International Journal of Management, Economics and Social Sciences
2024, Vol. 13(1-2), pp. 1 – 24.
ISSN 2304 – 1366
https://www.ijmess.com

DOI:10.32327/IJMESS.13.1-2.2024.1

Determinants of Dividend Payout Ratio of Nigerian Deposit Money Banks

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Within the sphere of financial management for Nigerian Deposit Money Banks (DMBs), the dividend payout ratio stands as a crucial indicator, influenced by a myriad of factors. This study scrutinized the impact of banks' specific factors, macroeconomic influences, and mergers and acquisitions on the dividend payout ratio of five selected DMBs. Secondary data collected from annual report of the selected banks over the 1987-2022 period were utilized. Correlation analysis, panel least square regression, and diagnostic tests like Hausman test were employed for data analysis. Results showed that profitability, liquidity, and bank size were positively associated with dividend payout ratio except leverage, which negatively affected dividend payout ratio. Moreover, gross domestic product and exchange rate had favorable and substantial effect on dividend payout ratio. Contrastingly, inflation and interest rates had significant but adverse effect on dividend payout ratio. Furthermore, findings on post-mergers and acquisition showed that banks capitalization, current ratio, and market shares demonstrated positive and significant effect on dividend payout ratio; whereas, debt ratio exhibited negative effect. In conclusion, the study advocated for strategic measures among Nigerian banks, emphasizing the enhancement of profitability, maintenance of liquidity, and effective management of leverage to bolster their dividend payout policies.

Keywords: Dividend, leverage, profitability, liquidity, deposit money banks

JEL: G32, G35, F49

The Nigerian banking sector, renowned for its dynamic nature and pivotal role in the country's economic growth, has witnessed significant transformations and challenges over the years. (Ademola *et al.*, 2022; Ajudua, 2023; Gololo, 2018). Notably, this sector maintains a complex relationship with dividend policy and payout ratios. Historically, Nigerian banks have grappled with the ramifications of fluctuating economic conditions, regulatory reforms, and market dynamics, all of which exert a profound influence on their dividend distribution strategies. It is imperative to recognize that dividend policy ranks among the most critical strategic determinations made by banks globally (Kullab and Yan, 2018). Dividend policy encompasses the frameworks and directives employed by management to remunerate shareholders for their contributions toward the attainment of corporate goals and objectives. Furthermore, dividend policy is intrinsically linked to numerous facets, including capital structure decision

Manuscript received September 22, 2023; revised January 16, 2024; accepted February 9, 2024.
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(Ebi and Harry, 2022), share price stability, consistent cash flow, and shareholder wealth (Gill *et al.*, 2010). Consequently, the dividend policy adopted by banks carries a direct impact on banks' overall value. The augmentation and stabilization of dividend payments can boost investor confidence and, in tandem, enhance share prices.

In practice, it is evident that dividend policies among banks remain heterogeneous and distinctive, with each institution adhering to a dividend policy tailored to its specific circumstances. Even within the confines of a similar business environment, certain banks disburse higher dividends than their peers (Kamau, 2017). As such, there exists a compelling necessity to probe into the determinants of dividend payout ratios in Nigerian banks, given the multifaceted nature of these institutions and the broader economic backdrop. This scrutiny is indispensable for both investors and management, as it illuminates the banks' dividend policy, financial stability, and comprehensive financial performance.

Throughout the years, numerous academic investigations have centered on banks' dividend policy (Banerjee *et al.*, 2016; Dibia, 2018; Tran, 2020), engendering a multitude of competing theoretical suppositions. Regrettably, despite the proliferation of studies scrutinizing pivotal issues surrounding dividend disbursements and policies, alongside their relevance to investors and management, a consensus on the drivers of bank dividend policies remains elusive. Majority of extensive empirical research in this domain emanates from industrialized economies, with scarcity of inquiries undertaken in developing countries. This dearth of investigations pertaining to the determinants of dividend policy within the realm of Nigerian banks serves as the impetus for enhancing the extant literature and offering fresh empirical insights into dividend payout ratios in the banking sector.

Moreover, a primary issue that has emerged from past studies pertains to the inconclusive and conflicting findings regarding the relationship between dividend policy, banks' specific factors, and macroeconomic factors (Assfaw, 2019; Dibia, 2018; Setiawan and Rahmawati, 2020). The inconclusiveness and ambiguity stem from the absence of specific parameters that are categorically identified as having either a positive or negative influence on dividend policy. Our paper endeavors to address this disparity by adopting a multifaceted strategy to examine the factors influencing the dividend policy of Nigerian banks. It also seeks to illuminate this intricate relationship, offering practical insights and enriching the theoretical framework governing dividend policy within the Nigerian context. Furthermore, this study endeavors to augment the existing dividend theories, including the dividend irrelevance theory, signaling theory, and agency theory, by situating their applicability within the landscape of Nigerian banking.

This work significantly contributes to the existing knowledge base in two pivotal ways. First, it introduces the variable of mergers and acquisitions as a key determinant of dividend policy in Nigerian

banks, an aspect that has received limited attention in previous research. Secondly, it conducts a comparative analysis of the pre-merger and post-merger periods concerning dividend policy in Nigerian banks, thereby bridging a substantial gap in the literature. The study aspires to fill these voids by scrutinizing the determinants of dividend policy in the Nigerian banking industry using the most current data available. These findings hold valuable implications for bank management in Nigeria, enabling them to attract shareholders and meet their needs effectively.

The remainder of this paper is structured as follows: Section 2 reviewed the relevant literature, gathering theories as well as empirical studies analyzing key elements determining dividend payout decisions within banking institutions. Section 3 introduced the methodology justified with the empirical specification alongside details of the selected banks data. The fourth section was devoted to the empirical results and their analysis according to the forwarded assumptions on the research issue; fifth section discussed the results; sixth, seventh, and eighth section presented conclusion, implications, and limitations and future directions, respectively.

LITERATURE REVIEW

Theoretical Underpinnings

Various theories have been propounded by scholars in an attempt to understand dividend payout decisions under different assumptions. Some of these theories are the dividend irrelevance theory, signaling theory, agency theory, bird in hand theory, residual dividend theory, and Lintner's model of dividend smoothing. Signaling theory, according to Miller and Modigliani (1961), presents that dividend payments are signals to the market. It posited that a company engaged in paying more dividends is seen as positive signal by the investors and tends to appreciate the market value of the stock (Forti and Schoozer, 2015). In Nigerian banking, where market confidence and perception are vital, signaling theory is particularly relevant. Banks may use dividend payments to signal their financial health, stability, and prospects to attract investors and depositors. High dividend payouts can be interpreted as a positive signal, indicating confidence in the bank's financial strength. The agency theory highlights the potential conflicts of interest between management and shareholders. In the Nigerian banking sector, this theory is pertinent due to governance and accountability challenges. Dividend policy can be seen as a mechanism to align the interests of shareholders and management. Nigerian banks may utilize dividend payouts to mitigate agency conflicts, ensuring that management's interests are aligned with those of shareholders and regulatory authorities.

The bird in hand theory attributed to John Lintner (1962) and Myron Gordon (1963), suggests that investors prefer current dividends to uncertain future capital gains Gordon (2003). In Nigeria, where

economic and political uncertainties can impact investment decisions, this theory may play a role. Investors may be more inclined to invest in Nigerian banks with a history of consistent dividend payments as it provides a tangible return and income in the face of uncertainty. The residual dividend policy also advocates paying dividends from what is left after funding all positive net present value (NPV) projects. In Nigerian banking, where economic conditions can be volatile, this policy is highly relevant. Banks often need to retain earnings to cushion against potential economic downturns and bad loans, and then distribute dividends from the remaining profits.

Hypotheses Development

Liquidity and Dividend Payout Ratio

A firm's liquidity can be measured by its capability to easily transform assets into cash in order to pay short-term obligations. Nadeem *et al*. (2018) defined liquidity as the capacity to promptly buy or sell an asset or security in the market at a price that reflects its underlying value. As reported by Ebi and Harry (2022) and Setiawan and Rahmawati (2020), firms with greater liquidity pay bigger dividends. Dividend-signaling theory also indicates that dividends can serve as a reliable indicator of a bank's liquidity (Forti and Schoozer, 2015). Consequentially, firms' liquidity (cash) remains a critical component affecting dividend policies; liquid firms do not have problems paying cash dividends (Baker *et al*., 2008).

Signaling theory posited that firm with greater access to cash are capable of paying dividends (Ho, 2003). According to Jensen's (1986) agency theory of cash flow, highly liquid firms pay more dividends so as to minimize agency conflicts between managers and shareholders. However, Banerjee *et al*. (2016), Dewasiri *et al*. (2019), and Fahim and Siddiqui (2021) discovered a negative correlation between liquidity and dividend payments. It is also important that when banks mark high liquidity, they maintain that level so that they can readily respond to any challenges that may arise.

H_1: Liquidity has a significant positive effect on dividend payout policy of Nigerian banks.

Profitability and Dividend Payout Ratio

Profitability refers to a company's ability to generate more revenue than it spends (Baker *et al*., 2008) and it is a key determinant of dividend payout ratio. Signaling theory suggests that the choices a company makes regarding profitability can be interpreted by investors as signals of its financial health and future prospects. A profitable company that consistently pays dividends may signal strength and stability. Investors often interpret a high dividend payout ratio from a profitable firm as a positive signal, indicating confidence in sustained earnings and financial health. However, mixed findings have been generated on the relationship between profitability and dividend payout ratio.

For instance, Hussein *et al*. (2016) affirmed that profitability adversely affects dividend payout ratio, showing that firms prefer investment in assets instead of dividend payments. Choi and Doowon (2014) also found that firms with higher return on equity tends to have higher retained earnings which they reinvest thus reducing the dividends paid to shareholders. Contrarily, Fahim and Siddiqui (2021) and Dibia (2018) find that profitability favorably affects dividend payout ratio. Sukmawardini and Ardiansari (2018) asserted that profitability positively affects dividend payout ratio in the financial firms. Banerjee *et al*. (2016) also emphasized that firms with high profits apportion their profit through dividends. Some other researchers posited that high ROE and ROA correspond to high dividend payout ratio (Denis and Osobov, 2008).

H_2: Profitability has a significant positive effect on dividend payout policy of Nigerian banks.

Leverage and Dividend Payout Ratio

Leverage is the level of firms' indebtedness influences the dividend behavior of firms. According to the signaling theory, if a company employs moderate leverage and maintains a consistent or increasing dividend payout ratio, it may signal to investors that the firm is confident about its future earnings and has the capacity to meet debt obligations while rewarding shareholders. Jabbouri (2016) also posited that when there is substantial debt, the likelihood of notifying investors of dividends is reduced. Al-Kayed (2017) stressed that banks that are highly indebted are subject to tougher rules, which have a detrimental impact on dividend payout. Furthermore, Higgins (2015) and McCabe (2017) claimed that highly geared firms typically pay lesser dividends to avoid incurring significant costs when seeking outside funding for the company. The possibility that a corporation will pay dividends decreases as its reliance on leverage increases (Von Eije and Megginson, 2008). A high degree of financial leverage implies that the firm pays more interest payment to creditors and this impact on firm earnings (Okoye *et al*., 2017). According to Kathuo *et al*. (2020), increasing leverage leads to lower dividend payout.

Cooper and Lambertides (2018) asserted that the choice to forgo dividend payments may be associated with high indebtedness, which may be justified by the necessity to keep more cash in hand to satisfy the demands of the creditors. As a result, lesser dividend payments or no dividends are associated with higher debt ratios (Chay and Suh, 2009). Contrastingly, Gill *et al*. (2010) asserted that leverage have a favorable and considerable impact on the company's dividend policy.

H_3: Leverage has a significant negative effect on dividend payout policy of Nigerian banks.

Banks' Size and Dividend Payout Ratio

According to the bird in the hand theory, larger firms are expected to have a higher dividend payout ratio compared to smaller firms. This may be because larger firms often have more stable earnings and are better positioned to pay consistent dividends. Denis and Osobov (2008) asserted that the size of firms matters in dividend payout policy; dividends are paid by the largest and most successful firms (Consler and Lepak, 2016). Lumapow and Tumiwaw (2017) perceived larger firms to have better growth prospects which influences investors' decision. Larger corporations are seen to be less hazardous by investors because they have larger financial market positions, quicker access to assets, and higher dividend distributions. According to Fahim and Siddiqui (2021) and Jabbouri (2016), bank's size affects dividend payout ratio substantially. Positive correlation between firm size and dividend payout ratio was proven by Dibia (2018). According to Xiaorong (2012), dividend payout ratio and the size of the firm are significantly positively correlated. Additionally, Tahir and Mushtaq (2016) found a link between firm size and dividend payout ratio made to investors. Also, Eyigege (2018) and Ahmad (2018) affirmed that bigger firms with strong accessibility to markets, pay more dividends. Howbeit, Biswajit and Kailash (2015) discovered a strong and adverse relationship between dividend payout ratio and firm size claiming that bigger firms pay out less dividends.

H_4: Banks size has a significant positive effect on dividend payout policy of Nigerian banks.

Macroeconomic Factors and Dividend Payout Ratio

Changes in macroeconomic factors can either boost or inhibit firm's overall performance and this can influence a whole lot of financial decisions which includes capital structure and dividend policies (Khan *et al.*, 2014). Rising inflation creates uncertainty in the market and this have a huge impact on fixed income earners. A way inflation affect dividend payout is through its indirect effect on earnings (Iheduru and Okoro, 2018). Different macroeconomic variables affect the economy; some of them are inflation rates, gross domestic product (GDP), money supply, exchange and interest rates. Inflation is a reflection of the steadiness of the local currency and how government manages the economy. Economies with high inflation are correlated with high uncertainties and this affects dividend payout ratio (Ebi and Harry 2022; Demirgüç-Kunt and Maksimovic, 1996). Interest rate is the difference between the borrower's gross price and the depositor's net value (Assfaw, 2019). Increased interest rate margins will compel bankers to increase lending. However, firms are less willing to invest as interest rates rise.

Furthermore, Bartholdy and Mateus (2008) affirmed that exchange rate suggests how a country's currency may be converted to some other currency. The exchange rate is the price at which citizens of

two nations transact with one another (Moseley, 2012). GDP denotes the market worth of all the goods and services produced within a country's border over a specific time period. Mehmood and Carter (2012) asserted that GDP is used in measuring economic growth which shows the overall performance of the country, as a country's economic activity increases, the corporate earning of different firms also increases, which ultimately increases the dividend payout ratio.

H_5: Macroeconomic factors (inflation rates, GDP, exchange and interest rates) have significant effect on dividend payout policy of Nigerian banks.

Mergers and Acquisitions (M&As) and Dividend Payout Policy

A number of reasons have prompted firms to engage in mergers and acquisitions over the years, including increasing profitability, increasing market share, raising share prices, and paying dividends. The effect of current ratio, debt ratio, capital adequacy, and market shares as indices of mergers and acquisitions on the dividend payout ratio can vary based on the specific circumstances of each bank and the broader industry context. For instance, a strong capital adequacy position, often measured by regulatory capital ratios, reflects a bank's ability to absorb losses and maintain financial health. Banks with robust capital adequacy may be more inclined to distribute dividends as a signal of strength and confidence in their financial position.

Current ratio shows the comparison between current assets and current liabilities, which is used to determine the firm's ability to pay its current debt. Samira and Krisnando (2020) and Firdaus (2019) asserted that a high current ratio provides a good indication of guarantee for short-term creditors which means that every time the company has the ability to pay off its short-term financial obligations, shareholders will receive high dividends. Meanwhile Wahyuni *et al*. (2018) and Hafeez *et al*. (2018) stated that the current ratio has no influence on dividend policy in Indonesia.

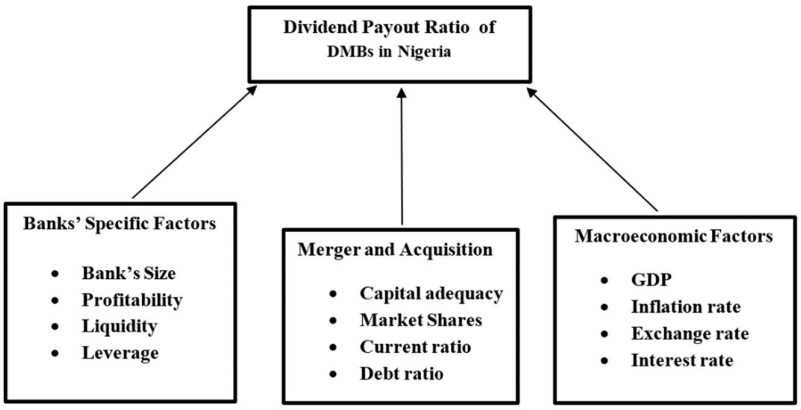
Additionally, larger market share can indicate industry dominance and competitive strength. Companies with significant market share may have more stable earnings and cash flows, providing a solid foundation for consistent dividend payouts. Moreover, a high debt ratio suggests a higher financial leverage. Firms with high debt ratios may prioritize debt repayment over dividend distributions to ensure financial stability and meet debt obligations (Sartono, 2017).

During bank merger announcements, Eckbo (1983), Cybo-Ottone and Murgia (2000), and Beitel and Schiereck (2004) found that the share value increases as a result of more consolidated markets which enhances the profits of bigger firms. However, it is crucial to highlight that the result contradict some other studies undertaken, particularly in the US, such as Cornett *et al*. (2011) and Siems (1996), which found that banks' share prices declined after M&As and this may affect dividend payout decisions

adversely.

Although the question of how much wealth is created or lost as a result of a merger is still subject to debate, majority of studies agree that mergers impact on shareholders or banks. According to some researches, merger's improved efficiency and resource pooling is responsible for changes in wealth (Berger, 2000).

H_6: Mergers and acquisition have significant effect on dividend payout policy of Nigerian banks.



Source: Authors' Presentation

Figure 1. Conceptual Framework

METHODOLOGY

Sample and Procedure

The population of the study are the entire twenty-four (24) DMBs in Nigeria at the time when current study was led which have gone through merger and acquisition and hold the operating license issued by Central Bank of Nigeria (CBN) as of December, 2022. Purposive sampling technique was used in selecting five (5) banks which satisfy the following five requirements (i) a regular annual report for the period under consideration; (ii) an income that is positive throughout the period; (iii) an income that is stable over the period; (iv) they must have undergone mergers or acquisitions; and (v) the banks should have obtained license from the CBN. The selected banks are WEMA bank, United Bank for Africa (UBA), First City Monument Bank (FCMB), First Bank of Nigeria, and Access Bank.

Research Design

The research design employed by the study is ex post facto design in order to examine the factors driving dividend payout ratio of selected Nigerian banks. In this connection, data were collected for pre-merger and acquisition period from 1987- 2004 as well as post-merger and acquisition period from 2005-2022.

Estimation Techniques

The CBN's statistical bulletin and the audited annual financial statements of selected banks provided secondary data for this study. Descriptive statistics, correlation analysis, panel least square regression and diagnostic test like Hausman test were employed for data analysis.

The estimation procedure employed was unit root test, this is used in order to avoid having spurious regression result that is often associated with time series data. Therefore, unit root test (test for stationarity) was carried out using the Augmented Dickey Fuller (ADF) and Phillip Pheron (PP) tests. These minimize autocorrelation in the error term since it involves the first difference in lags and captures additional dynamics left out by the DF thereby ensuring that the error term is distributed as white noise.

Variables' Measurement

The dividend payout ratio (DPR), one of the most popular metrics, was used in this study. This refers to the ratio of dividend paid to the banks' profit after tax.

The explanatory variables employed in this study are those that have theoretical connection with the dependent variable. The variables used to estimate the DPR of Nigerian banks are LEV, LQR, PRT, BSZ, EXR, INF, INT, GDP, and mergers and acquisition. The parameters are displayed in Table 1 (see Appendix-I).

Model Specification

The analytical model was built to study the complex relationships between banks specific factors, macroeconomic factors, mergers and acquisition, and dividend payout ratio of the selected banks.

$$\mathrm{DPR}_t = \beta_0 + \beta_1 \mathrm{LEV}_t + \beta_2 \mathrm{LQR}_t + \beta_3 \mathrm{PRT}_t + \beta_4 \mathrm{BSZ}_t + \varepsilon t \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (1)$$

where,

DPR = Dividend payout ratio; LEV = Leverage; LQR = Liquidity ratio; PRT = Profitability; BSZ = Bank size and t = Times Series; β_0 = denotes the regression constant.; $\beta 1$- $\beta 4$ = coefficients of the variables to be evaluated

$$\mathrm{DPR}_t = \beta_0 + \beta_1 \mathrm{INF}_t + \beta_2 \mathrm{INR}_t + \beta_3 \mathrm{EXR}_t + \mathrm{GDP}_t + \varepsilon_t \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (2)$$

where,

DPR = Dividend payout ratio; INF = Annual Inflation rate; INR = Annual Interest rate EXR = Annual Exchange rate of a currency t = Times Series; β_0 = denotes the regression constant.; β_1-β_4 = coefficients of the variables to be evaluated

$$DPR_t = \alpha_t + \beta_1 CRTt + \beta_2 DRT_t + \beta_3 CAP_t + \beta_4 MKT_t + \varepsilon_t \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (3)$$

where,

DPR = Dividend payout ratio; CRT = Current Ratio; DR = Debt Ratio: CAP = Capital adequacy; MKT = Market Share; t = Times Series; β_0 = denotes the regression constant; $\beta_1 - \beta_4$ = coefficients of the variables to be evaluated.

RESULTS

Descriptive analysis of the study is shown in Table 2. It displayed overview of statistics such as the mean, median, standard deviation, and metrics of the distribution's symmetry and normality. According to the descriptive analysis given in Table 2, BSZ has the highest mean score (18.77), followed by LQR (1.14), and LEV (0.88) with DPR having the lowest mean (0.16). Findings indicate that the values of standard deviation are greater than the mean values; this is an indication that the values are well dispersed and skewed. Also, skewness portends positive values ranging from −1 to +1, it is an indication that the data are positively and normally skewed right Furthermore, all the kurtosis values are not up to three. The Jarque–Bera statistics showed that probability values are more than 0.05 critical values. Thus, the variables passed the normality test.

	DPR	PRT	LQR	LEV	LOG(BSZ)
Mean	0.163443	0.393179	1.140602	0.884596	18.77726
Median	0.160920	0.395652	1.146992	0.871846	19.85867
Maximum	0.468750	0.568184	1.323061	1.289768	22.68942
Minimum	0.020000	0.002472	0.775333	0.755823	1.82806
Std. Dev.	0.172024	0.425942	1.298333	0.976690	22.99613
Skewness	0.664663	0.262915	0.956646	0.047529	0.230097
Kurtosis	2.318181	2.076682	1.074946	1.66056	1.290306
Jarque Bera	1.946197	11.13794	54.39461	157.0805	3.265449
Prob.	0.377910	0.403814	0.06200	0.102300	0.195397
Sum	4.086086	9.829477	28.51505	22.11491	469.4315
Sum Sq. dev	0.301185	0.380674	0.232066	.224376	211.6464
Obs.	360	360	360	360	360

Source: Authors' computation
Dependent Variable: Dividend Payout Ratio (DPR)
PRT= Profitability; LQR = Liquidity; LEV= Leverage; LOG (BSZ) = Size of banks

Table 2. Summary of Descriptive Statistics

Correlation matrix showing the relationship between banks internal factors, macro-economic factors and dividend payout ratio is displayed in Table 3 (see Appendix-II).

As seen from Table 4, according to the four different unit root test statistics results, all of the variables used in the study are stationary. Therefore, according to these results, the stationary assumption required for the regression analysis is not violated.

	Levin, Lin & Chu *t*		**Im, Pesaran & Shin, W**		**ADF Fisher Chi Sq.**		**PP-Fisher Chi Sq.**	
Variables	**Stat.**	**Prob.**	**Stat.**	**Prob.**	**Stat.**	**Prob.**	**Stat.**	**Prob.**
DPR	−30.5085	0.001	−12.5431	0.001	512.653	0.001	583.941	0.001
LEV	−63.3300	0.001	−20.2040	0.001	578.048	0.001	506.869	0.001
LQR	−45.8209	0.001	−8.44764	0.001	450.820	0.001	399.834	0.001
PRT	−34.5918	0.001	−7.47222	0.001	400.381	0.001	444.383	0.001
BSZ	−46.8429	0.001	−6.81159	0.001	332.622	0.001	404.175	0.001
EXR	−28.8385	0.001	−6.42081	0.001	357.629	0.001	391.920	0.001
INF	−38.5245	0.001	-5.83200	0.001	320.669	0.001	523.941	0.001
INR	−66.2920	0.001	-8.43721	0.001	256.780	0.001	398.869	0.001
GDP	−37.6209	0.001	-7.89442	0.001	387.900	0.001	414.834	0.001
CRT	−32.4418	0.001	-9.54722	0.001	410.544	0.001	480.383	0.001
DRT	−44.8009	0.001	-4.76129	0.001	230.448	0.001	256.175	0.001
CAP	−29.8341	0.001	-5.87909	0.001	355.906	0.001	301.560	0.001
MKT	-27.4228	0.001	-4.09442	0.001	422.654	0.001	475.997	0.001

Source: Authors' computation

Note: If the probability value is less than 10%, "H_0: variable has unit root" is rejected. In other words, the variables are stationary.

Table 4. Unit Root Tests

Hausman Test is used to determine the suitability of the model and results revealed that the Chi-square statistics is 5.184633 with *p-value* of 0.2689 this is higher than 0.05 significant levels; showing that the random effect model is suitable.

The result as illustrated in Table 5 (see Appendix-III) indicates that:

$$DPR = 3.7597 + 1.4460PRT + 0.3617LQR - 1.4842LEV + 0.4261BSZ + 0.1922EXR - 0.0506INF - 0.0337INR + 4.3515GDP + e_0$$

The coefficient of determination (r^2) being 0.7390, indicate that the explanatory variables account for about 73.9 % of variation in DPR while the remaining 26.1 % can be attributed to other factors. Adjusted R-squared being 0.5778 showed that the predictive power of the model is high. This implies that all the explanatory variables considered are reliable predictors. Moreover, Hausman Test is used to determine the suitability of the model indicating how pre-merger and acquisition (M&As) affects DPR. Findings revealed that Chi-statistics of 2.9806 with *p-value* of 0.3946 is more than the 0.05 significant levels; this shows that the random effect model is a suitable model.

The result of the pre-merger and acquisition effect on banks DPR is shown in Table 6 (see Appendix-IV). The equation of the regression is stated as:

$$DPR = 2.4567 + 0.0138MKT - 1.1553DRT - 0.9547CRT + 0.6119CAP + e_0$$

The result of the regression analysis for the pre-M&As period showed that the parameters tested accounted for 64.8 % of changes in DPR while 35.2 % is due to unspecified components in the model. The *f*-statistic value of 4.678 is significant. The constant parameter being 2.456 implies that DPR will increase by 2.456 units if all external factors are kept constant. Furthermore, Hausman Test is used to determine the suitability of the model indicating how post-merger and acquisition (M&As) affects DPR. The findings revealed that Chi-square statistics of 16.924 with *p-value* of 0.0020 is less than the 0.05 significant levels, indicating that using a fixed effect model is suitable.

Results for the post-merger period are displayed in Table 7 (see Appendix-V). The equation is specified as:

$$DPR = 0.99835 + 0.43194MKT - 0.12954DRT + 0.12525CRT + 0.1829CAP + e_0$$

Findings revealed that the parameters tested accounted for 78.5 % of changes in DPR while 21.5 % was due to unspecified components in the model. The *f*-statistic value of 7.32 is significant. The constant parameter shows that if all external factors remain constant, DPR will increase by 2.998 units.

DISCUSSION

The relationship between banks internal factors, macroeconomic factors and dividend payout ratio is displayed in Table 3. Findings revealed that the correlation coefficient between PRT and DPR is 0.5900 which indicates that PRT is moderately and positively correlated with DPR signifying that higher PRT produces higher DPR. LQR with value of 0.2152 exhibited weak but positive correlation with DPR. Moreover, LEV demonstrated weak and negative relationship (-0.2615) with DPR. It signifies that higher LEV lowers the DPR of DMBs in Nigeria. Furthermore, moderate and positive correlation (0.5179) exist between BSZ and DPR indicating that the bigger the BSZ, the higher the DPR. The results revealed that all proxies of banks' specific factors are positively associated with DPR except LEV. PRT, LQR, and LOG (BSZ) are positively related to DPR. However, while the relationships of PRT and LOG (BSZ) with DPR are significant, that of LQR is not significant. Moreover, LEV maintains negative and insignificant relationship with DPR.

Additionally, findings revealed that DPR and GDP were positively and significantly correlated with

coefficient of 0.628. This shows that DPR to shareholders increases as GDP increases. EXR also exhibited moderate and positive correlation with DPR. However, INF and INT portend moderate but negative relationship with DPR. This implies that the higher the inflation and interest rates, the lower the dividend payout ratio. Moreover, LOG (GDP) showed moderate but negative correlation with INF, signifying that higher inflation rates adversely affect GDP of the country. Howbeit, LOG (GDP) exhibited weak and positive relationships with EXR and INT.

The result of the regression analysis in Table 4 showed that PRT had a favorable and significant effect on DPR, and all independent variables played a significant role in predicting it. As a result, an increase in PRT of one unit causes a DPR increase of 1.4460. This implies that the higher the dividends paid to bank shareholders, the more profitable the banks are. This indicates that profitability is a crucial factor that determines DPR of banks in Nigeria. This report conforms to the submission of Ahmed and Javid (2019), Fahim and Siddiqui (2021), and Marfo-Yiadom and Agyei (2017). It also provides support for the profitability theory. Also, LOG (BSZ) has a value of 0.4261 signifying that bank size positively and significantly influence DPR. This shows that larger banks pay higher dividends. The conclusion is consistent with that of Fahim and Siddiqui (2021) and Venkataraman and Venkatesan (2018), who all indicated that a firm's size influences its DPR.

While the LQR yielded a positive value of 0.3617, it was not deemed statistically significant. This suggests that liquidity does not exert a substantial influence on dividend ratio. One plausible explanation for this lack of significance could be shareholders' preference for capital appreciation over regular dividends, prompting banks to prioritize reinvesting profits in growth opportunities rather than distributing dividends. This finding is in line with Maladjian and Khoury (2014) who discovered that DPR is not affected by liquidity.

Moreover, LEV exhibited negative and insignificant effect on DPR. The negative effect could be that banks that are highly geared resort to lower dividend payments as third-party liabilities increase. Consequently, they are unable to pay greater dividends (Dickens *et al.*, 2002; Kathuo *et al.*, 2020). This finding aligns with Fahim and Siddiqui (2021), Kathuo *et al.*, (2020), King'wara (2015), and Marfo-Yiadom and Agyei, (2017).

The coefficient of GDP is 4.3515 indicating that GDP positively and significantly affects DPR in the selected banks (t = 3.362349, p = 0.0075). Hence, a unit increase in GDP produces 4.35 increases in DPR; indicating that higher GDP increases shareholders' dividend. This reveals that GDP being the financial health of a country is a salient factor influencing DPR of Nigerian banks. This corroborates the assertion of Ghafoor *et al.* (2014) that increased GDP increases corporate earnings of firms, which eventually increases DPR. Assfaw (2019) also asserted that when the economy is booming, banks

perform favorably well and boost their long-term investment, thus enhancing their DPR.

Moreover, EXR with a value of 0.1922 positively and significantly affects DPR (t = 1.9634, p = 0.0500). This signifies that the higher the EXR, the higher the DPR. When the Nigerian currency appreciates, DPR increases by 0.192%. This finding tallies with Singh *et al*. (2011). Contrastingly, the coefficient of INF being −0.0506 affects DPR negatively and significantly. (t = −2.4740, p = 0.0244). This indicates that as inflation rates rise, DPR decreases significantly. Inflation rate is an indicator of currency stability. Inflation prone economies are generally characterized by high uncertainties (Demirgüç-Kunt and Maksimovic, 1990, Ebi and Harry, 2022) and this impact negatively on DPR.

INT having a coefficient of −0.0337 exhibited negative but significant effect on DPR (t = −2.3490, p = 0.0340). The negative sign, denotes an unexpected rise in interest rates, deters bank customers from taking out loans, raises borrowers' interest payments, lowers repayment capacity, raises default rate and lowers banks' profitability and DPR, respectively. This result is consistent with Zeitun and Tian (2007).

Moreover, in Table 6, for the pre-merger era, findings revealed that only capital adequacy of banks (CAP) had positive and significant effect on DPR. A unit increase in CAP equals a 0.6119 increase in DPR. However, debt and current ratios though insignificant had negative effect on DPR. LOG (MKT) though positive had no significant impact on DPR. However, in the post-merger era as indicated in Table 7, CAP, CRT, and MKT positively and significantly affected DPR. This signifies that post M&As substantially affected DPR. The coefficient of banks CAP in the post M&As period is 0.1829 and this substantially affected DPR of the selected banks positively (t = 3.0509, p = 0.0095). This shows that CAP is an important indicator of the strength of a bank. In essence, increased CAP enhances earnings by decreasing financial distress cost as suggested by Mathura (2009).

CRT has a positive and strong influence on DPR, with a coefficient of 0.1252 and this indicates that every unit rise in CRT causes 0.1252 increase in DPR in the post-merger period. Also, market shares LOG (MKT) with a coefficient of 0.43194 portend positive and significant influence (t = 2.463716, p = 0.0248) on DPR in the post-merger phase. This indicates that larger MKT increases DPR of the merged banks. Furthermore, increased MKT have direct substantial relationship with profitability of banks. As MKT impacts positively on bank's revenue, shareholders' wealth increases.

However, debt ratio is inversely proportional to dividend policy payout, with a value of −0.129 indicating that a unit rise in DRT causes a 0.0129-unit decrease in DPR. This indicates that higher debt ratio of the merged banks reduces shareholders' wealth. These findings signify that M&As affect dividend payout policy of DMBs in Nigeria. This is because M&As increase shareholders wealth. Some researchers attributed the wealth changes to higher efficiency generated from M&As and combination of resources

(Berger, 2000; Cybo-Ottone and Murgia, 2000). Others such as Beitel and Schiereck (2004) concluded that almost all M&As give rise to surplus shareholders' wealth due to combined assets, capital and efficiency factor. This showed that banks specific factors, macroeconomic factors, and mergers and acquisition significantly affect the dividend payout ratio of Nigerian Deposit Banks. Therefore, the alternative hypotheses were accepted.

CONCLUSION

This study conducted a comprehensive analysis of the determinants of dividend payout policy within the Nigerian banking sector, spanning the extensive period from 1987 to 2022. The investigation encompassed a multitude of factors, including internal bank-specific elements (such as size, liquidity, profitability, and leverage), macroeconomic variables (inflation rates, gross domestic product, exchange rates, and interest rates), and the effect of mergers and acquisitions on dividend payout policy. The findings of this study have yielded several critical insights into the dynamics and factors influencing dividend payout policies of Nigerian banks. First, it was observed that internal factors, represented by proxies like profitability (PRT), liquidity (LQR), and logarithm of bank size (LOG [BSZ]), exhibited positive influence on dividend payout ratio (DPR), indicating that larger, more profitable, and liquid banks tend to allocate a larger share of their earnings as dividends.

However, the relationship between leverage (LEV) and DPR was found to be negative, although not statistically significant, implying that higher leverage may deter banks from paying out dividends. This suggests that Nigerian banks should prioritize maintaining profitability, liquidity, and a reasonable level of leverage to foster a more favorable dividend policy. Secondly, macroeconomic factors, including gross domestic product (GDP) and exchange rates (EXR), had positive and statistically significant effect on DPR, suggesting that an expanding economy and stable exchange rates incentivize banks to distribute more dividends. Conversely, inflation rates and interest rates were found to have negative and significant effect on DPR, underscoring the influence of these variables in shaping dividend policy.

Nigerian banks should thus remain vigilant regarding inflation and interest rate developments when formulating dividend strategies. Furthermore, the study examined the post-merger and acquisition effects on DPR, revealing that factors such as capitalization, current ratio, and market shares positively and significantly influenced dividend payout, while the debt ratio exerted a negative impact. This highlights the importance of prudent capital management and financial health after mergers and acquisitions in preserving or enhancing dividend payout ratios. Based on the conclusions drawn from this study, the following recommendations are put forth:

1. Nigerian banks should prioritize measures to enhance profitability, maintain liquidity, and manage

leverage effectively to bolster their dividend payout policies.

2. Policymakers should strive to create and sustain a macroeconomic environment that promotes economic growth and exchange rate stability, as these factors encourage higher dividend distributions by banks.
3. Banking institutions should be cautious and proactive in monitoring inflation and interest rate trends to ensure they do not adversely affect dividend policy decisions.
4. In the context of mergers and acquisitions, banks should pay close attention to maintaining healthy capitalization, liquidity, and market shares, while simultaneously managing their debt levels to ensure that such events do not disrupt dividend payout policies.

IMPLICATIONS

These findings hold significant implications for Nigerian banks and the broader Nigerian economy. Theoretical implications of this study underscore the importance of considering both internal and external factors in understanding the dividend payout behavior of Deposit Money Banks (DMBs) in Nigeria. The positive association between profitability, liquidity, and bank size with the dividend payout ratio aligns with agency theory, emphasizing the relevance of internal performance metrics. Conversely, the negative impact of leverage on dividend payout ratio supports signaling theory, suggesting that high leverage may signal financial distress and reduce shareholder payouts. The study also contributes to the understanding of macroeconomic influences, highlighting the significant role of gross domestic product and exchange rates in shaping dividend policies.

Practically, the findings provide actionable insights for DMBs in Nigeria, emphasizing the need for strategic measures to enhance profitability, maintain liquidity, and manage leverage effectively. Policymakers can use these insights to formulate regulations that promote a balance between profitability and financial stability. Moreover, the positive effects of post-merger capitalization, current ratio, and market shares on dividend payout ratio suggest that banks engaging in mergers and acquisitions should focus on strengthening these aspects to optimize shareholder returns. Overall, the study advocates for a holistic approach to dividend policy formulation, taking into account both internal and external dynamics in the Nigerian banking sector.

LIMITATIONS AND FUTURE DIRECTIONS

The study's focus on only five selected Deposit Money Banks (DMBs) in Nigeria restricts the generalizability of findings, warranting future research to incorporate a more diverse and representative

sample of DMBs to enhance external validity. Moreover, the study relied solely on secondary data obtained from annual reports of selected DMBs over a specific period (1987–2022). This reliance may limit the generalizability of the findings and overlook potential nuances in data not captured by these reports. However, future research could benefit from incorporating qualitative data, such as interviews or surveys with banks' executives, to provide a more comprehensive understanding of the factors influencing dividend payout ratios. Also, including a larger and more diverse sample of Nigerian DMBs would enhance the external validity of the findings and enable researchers to draw more robust conclusions about the determinants of dividend payout ratios in the Nigerian banking industry.

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Appendix-I

S/N	Variables	Abbrev.	Measurement
1.	Dividend Pay Ratio	DPR	Dividend paid / Profit After Tax
2.	Leverage	LEV	Total Debts / (Total Debts + Total Equity)
3.	Liquidity	LQR	Ratio of cash and cash equivalent to total assets of bank
4.	Profitability	PRT	Earnings Before Interest and Tax / Total Assets
5.	Bank size	BSZ	Log of sales
6.	Exchange rate	EXR	Annual average Naira against US Dollar
7.	Inflation rate	INF	Annual average consumer price index
8.	Interest rate	INR	Interest paid / Interest Earned
9.	Gross Domestic Product	GDP	Total value of all goods produced in a country in a year
10.	Current ratio	CRT	Current asset/current liabilities
11.	Debt ratio	DRT	Total liabilities/assets
12.	Capital adequacy	CAP	Equity/total asset
13.	Market share	MKT	Log of total assets

Source: Author's presentation

Table 1. Measurements of Variables

Appendix–II

	DDPR	PPRT	LLQR	LEV	BSZ	INF	EXR	GDP
PRT	0.5900**							
LQR	0.2152	0.1725						
LEV	-0.2615	-0.3082	0.4829					
BSZ	0.5179**	0.2367	0.2234	0.2067				
INF	-0.5200*	0.5082**	-0.2829*	0.329	-0.165			
EXR	0.5612**	0.4872*	0.4478*	0.3245	0.222	0.4752*		
GDP	0.6280**	0.6619**	0.5743*	0.489	0.512*	0.456	0.502*	
INT	-0.5000*	0.4367**	0.3934*	0.5067*	0.323	0.345*	0.447	0.456†

Source: Authors' computation
† *p*-value < .10 ** *p*-value < .01, * *p*-value < .05

Table 3. Correlation Matrix

Appendix–III

Variable	Coefficient	Std.Error	*t*-statistics	Prob.
C	3.759777	1.858471	2.023048	0.0566
PRT	1.446089	0.139151	2.599652	0.0171
LQR	0.361744	0.913072	1.583762	0.1289
LEV	-1.484262	0.933312	-1.590318	0.1274
LOG (BSZ)	0.426187	0.005841	4.482939	0.0002
LOG(GDP)	4.351593	1.294212	3.362349	0.0075
INT	-0.033708	0.014349	-2.349013	0.0340
INF	-0.050621	0.020461	-2.474023	0.0244
EXR	0.192239	0.046977	1.963492	0.0500
Weighted statistics				
R-squared	0.738994	Mean dependent var	0.163443	
Adjusted R-squared	0.577989	S.D. dependent var	0.112024	
S.E. of regression	0.080938	Akaike info criterion	-1.884242	
f-statistic	6.958790	Durbin-Watson stat	1.554418	
Prob. (*f* -statistic)	0.001113			
Dependent Variable: DPR		Method: Panel EGLS (Two-way random effects)		
Total panel (balanced) observations: 360				

Source: Authors' computation

Table 5. Summary of Regression Results

Appendix–IV

Variable	Coefficient	Std.Error	*t*-statistics	Prob.
CAP	0.611932	0.235661	2.596653	0.0007
CRT	-0.954745	0.926002	-1.031040	0.3148
DRT	-1.155384	0.888620	-1.300200	0.2083
LOG(MKT)	0.013859	0.004814	2.879197	0.1043
C	2.456762	1.853604	1.325397	0.2000
Weighted statistics				
R-squared	0.648853	Mean dependent var		0.153793
Adjusted R-squared	0.518624	S.D. dependent var		0.090976
S.E. of regression	0.080418	Akaike info criterion		0.129342
f-statistic	4.678762	Durbin-Watson stat		1.597362
Prob. (*f*-statistic)	0.031502			
Dependent Variable: DPR		Method: Panel EGLS (Two-way random effects)		
Total panel (balanced) observations: 180				

Source: Authors' computation

Table 6. Random Effects Model for Pre-merger and Acquisition Effect on Dividend Policy

Appendix–V

Variable	Coefficient	Std.Error	*t*-statistics	Prob.
CAP	0.182993	0.059980	3.050903	0.0095
CRT	0.125251	1.169634	0.107085	0.0161
DRT	-0.129547	0.048218	-2.990149	0.0449
LOG(MKT)	0.431944	0.012154	2.463716	0.0248
C	2.998353	3.611553	0.276433	0.7858
Effect specification				
Cross-section fixed (dummy variables)				
R-squared	0.783573	Mean dependent var		0.153793
Adjusted R-squared	0.625360	S.D. dependent var		0.090976
S.E. of regression	0.062677	Akaike info criterion		2.427937
Sum squared resid	0.062854	Schwarz criterion		1.989142
Log likelihood	59.34921	Hannan-Quinn criter.		2.306234
f -statistic	7.320578	Durbin-Watson stat		2.099225
Prob (*f* -statistic)	0.001193			
Dependent Variable: DPR		Method: Panel EGLS (Two-way random effects)		
Total panel (balanced) observations: 180				

Source: Authors' computation

Table 7. Fixed Effects Model for Pre-merger and Acquisition Effect on Dividend Policy