00, 2.256, 3.485 and 27.173 for Zenith bank model as shown in tables 5, 6, 7 and 8 respectively. The results implied that there was no multi-co-linearity problem. From tables 5, 6, 7 and 8 the residuals’ average was zero with standard deviation of approximately 1.0 (0.816) implying that residuals were actually independent. The variance inflation factor (VIF) of 2.219, 2.483 and 1.190 for Access bank coefficients; 1.514, 1.612 and 1.081 for Access bank coefficients; 1.141, 1.504 and 1.649 for UBA coefficients; 1.169, 1.734 and 1.952 for Sterling bank coefficients; 6.761, 5.665 and 2.163 for Zenith bank coefficients showed that multi-co-linearity was not a problem in this application (i.e. VIF < 4) (Neave, 1978), which clearly showed that AS, SCR and AAG were not significantly interacting factors.

In testing the hypotheses earlier formulated, it is imperative to restate the hypotheses in both null and alternative form:

$H_0$: There is no significant relationship between the assets and the dividends paid out ratio of the selected banks.

$H_1$: There is a significant relationship between the assets and the dividends paid out ratio of the selected banks.

To test for significant relationship of each independent variable, the T-statistic was used. The decision rule was that if the coefficient associated with any of the independent variable is zero while the T-table value is not equal to zero then the null hypothesis should be accepted, otherwise rejected and accept the alternative. At five percent level of significant, the table value is 1.771. Thus, since the regression coefficients associated with assets (AS) for all the banks were not equal to zero and the table value (1.771) was not equal to zero, the null hypothesis is rejected and the alternative accepted for the model (where DPR was the dependent variable). We can conclude that

$H_0$: There is no significant relationship between the share capital to assets ratio and the dividends paid out ratio of the selected banks.

$H_1$: There is a significant relationship between the share capital to assets ratio and the dividends paid out ratio of the selected banks.

For hypothesis two, the regression coefficients associated with the share capital to assets ratio (SCR) for all the banks were not equal to zero and the table value (1.771) was not equal to zero for the model. Based on this, the null hypothesis is rejected and the alternative accepted. We conclude that there is a significant relationship between share capital to assets ratio and the dividends paid out ratio of the four banks for the period of study.

$H_0$: There is no significant relationship between the annual assets growth and the dividends paid out ratio of the selected banks.

$H_1$: There is a significant relationship between the annual assets growth and the dividends paid out ratio of the selected banks.

For hypothesis three, the regression coefficients associated with the annual assets growth (AAG) for the four banks were not equal to zero for the model. The implication is that annual assets growth was significant in explaining the variation in the dividends paid out ratio of the banks. We can conclude that there is a significant relationship between the annual assets growth and the dividends paid out ratio of the banks for the period of study.

$H_0$: there is no significant relationship between dividends paid out ratio and the soundness/safety of an institution.

$H_1$: there is a significant relationship between dividends paid out ratio and the soundness/safety of an institution.

With respect to the formulated model, assets size, share capital to assets ratio, annual assets growth and dividends
paid out ratio of Access bank are negatively correlated, which implies that increase in Access bank assets size, share capital to assets ratio and annual assets growth will decrease the dividends paid out ratio of the bank. The UBA share capital to assets ratio and dividends paid out ratio are positively correlated while the bank size, annual assets growth and dividends paid out ratio are negatively correlated. This implies that as the share capital to assets ratio of UBA increase, the dividends paid out ratio will also increase. But increase in UBA assets, annual assets growth will decreases the dividends paid out ratio of the bank for the period of study. The size of sterling bank, share capital ratio, annual asset growth and dividends paid out ratio are negatively correlated. The implication is that the DPR of sterling bank decreases with increase in bank size, share capital to assets ratio and annual assets growth. For the Zenith bank, its size, share capital to assets ratio, annual assets growth and dividends paid out ratio are positively correlated. The implication is that the dividends paid out ratio of the bank increases with increase in the bank size, share capital to assets ratio and annual assets growth. Also, those institutions with lower share capital-to-asset ratios, moderate dividends paid out ratio in comparison with their assets like Zenith bank and UBA are better able to absorb losses and, hence, exhibit safer behavior. Therefore, the null hypothesis that there does not exist a relationship between bank soundness and the dividend payout ratio can be rejected.

6. Summary, Conclusion and Recommendations

6.1 Summary of Findings

This study examined the relationship between bank dividend policy and bank quality rating. Empirical evidence shows that bank management uses its dividend policy as a vehicle for signaling its financial health to the investing public. Using the regression models, this study found that an inverse relationship exists between quality and dividends as a percent of earnings, because those banks like Zenith and UBA despite lower dividends as a percent of earnings exhibited better quality. The result clearly points to the facts that retained earnings are a key source of capital for banking institutions and that capital position provides information about institutional soundness or, alternatively, risk. This study also shows that depositors, shareholders, and creditors can acquire information about the overall quality of a bank by examining both aspects of a bank’s dividend policy (including the dividends paid out ratio).

6.2 Conclusion

As anticipated, dividends as a percent of earnings and quality are inversely related as seen in the case of Zenith bank; however, the coefficient is small. A potential reason for this outcome is that the banking industry is unique in that retained earnings provide significant information concerning the future capital position of the industry. Thus, as the dividend payout increases, the ability of an institution to expand its capital base is diminished, as is the quality or soundness of the bank.

Therefore, while dividends per share is the dominant factor, it should not be considered in isolation. The investing public needs to weigh both aspects of a bank’s dividend policy when selecting an investment target.

6.3 Recommendations

Depositors, shareholders, and creditors can acquire information about the overall quality of a bank by examining both aspects of a bank’s dividend policy (that is, dividends paid out ratio and dividends per share).

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