
Determinants of Dividend Policy in Banks in the United States: A Multidimensional Approach

Murtala Abdulrahman

Sustainability, Policy and innovative Development, Research Solutions (SPIDR), Uyo, Nigeria.

Email: murtalaa@gmail.com

Sani AbdulRahman Bala

Usmanu Danfodiyo University Sokoto. Email: Sani.abdulrahman@udusok.edu.ng

Abstract

Dividend policy in the banking sector remains a pivotal area of financial research, offering insights into a bank's financial health and operational strategies. This study investigates the determinants of banks' dividend policies by integrating theoretical frameworks such as the Fama-French model, Risk-shifting theory, Signalling theory, and Lifecycle theory. Utilizing data from 2015 to 2023, the research examines internal factors (profitability, size, growth prospects) and external influences (macroeconomic conditions, regulatory environments). A panel data regression model is employed to analyse the impact of these variables on dividend payout decisions, incorporating the effects of recent market disruptions like the COVID-19 pandemic and regulatory changes. The findings reveal significant relationships between profitability, size, growth prospects, macroeconomic conditions, regulatory environments and dividend policies. The findings highlight significant relationships between profitability, size, growth prospects, macroeconomic conditions, regulatory environments, and dividend policies. Notably, bank-specific characteristics such as size and profitability play a dominant role, supporting the Signalling theory that dividends serve as a signal of financial health. Additionally, banks with high asset growth rates tend to prioritize reinvestment over dividend payouts, reflecting the Lifecycle theory. The study also suggest that macroeconomic conditions, proxied by GDP growth, and regulatory pressures, proxied by capital adequacy requirements, positively influence dividend decisions. These insights offer valuable implications for investors assessing bank stability, for policymakers in designing regulations, and for financial institutions in optimizing their dividend strategies. The findings highlight the importance of flexible dividend policies that can adapt to economic disruptions, such as the COVID-19 pandemic, underlining the need for adaptability in dividend strategies.

JEL Classifications: G21, G35, G28, G32

Keywords: Dividend Policy, Bank Profitability, Risk-Shifting Theory, Regulatory Environment, Macroeconomic Conditions

1. Introduction

Dividend policy holds significant interest for various stakeholders as a key indicator of a firm's financial health. This is particularly crucial in the banking sector, where dividend policy is not only vital but also complex due to the sector's intricate connections with the overall economy. Understanding the factors that influence banks' dividend policies is essential, as these decisions

have far-reaching implications for investors, policymakers, and financial institutions themselves. Dividend policies can signal the financial health of a bank, affect investor confidence, and impact resource allocation, especially in times of economic uncertainty. Moreover, banks must carefully balance their dividend payout strategies with regulatory requirements and macroeconomic factors to ensure long-term stability and growth.

This research seeks to examine the determinants of banks' dividend policies by analysing both internal factors, such as profitability, size, and growth prospects, and external factors, including macroeconomic conditions and regulatory environments. The central research problem addressed in this study is understanding how these factors influence the decision-making process regarding dividend payouts. In particular, the study aims to explore how banks adjust their strategies in response to changes in economic conditions, regulatory pressures, and other relevant factors. By investigating these dynamics, the research aims to provide insights into the complexities of dividend policy decisions in the banking sector.

Several foundational theories explain why banks pay dividends, each highlighting different corporate characteristics and market behaviours. According to Fama and French (2001), dividends in banks are influenced by size, profitability, and growth opportunities, with larger and more profitable banks that face fewer growth prospects more likely to distribute dividends.

The Risk-shifting theory suggests that financially distressed banks might increase dividends to shift risks to creditors, though empirical evidence on this behaviour is mixed. By analysing recent data, this study aims to clarify these mixed findings and provide a deeper understanding of risk-shifting in the current economic landscape. The Signalling theory posits that banks use dividends as a tool to signal their future financial prospects to the market, with changes in dividends potentially boosting investor confidence. The Lifecycle theory suggests that a bank's dividend policy correlates with its maturity stage, offering consistent dividends as they mature and become more stable.

In addition to these theories, this study considers the impact of deposit levels, capital adequacy, and macroeconomic conditions like GDP growth on dividend policies. This research, therefore, aims to offer a more robust understanding of how both internal and external factors influence banks' dividend policy decisions in the current economic environment.

1.2 Limitations of the Study

This study is limited by its focus on U.S. banks and the specific period from 2015 to 2023, which may not fully capture long-term trends or global perspectives. The exclusion of qualitative data and the reliance on secondary data sources restricts the depth and applicability of the findings. Additionally, the study does not account for the potential impact of unobservable factors such as managerial behaviour and specific regulatory nuances that could influence dividend policies.

1.3 Research Objectives

This study aims to achieve the following objectives:

1. Identify the key determinants of banks' dividend policies by examining internal factors such as profitability, bank size, growth prospects, and retained earnings, as well as external factors including macroeconomic conditions and regulatory environments.
2. Assess the impact of financial performance on dividend payouts, determining how bank profitability and asset growth influence dividend distribution strategies.
3. Evaluate the role of risk and regulatory constraints by analysing how capital adequacy, loan loss provisions, and risk indicators (such as the Z-Score) affect dividend decisions in the banking sector.
4. Examine the influence of market signalling and lifecycle stages on dividend policies, investigating how banks use dividends to signal financial health and how dividend behaviour evolves as banks mature.
5. Analyse the effects of macroeconomic conditions, including GDP growth and market disruptions (e.g., the COVID-19 pandemic), on banks' dividend strategies.
6. Provide empirical insights for investors, policymakers, and financial institutions to enhance decision-making regarding dividend policies, financial stability, and regulatory compliance.

By addressing these objectives, the study aims to contribute to the existing literature on bank dividend policies while offering practical implications for stakeholders on the complexities of the financial sector.

2. Literature Review

2.1 Dividend Policy in the Banking Sector

Dividend policy refers to the strategy a company employs to determine the portion of its earnings to distribute to shareholders as dividends versus retaining for reinvestment. In the banking sector, this policy is particularly significant due to the industry's unique characteristics, including stringent regulatory requirements, capital adequacy norms, and the need to maintain liquidity. Banks must balance rewarding shareholders with ensuring sufficient capital reserves to support operations and growth.

2.2 Theoretical Frameworks

Several theories have been proposed to explain dividend policies:

Signalling Theory: Miller and Rock (1985) suggest that dividends serve as signals of a firm's financial health and future prospects. In the banking sector, transparent dividend policies can enhance investor confidence by indicating stability and profitability. Empirical studies, such as those by Boldin & Leggett (1995) and Kilincarslan (2021), support this theory, showing that market valuation significantly influences dividend policies. However, Collins et al. (1994) found no link between market-to-book ratio and dividend payouts, indicating potential limitations in the signalling model's applicability.

Agency Theory: Jensen (1986) and Rozeff (1982) discuss how substantial dividend payouts can reduce agency problems by limiting the free cash flow available to managers, thereby mitigating the risk of funds being used for non-value-maximizing activities. This is more pronounced in banks due to their complex capital structures, necessitating stringent monitoring mechanisms. Empirical

findings, such as those by Maqbool et al. (2022) and Olaniyi et al. (2023), offer mixed results on risk-shifting behaviour, underscoring the need for further research in this area.

Lifecycle Theory: This theory posits that a bank's dividend policy evolves with its life cycle, with mature banks offering consistent dividends as they become more stable. Evidence shows that mature banks with stable cash flows tend to pay higher dividends (Trinh et al., 2020; Santos et al., 2019). Regulatory pressures also play a crucial role, with banks nearing minimum capital requirements more likely to retain earnings to ensure financial stability and compliance.

2.3 Empirical Studies on Determinants of Dividend Policy

Recent empirical studies have identified various factors influencing banks' dividend policies, with emerging research shedding light on new dynamics in the post-pandemic era and evolving regulatory landscapes.

Ownership Structure

Duqi et al. (2020) found that foreign ownership positively impacts dividend payouts in both Islamic and conventional banks, while ownership concentration and leverage negatively influence dividend distributions. Recent studies, such as those by Al-Najjar and Kilincarslan (2023), have expanded on this by examining the role of institutional ownership in dividend policy. They found that institutional investors, particularly those with long-term investment horizons, tend to favour higher dividend payouts to ensure consistent returns. Additionally, the COVID-19 pandemic altered the relationship between foreign ownership and dividend policies, particularly in Islamic banks, as noted by Alzoubi and Alomari (2022). Their study highlighted that foreign investors became more risk-averse during the pandemic, leading to reduced dividend payouts in volatile markets.

Financial Performance

Profitability remains a significant determinant of dividend policy, with profitable banks more likely to distribute dividends. However, the impact of profitability can vary across banking sectors. For instance, a recent study by Nguyen and Nguyen (2023) found that while profitability strongly influences dividend payouts in commercial banks, its effect is less pronounced in investment banks due to their focus on capital retention for growth opportunities. Furthermore, Al-Homaidi et al. (2021) emphasized that banks with higher liquidity ratios are more likely to distribute dividends, as they have sufficient cash reserves to meet both regulatory requirements and shareholder expectations.

Regulatory Environment

Regulatory frameworks and capital adequacy requirements continue to play a critical role in shaping dividend decisions. Banks nearing minimum capital requirements are more likely to retain earnings to ensure financial stability and compliance. A recent study by Barth et al. (2023) highlighted the impact of Basel III regulations on dividend policies, noting that stricter capital conservation buffers have led to more conservative dividend payouts globally. Similarly, Demirgüç-Kunt and Huizinga (2022) found that banks operating in jurisdictions with stringent regulatory oversight tend to adopt more cautious dividend policies to avoid regulatory penalties.

Macroeconomic Conditions

Economic factors such as GDP growth, inflation, and interest rates significantly affect banks' profitability and, consequently, their dividend policies. For instance, higher interest rates can boost bank profits, enabling higher dividend payouts. However, recent research by Chen et al. (2023) suggests that the relationship between interest rates and dividend payouts has become more nuanced in the post-pandemic era. They found that in low-interest-rate environments, banks are more likely to retain earnings to strengthen their balance sheets, particularly in the face of economic uncertainty. Additionally, studies by Beck and Levine (2022) have shown that macroeconomic instability, such as that caused by geopolitical tensions or global supply chain disruptions, can lead to reduced dividend payouts as banks prioritize financial resilience.

Market Discipline Mechanisms

Instruments like subordinated debt and depositor behaviour continue to influence risk management strategies and dividend policies. Studies by Sironi (2003) and Gropp & Vesala (2004) suggest that higher levels of subordinated debt correlate with lower risk levels, supporting more stable dividend payouts. Recent research by Flannery and Sorescu (2023) has expanded on this by examining the role of market discipline in shaping dividend policies during periods of financial stress. They found that banks with higher levels of market discipline, as evidenced by their reliance on market-based funding, tend to adopt more conservative dividend policies to maintain investor confidence.

Theoretical Frameworks and Emerging Trends

The interplay of internal factors like profitability and size, external factors such as regulatory environments and macroeconomic conditions, and theoretical frameworks like signalling, agency, and lifecycle theories collectively shape banks' dividend decisions. Recent studies, such as those by Baker and Wurgler (2023), have emphasized the growing importance of behavioural finance in understanding dividend policies. They argue that investor sentiment and market psychology play a significant role in shaping dividend decisions, particularly in volatile markets. Additionally, the rise of environmental, social, and governance (ESG) considerations has introduced new angle into dividend policy decisions. Banks with strong ESG performance are increasingly using dividend payouts as a signalling mechanism to demonstrate financial stability and commitment to sustainable practices (Gillan et al., 2023).

Methodology

3.1 Data Source and Sample Selection

This study uses financial data sourced from the *Compustat* database, focusing on U.S. commercial banks. These banks are classified under the SIC codes 6020, 6022, 6035, and 6036 and the time frame of the analysis spans from 2015 to 2023. The data set includes information from a total of 420 banks. In addition, GDP data was downloaded from Worldbank.org and Statista.com websites.

3.2 Variables Description

Table 2 offers a comprehensive overview of the variables applied in this study, including their descriptions, the proxies chosen for analysis, and the ratios formulated along with their corresponding notations as found in the *Compustat* database. Additionally, to facilitate more effective comparative analysis among banks of different sizes and to enhance the statistical characteristics of the data, the natural logarithm of total assets was used to normalize the

distribution. All variables underwent a 1% Winsorization process, where data points below the 1st percentile and above the 99th percentile were adjusted to reduce the impact of extreme values or outliers on the analysis.

Table 2: variable description

Variable	Description	Proxy	Ratio & Compustat notation
DivAs	Dividend policy	Dividends-to-asset ratio	$(dvc/at)*100$
DivEq	Dividend policy	Dividend-to-Equity ratio	$(dvc/seq)*100$
ROA	Measures profitability	Netincome to asset ratio	$(ni/at)*100$
SIZE	Capture size of the bank	Total asset	$\ln(at)$
AGrowth	Captures bank asset growth.	Asset size at time t minus asset size at time t-1	$\ln(at) - \ln(l.at)$
RETE	Measures retained earnings accumulation	Retained earning per stockholder's equity	$(re/seq)*100$
DEPAS	Measures bank deposit as a percentage of total asset	Deposit to asset ratio	$(dptc/at)*100$
ZScore	Measures riskiness of a bank	ROA plus pstockholders equity over ROA volatility	$\ln((ROA+EA)/sdROA))$, where $EA = (seq/at)*100$
LLPLN	Measures credit riskiness of a bank	Loan loss provision per total loan	$(pll/lg)*100$
MBV	Measure market value of a bank relative to it's book value	Total asset minus stockholders equity plus market capitalisation all over total asset	$(at-seq+MktCap)/at$
Capr1	Measures the bank's equity capital	Bank tier 1 capital	Capr1
gGDP	Captures macroeconomic growth factor	Annual GDP data	$\ln(gGDP) - \ln(l.gGDP)$

For an overview of both the dependent and independent variables used in this research, table 1 below provides a summary of the key statistics. The mean represents the average value of a variable, the minimum shows the lowest recorded value, and the maximum indicates the highest value observed. For example, the Return on Assets (ROA) has a mean of 0.927, meaning that, on average, banks generate a 0.93% return on their assets. However, the minimum value of -0.722 indicates that some banks operate at a loss, while the maximum of 2.542 suggests that some banks achieve high profitability.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DivAs	3694	.285	.225	0	1.189
DivEq	3694	2.686	2.05	0	9.726
ROA	3785	.927	.485	-.722	2.542
SIZE	3785	8.614	1.96	5.538	14.53
AGrowth	3206	.097	.122	-.139	.606
RETE	3763	45.982	30.284	-62.169	118.94
DEPAS	3785	78.137	9.23	39.384	90.584
ZScore	3205	4.261	1.032	1.684	7.536
LLPLN	3745	.233	.428	-.472	2.938
MBV	3769	1.02	.047	.935	1.208
Capr1	3606	12.875	2.833	8.35	23.562
gGDP	3785	2.157	2.101	-2.768	5.945

2.2 Model of the Study

We propose an econometric model to capture the relationship between dividend policy and other control variables as follows:

$$\text{DivA}_i = \beta_0 + \beta_1 \times \text{ROA}_i + \beta_2 \times \text{SIZE}_i + \beta_3 \times \text{AGrowth}_i + \beta_4 \times \text{RETE}_i + \beta_5 \times \text{DEPAS}_i + \beta_6 \times \text{ZScore}_i + \beta_7 \times \text{LLPLN}_i + \beta_8 \times \text{MBV}_i + \beta_9 \times \text{Capr1}_i + \beta_{10} \times \text{gGDP}_i + \mu_t + \alpha_i + \epsilon_{it}$$

$$\text{DivEq}_i = \beta_0 + \beta_1 \times \text{ROA}_i + \beta_2 \times \text{SIZE}_i + \beta_3 \times \text{AGrowth}_i + \beta_4 \times \text{RETE}_i + \beta_5 \times \text{DEPAS}_i + \beta_6 \times \text{ZScore}_i + \beta_7 \times \text{LLPLN}_i + \beta_8 \times \text{MBV}_i + \beta_9 \times \text{Capr1}_i + \beta_{10} \times \text{gGDP}_i + \mu_t + \alpha_i + \epsilon_{it}$$

For every bank i , DivA and DivEq are the dependent variables and represents dividend to asset and dividend to equity ratios respectively. ROA denotes return on asset while SIZE represents the size of the bank. Agrowth is the asset growth of the bank, RETE represent retained earnings and DEPAS is the deposit to asset ratio for the bank. ZScore and LLPLN captures the measure of risk and represent Z-score and loan loss provision, respectively. MBV, Capr1 and gGDP represents, the market to book ratio, tier 1 capital ratio and GDP growth for the bank, respectively. β_0 is the intercept term, while β_1 to β_{10} are coefficients for each independent variable. μ_t , α_i represent time and bank fixed effects, respectively. ϵ_{it} indicate the error term for bank i at time t .

2.3 Regressions

This study employs a Tobit regression model to analyse factors influencing banks' dividend policies. The Tobit model is chosen due to the censored nature of the dependent variables: Dividend to Asset ratio (DivAs) and Dividend to Equity ratio (DivEq). The regression analyses are conducted across various dimensions to capture the multifaceted nature of the factors influencing dividend policies in banks:

Full Regression Analysis (DivAs and DivEq):

Initially, two full regressions are performed. The first uses the Dividend to Asset Ratio (DivAs) as the dependent variable, while the second uses the Dividend to Equity Ratio (DivEq). These regressions include all selected independent variables to assess their overall impact on each type of dividend ratio.

Bank Size-Based Regression:

The data set is then divided into two groups: large banks and small banks. Separate regressions for each group are conducted to explore how bank size influences dividend policy. This segmentation helps identify whether the determinants of dividend policies vary significantly between larger and smaller banking institutions.

Pandemic Period Analysis:

Another regression excludes the years 2020 and 2021 to assess the impact of the COVID-19 pandemic on dividend policies. By comparing results from this regression with those including pandemic years, insights are gained into the pandemic's effects on banks' dividend decisions.

Lagged Independent Variables Regression:

This analysis helps in understanding if the previous years' financial indicators have an impact on the current year's dividend decisions.

Tier 1 Capital-Based Regression:

Finally, the data set is bifurcated based on the Tier 1 capital ratio, creating two subsets: banks with high tier 1 capital and banks with low Tier 1 capital. Separate regressions for each subset are run to evaluate how the financial strength of a bank, as indicated by its Tier 1 capital, influences its dividend distribution policy.

Each regression includes the same independent variables listed in table 1. The results from these varied regression analyses provide a comprehensive understanding of the factors that impact dividend distribution in the banking sector, considering different bank sizes, temporal effects, and capital adequacy scenarios.

4. Discussion of the Results

Table 3: Results

VARIABLES	(1) DivAs	(2) DivEq	(3) DivAs	(4) DivAs	(5) DivAs	(6) DivAs	(7) DivAs	(8) DivAs
ROA	0.0337** * (0.0122)	0.0336 (0.0966)	0.0184 (0.0184)	0.0526** * (0.0128)	0.0353** (0.0177)	0.0395** * (0.0151)	0.0285 (0.0221)	0.0334** * (0.0125)
SIZE	0.0330 0.0866** * (0.0169)	0.0315 0.431*** (0.162)	0.0184 0.0997** * (0.0238)	0.0470 0.0227 (0.0253)	0.0349 0.0846** * (0.0190)	0.0392 0.152*** (0.0198)	0.0281 0.0440 (0.0280)	0.0330 0.113*** (0.0229)
AGrowth	0.0847 - 0.127*** (0.0218)	0.405 - -0.884*** (0.183)	0.0994 - -0.147*** (0.0289)	0.0203 - -0.0682** (0.0294)	0.0836 - -0.137*** (0.0277)	0.151 0.0794** * (0.0253)	0.0434 - -0.126*** (0.0364)	0.111 0.0974** * (0.0241)
RETE	0.00117* ** (0.00027 0)	0.00759* ** (0.00293)	0.00149* ** (0.000387)	0.00114* ** (0.000376)	0.00119* ** (0.000306)	0.000433 ** (0.000272)	0.00121* ** (0.000402)	0.00110* ** (0.000312)
DEPAS	0.00114 0.0282** 0.000800 (0.00088 8)	0.00712 0.0282** * (0.00869)	0.00148 0.00739* 0.00190* (0.00114)	0.00102 -0.000227 -0.000253 (0.00150)	0.00118 5 3.70e-05 (0.00106)	0.000429 0.000595 0.000600 (0.000903)	0.00119 0.00123 0.00124 (0.00147)	0.00109 -0.000412 -0.000416 (0.00114)
ZScore	0.000782 0.00220 (0.00285)	0.0265 -0.0261 (0.0254)	0.00190 * (0.00345)	-0.000227 -0.00395 (0.00486)	5 -0.000751 (0.00324)	0.000595 0.000790 (0.00331)	0.00123 0.00267 (0.00438)	-0.000412 0.00393 (0.00410)
LLPLN	0.00215 0.0389** * (0.0108)	-0.0245 0.256*** (0.0961)	0.00737 0.0446** * (0.0153)	-0.00354 -9.66e-05 (0.0155)	-0.000742 0.0309* (0.0172)	0.000784 -0.00743 (0.0121)	0.00264 * (0.0156)	0.00389 0.0440** * (0.0139)
MBV	0.0381 0.794*** (0.147)	0.240 10.12*** (1.355)	0.0445 0.703*** (0.194)	5 1.083*** (0.182)	0.0305 0.756*** (0.182)	-0.00737 0.328** (0.158)	0.0420 0.896*** (0.205)	0.0435 0.809*** (0.199)
	0.776	9.503	0.702	0.969	0.747	0.325	0.886	0.801

		-						
		0.0950**				0.00747*		
Capr1	0.00123	*	0.00124	0.000381	0.00292	**	0.00204	-7.86e-05
	(0.00244)	(0.0205)	(0.00459)	(0.00262)	(0.00296)	(0.00246)	(0.00405)	(0.00359)
								-
								0.000077
gGDP	0.00121	-0.0892	0.00124	0.000341	0.00288	0.00741	0.00201	8
	0.0152	0.884***	0.00185	0.0485*	0.0133	-0.237***	0.0513**	-0.0169
	(0.0164)	(0.168)	(0.0222)	(0.0280)	(0.0179)	(0.0579)	(0.0230)	(0.0225)
	0.0148	0.830	0.00184	0.0434	0.0131	-0.235	0.0507	-0.0167
Observatio								
ns	2,958	2,958	1,594	1,364	2,226	2,466	1,434	1,524
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents the results of eight different regressions. For each variable, the first row shows the regression coefficient, the second row indicates the standard error, and the third row represents the marginal effect. Column: (1) full regression (with DivAs) (2) full regression (with Div Eq) (3) large banks (4) small banks (5) excluding pandemic years (2020 & 2021) (6) with lagged independent variables (7) high tier 1 capital (8) low tier 1 capital

Table 3 presents the results of eight unique regressions analysing the determinants of banks' dividend policies. The results in (1) show that return on assets (ROA) significantly boosts dividend payouts (DivAs). A one percentage point rise in ROA is associated with an increase of about 0.0330 percentage points in dividends, indicating a strong positive correlation between profitability and dividend distribution. This suggests that more profitable banks generate higher free cash flows, allowing them to distribute dividends without jeopardizing their financial stability.

Bank size also positively influences dividend payouts. Each percentage point growth in bank size leads to an approximate 0.0847 percentage point rise in the dividend-to-asset ratio, implying that larger banks tend to distribute more dividends. This aligns with the Fama-French hypothesis, as larger banks often have more stable earnings, lower growth prospects, and easier access to external financing, reducing the need to retain earnings. Conversely, asset growth (AGrowth) presents a negative effect, with a one percentage point increase leading to a 0.124 percentage point decrease in the dividend-to-asset ratio. This suggests that rapidly growing banks prioritize reinvestment over dividends, as they require retained earnings to finance expansion and maintain regulatory capital requirements. These results align with Lepetit et al. (2018).

Retained earnings (RETE) exert a significantly positive effect on dividend payouts, with a one percentage point increase raising dividends by approximately 0.00114 percentage points. This supports the lifecycle theory, as mature banks with accumulated earnings are more likely to distribute dividends. The findings are consistent with DeAngelo, DeAngelo, & Stulz (2006) and Fairchild, Guney, & Thanatawee (2014), who suggest that firms with high retained earnings have lower reinvestment needs and can afford consistent dividend payments.

The deposit-to-asset ratio (DEPAS) has a positive but relatively marginal effect on dividend payouts, increasing the dividend-to-asset ratio by about 0.000782 percentage points per percentage

point increase in deposits. While higher deposits provide more liquidity, their limited impact on dividends suggests that banks prioritize using these funds for lending rather than immediate shareholder distribution. This finding aligns with Forti & Schiozer (2015), who noted a direct but weak relationship between bank deposits and dividend payments.

Consistent with Onali (2014), the Z-Score, an indicator of risk, has a minor but positive effect on dividend payouts. Specifically, a one percentage point increase in the Z-Score leads to a 0.00215 percentage point rise in the dividend-to-asset ratio (DivAs), suggesting that banks with lower risk profiles tend to slightly favour higher dividends. This result is likely due to the fact that financially stable banks, as reflected by a higher Z-Score, have greater confidence in maintaining consistent dividend payments without jeopardizing their solvency. Since these banks face lower regulatory scrutiny and reduced market discipline pressures, they may have more flexibility in distributing earnings to shareholders.

However, the absence of a negative correlation between the Z-Score and dividend payouts indicates that risk-shifting behaviour is not evident in these banks. If risk-shifting were present, we would expect riskier banks (i.e., those with lower Z-Scores) to increase dividends as a strategy to transfer wealth from creditors to shareholders. The lack of such a pattern suggests that banks with higher risk do not necessarily use dividends as a tool for risk-shifting, possibly due to stricter regulatory constraints or a heightened focus on capital retention to cushion against potential financial distress.

Interestingly, loan loss provisions (LLPLN), another measure of risk—specifically credit risk—show a significant positive relationship with dividend payouts. A one percentage point increase in LLPLN corresponds to a 0.0381 percentage point rise in the dividend-to-asset ratio. This finding implies that banks with higher provisions for loan losses, which typically indicate greater exposure to risky loans, paradoxically pay higher dividends. One likely explanation is that these banks may use dividend payouts as a signalling mechanism to reassure investors about their financial stability, despite deteriorating loan quality. By maintaining or increasing dividends, they might aim to counteract negative market perceptions arising from higher loan loss provisions. This aligns with Pugachev (2022), who finds a positive correlation between risk-shifting and dividend payouts, suggesting that some banks may prioritize short-term shareholder returns over long-term stability.

Contrastingly, Turner, Ye, and Zhan (2013) find no support for the risk-shifting theory, which may be attributed to differences in regulatory environments, capital structures, or investor expectations across banking sectors. In more tightly regulated banking systems, the ability of distressed banks to engage in risk-shifting through dividends may be limited, as regulators impose stricter capital retention requirements. This divergence in findings highlights the complex interplay between risk management, regulatory oversight, and dividend policy in the banking sector.

The market-to-book ratio (MBV) shows a significant positive correlation with dividend payouts, with a one percentage point increase leading to a 0.776 percentage point rise in dividends. This supports the signalling theory, suggesting that banks with higher market valuations use dividends to convey financial strength and stability to investors. Forti & Schiozer (2015) also found support for signalling but through deposits rather than dividends.

Tier 1 capital (Capr1) and GDP growth show a slight positive effect on dividends. A one percentage point increase in Capr1 leads to a marginal 0.00121 percentage point increase in the dividend-to-asset ratio, while GDP growth has a slightly stronger effect, increasing dividends by 0.0148

percentage points. This suggests that banks with stronger capital buffers and those operating in growing economies have greater flexibility to distribute dividends. The findings align with Romus et al. (2020), who concluded that GDP growth positively impacts dividend policy by improving bank profitability and stability.

When the dividend-to-equity ratio (DivEq) is used instead of DivAs (column 2), the impact of ROA, while still positive, becomes insignificant. This could indicate that profitability influences dividend payouts relative to total assets rather than equity. The deposit-to-asset ratio turns positive and significant, suggesting that banks may rely more on deposit funding to support dividends. There is also marginal evidence of risk-shifting, as indicated by the negative correlation of the Z-Score with dividends, implying that some riskier banks may use dividends strategically. Additionally, while Tier 1 capital has a small positive effect on DivAs, it shows a substantial negative impact on DivEq, suggesting that highly capitalized banks may prioritize stability over shareholder returns. GDP growth has a stronger effect on DivEq, reinforcing the idea that economic expansion enhances dividend capacity.

Comparing regression results for DivAs between large banks (3) and small banks (4) shows that ROA has a stronger impact on small banks' dividend policies. This suggests that smaller banks rely more on profitability to determine dividends, whereas larger banks have diversified income sources that make them less sensitive to short-term profits. The deposit-to-asset ratio positively affects large banks' dividends but has a negligible negative impact on small banks, possibly because larger banks attract more stable deposits that facilitate higher payouts. The Z-Score shows contrasting effects: slightly positive for large banks but negative for small banks, indicating that smaller banks may engage in risk-shifting more than larger banks. A similar pattern emerges for LLPLN, where larger banks exhibit a positive correlation with dividends, suggesting a high disincentive for risk-shifting. GDP growth influences small banks more than large banks, implying that smaller institutions are more sensitive to macroeconomic changes.

Excluding the pandemic years (2020–2021) (column 5) yields results largely consistent with the full sample. However, profitability, asset growth, and risk profile exhibit slightly stronger effects, suggesting that the crisis period introduced additional uncertainties that affected dividend decisions. Meanwhile, bank size and market valuation maintained consistent influence, implying that these structural factors remained stable throughout the period.

Comparing unlagged (1) and lagged (6) independent variables shows that past profitability (ROA) has a stronger influence on current dividends, indicating that banks base dividend decisions on historical earnings stability. Bank size has a much larger impact when lagged, suggesting that sustained growth over time enhances dividend capacity. The Z-Score has a minor positive impact in both cases but is stronger with current values, indicating that present risk perceptions influence dividend policies more than past risks. Interestingly, LLPLN has a positive impact in the current period but turns negative when lagged, suggesting that while banks may initially compensate for risk with higher dividends, prolonged credit risk pressures force them to cut payouts later. Market valuation has a stronger current effect, while the impact of Tier 1 capital is more evident in the past, implying that historical capital adequacy plays a greater role in dividend decisions. Notably, GDP growth shows a delayed negative effect, suggesting that past economic conditions may have long-term constraints on dividend payouts.

Comparing banks with high (7) and low (8) Tier 1 capital reveals that profitability has a slightly greater impact on dividend policies in low-capital banks, indicating that these banks rely more on

earnings to justify dividends. Bank size has a stronger effect in low-capital banks, suggesting that their dividend decisions are more influenced by structural factors. Asset growth negatively impacts dividends in both groups but is more pronounced in high-capital banks, possibly because these banks prioritize financial stability. Retained earnings have a positive impact in both groups but are slightly stronger in high-capital banks, reinforcing the lifecycle theory. The deposit-to-asset ratio positively influences dividends in high-capital banks but has a slightly negative effect in low-capital banks, suggesting different liquidity management strategies. Market valuation significantly impacts both groups, while GDP growth positively affects high-capital banks but negatively influences low-capital banks, indicating different sensitivities to macroeconomic conditions.

5.0 Conclusion

This research provides an analysis of the factors influencing dividend policies in the banking sector, integrating theoretical insights and empirical data to explore how internal and external dynamics shape dividend decisions. Our study utilizes a robust econometric model to assess the impact of bank-specific characteristics such as size, profitability, and growth, alongside macroeconomic factors and regulatory environments, on dividend payout strategies, which serve as an indicator of financial stability, boost investor confidence, and influence regulatory compliance.

The findings underscore the relevance of foundational theories such as the Fama and French model, which links dividend payouts to bank size and profitability, and the Lifecycle theory, highlighting the different dividend policies of banks based on their maturity stages. The study also provides new insights into the influence of regulatory pressures and macroeconomic conditions, with banks adjusting their dividend policies in response to changes in GDP growth and capital adequacy requirements. One of the most striking results is the significant role of bank-specific factors in determining dividend payouts. Larger and more profitable banks tend to distribute more dividends, which supports the Signalling theory's premise that dividends act as a signal of financial health to the market. Conversely, banks with high asset growth rates often prioritize reinvestment over dividend distribution, aligning with the Lifecycle theory. Furthermore, the analysis during the pandemic period offers valuable insights into how extraordinary economic disruptions affect dividend policies. The findings suggest that banks may adjust their strategies significantly in response to such disruptions, indicating the need for flexible dividend policies that can adapt to rapidly changing economic landscapes. This work not only corroborates several established theories regarding dividend policies in the banking sector but also highlights the complex interplay between various determinants. For policymakers, understanding these dynamics is crucial for designing regulations that ensure financial stability without stifling growth. For bank managers and investors, the insights provided here offer a deeper understanding of the strategic considerations behind dividend distributions.

5.1 Suggestions for further studies

Future research would consider a cross-country comparative analysis to explore how different regulatory environments and economic conditions affect dividend policies, specifically extending the scope to include Nigerian banks. Investigating the impact of technological innovations, such as fintech, and the influence of behavioural finance theories could provide valuable insights into contemporary financial strategies. Additionally, incorporating ESG factors, sectoral differences, and the role of risk management practices and regulatory changes would enrich the understanding of dividend policies. Employing alternative econometric models and a dual approach that examines

both micro and macro-level factors could validate and extend the current findings. By addressing these areas, future research can build on the findings of this study, providing a more detailed and comprehensive understanding of the multifaceted nature of dividend policies in the banking sector.

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