FACTORS INFLUENCING DIVIDEND PAYOUT POLICY DECISIONS OF NIGERIAN LISTED FIRMS

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Abstract

Dividend policy is primarily concerned with the decision regarding the distribution of a firm's profit between dividend and retention. The determinants of this important financial decision have been a subject of debate among financial management researchers for over six decades. This study examines the determinants of dividend policy decisions of twenty-five non-financial firms listed on the Nigerian Stock Exchange between 1997 and 2011. Panel data methodology was employed, while fixed and random effects models were used as estimation techniques. Result reveals that profitability, firm size, leverage and changes in the dividend payout are significant factors that affect dividend policy decisions of the sampled firms during the period of the study. It is hereby recommended that profitability, size, leverage and changes in dividend payout should be considered by Board of Directors of listed firms in Nigeria when designing their dividend payout policy decisions. The outcome of this study lends support for profitability, agency cost and signaling hypotheses of dividend policy.

Keywords: Determinants, Dividend payout, Agency cost, Signaling, Profitability

INTRODUCTION

A business outfit that makes profit from its operation at the end of the financial year is expected to make a decision concerning the portion of the profit to be distributed to the providers of funds (equity shareholders) as dividend and the portion to be retained for future re-investment. This is a significant managerial decision. A bad decision made by the management of corporation may in turn affect the future market value of the firm.

Dividend policy, according to Lease, John, Kalay, Lowenstein and Sarig (2000), refers to the practice that management follows in making dividend payout decision or, in other words, the size and pattern of cash distributions over time to shareholders. Dividend payout policy decision is one of the controversial issues in Financial Management, Corporate Finance and Financial Economics. The seminal work of Miller and Modigliani (1961) provided the foundation for the study of dividend policy in modern era. Miller and Modigliani (1961) posit that under certain perfect market conditions, dividend policy decision is irrelevant. This position has been challenged by some other writers through relaxation of some of the perfect market conditions as enunciated by Miller and Modigliani (1961)'s proposition. They indeed found that dividend payout policy decision matter. More than five decades on, consensus is yet to be reached on dividend policy decision studies.

It is worthwhile to note that most of the studies on dividend policy were conducted in the developed economies. Limited studies exist in the developing/ emerging economies (especially in Nigeria), thereby creating a huge knowledge gap. To our knowledge, earlier studies on dividend policy in Nigeria were made by Soyode (1975), Oyejide (1976), Odedokun (1995), Izedonmi and Eriki (1996), Adelegan and Inanga (2001), Adelegan (2002), Adelegan (2003) and Musa (2009). However, the lack of clarity about the determining factors of dividend policy decision in a developing economy like Nigeria is the motivating factor for this study.

The present study intends to reduce the knowledge gap by investigating the factors that determine the dividend payout policy decision of 25 listed non-financial firms in Nigerian business environment.

The rest of the paper is organized as follows: section 2 deals with literature review while in section 3 the methodology of the study is examined. Section 4 presents the results and discussion and section 5 concludes the study.

Objective of the study

The primary objective of this study is to examine the factors that determine the dividend policy decision of 25 listed non-financial firms in Nigeria for the period 15-year period, 1997-2011.

LITERATURE REVIEW

Theoretical framework

Since the seminal work of Miller and Modigliani (1961) dividend irrelevance hypothesis, a large number of theories have been developed, each tried to relax the variables of perfect market situation as suggested by Miller and Modigliani (hereafter refers to MM). Some of these notable theories (or better still hypotheses) are as discussed in Kajola, Adewumi and Oworu (2015) and are represented here:

MM Irrelevance Hypothesis: MM in their 1961 paper suggested that under certain assumptions about perfect capital market, dividend policy decisions being adopted by a firm will not affect its rate of returns and market value. They argued that regardless of how the firm distributes its income, the market value of the firm will not be affected because its value is determined by its basic earning power and its investment decision. By implication, according to their proposition, the firm shareholder will be indifferent if faced with the options of either to accept dividend now or selling the securities later to earn capital gains. Although it is extremely difficult to prove the proposition empirically, there exist in the literature some empirical studies that have been conducted and which provided evidence in support of the MM hypothesis. Black and Scholes (1974) examined the relationship between dividend yield and stock returns of common stocks listed on the New York Stock Exchange for the period 1936- 1966. Their results showed that the dividend yield coefficient was not significant either for the entire period or for any of shorter sub-periods. The results simply revealed that neither high-yield nor low-yield dividend payout seemed to influence stock prices (market values). Studies conducted by Miller (1986) and Bernstein (1996) also provided evidence in support of MM proposition.

Bird-in-hand Hypothesis: This hypothesis opined that increase dividend payout decisions affect firm value positively. This has been the belief of academics and practitioners long before the MM proposition of 1961. The proponents of this hypothesis argued that due to existence of market imperfections and uncertainty, dividends are valued differently from capital gains. Hence, investors would prefer the "bird-in-hand" (cash dividends) to "two-in-the-bush" (future capital gains). Although this hypothesis has been challenged by many researchers, yet it has received support from studies conducted by Lintner (1962), Walter (1963) and Gordon (1963).

Tax Preference Hypothesis: This hypothesis predicted that low-dividend payout ratios lower the rate of returns, which ultimately increases the market value of the firm and vice versa. It argued that the influence and treatment of taxes might have effect on income to be distributed by a firm. In most countries the tax rates which apply to dividends differ from capital gains tax rate. Hence, investors in different tax bracket will have different perception regarding whether to accept cash dividends or obtain capital gains (through disposal of the securities). For instance,

according to the hypothesis, investors in high tax bracket might require higher pre-tax risk adjusted premium returns to hold stocks with higher dividend yield. Empirically, studies conducted by Litzenberger and Ramaswamy (1979, 1982), Poterba and Summers (1984) and Kalay and Michaely (2000) provided evidence in support of tax preference hypothesis.

Clientele Effects Theory: This theory suggested that investors/ clienteles are affected differently by dividend policy decisions adopted by firms. While some investors will prefer companies that pay significant amount of their earnings in form of dividends, other group of investors may prefer the ones that retained higher proportion of their earnings. The different tax treatment of dividends and capital gains is considered as an important factor in investors having different behaviours toward dividends and capital gains. For instance, firms that pay a large amount of their earnings as dividends will attract a client that prefers high dividend, while those in high-tax bracket will prefer firms that pay low dividends (or no dividends) and favour capital gains. Support for this theory include the works of Pettit (1977), Denis, Denis and Sarin (1994), Dhaliwal, Errickson and Trezevant (1999), Allen, Bernado and Welch (2000), Seida (2001) and Short, Zhang and Keasey (2002).

Agency Cost Hypothesis: In today's corporate world, principal-agency relationship exists between the company's shareholders (principal) and managers (agents). The managers are expected to act in the best interest of the shareholders at all times. In many cases, however, the hypothesis posited that managers tend to act in a way that is detrimental to the interest of the shareholders (for instance, by investing in negative NPV projects, by increasing their perquisites, etc). The hypothesis suggested that payment of dividends can be used to mitigate this agency costs in two ways. Firstly, by paying dividends the firm will also have the opportunity to access additional funds from the capital market. This will make it possible for the new investors, stakeholders and the general public to scrutinize the financials of the firm, thereby reducing the agency cost. Secondly, paying dividends will reduce the amount of excess fund available to managers which may not be utilized in the best interest of the owners of the business (shareholders). Studies conducted by Rozeff (1982), Lloyd, Jahera and Page (1985), Jensen (1986), Demsey and Laber (1992), Jensen, Solberg and Zern (1992), Gaver and Gaver (1993) and Al-Malkawi (2005) were consistent with this hypothesis.

Signaling Hypothesis: This hypothesis indicated that dividend announcements have valuable information, known as signals, relating to future earnings of the firm. An increase in the level of dividend payout, according to this hypothesis, sends a positive signal to the investors and the general public that the future earnings of the firm is bright. The reverse is the case for a firm that reduces its dividend payout or did not even pay dividends. For the signal to be significant, the hypothesis suggested that the signal being sent by the firm through dividend

announcements should be true. Thus, a bad firm (with low-or no dividend payout) should not be able to mimic a good firm (with high or increase payout) by declaring high dividend. The cost of the mimic should be high in order to discourage the bad firm from passing bad signal to the market. Pettit (1977), Asquith and Mullins (1983), Michaely, Thaler and Womack (1995), Nissim and Ziv (2001), Travlos, Trigeorgis and Vafeas (2001) and Bali (2003) provided evidence consistent with the prediction of this hypothesis.

Related empirical studies on determinants of dividend policy

The financial management literature has a body of large empirical studies that have been conducted so far on factors that determine dividend policy decisions of corporate organizations. The under listed are recent studies.

Amidu and Abor (2006) examine the determinants of dividend policy in Ghana. Results show a positive association between the dividend payout ratio on one hand and cash flows, profitability and corporate tax. It further show that highly liquid firms pay more dividends. On the other hand, negative relationship was found between growth, market to book value, risk and payout ratio.

Al-Malkawi (2008) examines the determinants of corporate decisions of listed firms in Jordan. Results suggest that factors that affect dividend policy in developed stock markets seem to apply in Jordan, an emerging market. Specifically, the study shows a positive relationship between dividend policy on one hand and size, profitability and age on the other. It however shows a negative relationship with financial leverage.

Al-Kuwari (2009) investigates the determinants of dividend policies of firms listed on the Gulf Co-operation Council (GCC) countries' stock exchanges for the period 1999 to 2003. Seven hypotheses pertaining to agency cost theory were investigated using a series of random effect Tobit models. The results suggest that the main characteristics of firm dividend payout are that dividend payments related strongly and directly to government ownership, firm size and firm profitability but negatively to the leverage ratio. It further indicates that firms pay dividends with the intention of reducing the agency problem and maintaining firm reputation, since the legal protection for outside shareholders was limited.

Musa (2009) utilizes the parsimonious multiple regression model to investigate the dividend policy of 53 firms quoted on the Nigerian Stock Exchange during the period 1993 to 2002. The model employ five metric variables (previous dividend, current earnings, cash flows, investment and net current assets) and three non-metric variables (growth, firm size and industry classification) in order to explain and predict the dividend policy of the firms. The results reveal that all the five metric variables have significant aggregate impact on the dividend policy

of the firms, and none of the three non-metric variables provides a statistically significant improvement to the base model.

Al-Shubiri (2011) explores the factors that determine the dividend policies of 60 industrial firms listed on the Amman Stock Exchange for the period 2005- 2009. Using both Tobit and Logit regression analyses, the study conclude that the dividend policy in Jordan as a developing country is influenced by factors similar to those relating to developed countries. Specifically, the results show that leverage, institutional ownership, business risk and asset structure are negatively related with dividend payout ratios. More so, profitability, growth opportunity and free cash flow are positively related to dividend payout.

Marfo-Yiadom and Agyei (2011) study the determinants of dividend policy of banks in Ghana covering the five-year period 1999-2003. The results show that profitability, debt, changes in dividend and collateral capacity are the statistically significant factors which positively influence dividend policy of banks in Ghana. The results further indicate that growth and age influence bank dividend policy negatively and significantly.

Michaely and Roberts (2011) investigate dividend policies of publicly and privately held firms in order to shed light on the behaviour of privately held companies. The results show that private firms smooth dividends significantly less than their public counterparts, suggesting that the scrutiny of public capital markets play a central role in the propensity of firms to smooth dividends over time. It further shows that public firms pay relatively higher dividends that tend to be more sensitive to changes in investment opportunities than otherwise similar private firms. Ownership structure and incentives are found to play key roles in shaping dividend policies.

Alam and Hossain (2012) examine the dividend policy of UK companies listed in London Stock Exchange. The study reveals that leverage, profitability, market capitalization influence the dividend rate positively, whereas liquidity and growth have negative impact on dividend payout ratio. With respect to Bangladeshi companies, liquidity, leverage, profitability and market capitalization influence the dividend rate negatively, while growth affect positively.

Islam, Aamir, Ahmed and Saeed (2012) examine the determinants and motivators of dividend policy of 8 selected cement firms in Pakistan for the period 2004-2009. Results indicate that P/E ratio, EPS growth and sale growth are positively associated with the dividend payout while profitability and debt to equity are found to have negative association with dividend payout.

El-Essa, Hameedat, Altaraireh and Nofal (2012) study some factors that affect dividend policy decisions of industrial corporations listed in Amman Stock Exchange from 2005 to 2011. The study find a positive relationship between dividends and net cash flows, earnings before interest and tax, earning per share, price to book value ratio, dividend yield and firm size. The

study further finds a negative relationship between dividends and debt ratio. The final result indicates that large firms have a greater impact on dividends policy decisions than small firms.

Fakhra, Sajid, Muhammed, Shafiq and Madiha (2013) investigate the determinants of dividend policy of 100 firms listed on Karachi Stock Exchange over the period 2007-2009. Using both OLS and Probit model, results show that liquidity, leverage, earnings per share and size are positively related to dividend, whereas growth and profitability are found to be insignificant determinants of dividend policy.

Nnadi, Wogboroma and Kabel (2013) explore the existing theoretical literature on dividend policy as it affects 29 stock exchanges in Africa. The study finds similarities in the determinants of dividend policy in African firms with those in most developed economies. In particular agency costs are found to be the most dominant determinant of dividend policy among African firms. Other factors such as level of market capitalization, age and growth of firms, as well as profitability also play key roles in the dividend policy of listed African firms.

Badu (2013) examines the determinants of dividend payout policy of listed financial institutions in Ghana. Panel data covering 2005- 2009 from the selected companies were used for the study. Using fixed and random effects to estimate the coefficient of the explanatory variables, the results show statistical significant and positive relationship between age and liquidity but saw statistical insignificant relationship between profitability, collateral and dividend payment.

Osegbue, Ifurueze and Ifurueze (2014) analyze the relationship between dividend payout and corporate performance of Nigerian listed banks for the period 1990 – 2010. Results indicate that there is no significant relationship between dividend payout of the banks and all the explanatory variables (free cash flow, current profitability, financial leverage, business risk and tax paid used in the study.

Movalia and Vekariya (2014) study the determinants of dividend policy and its impact on dividend of 30 listed companies under S&P BSE SENSEX for the period 2010-2014. By using regression and Durbin Watson statistics, result reveals that profitability, leverage, growth rate, rate of return and dividend payout have impact on dividend. It also show that majority of the companies under the study is following constant dividend payout policy.

Baah, Tawiah and Eric (2014) examine the industry sector determinants of dividend policy and its effect on share prices of 12 companies (covering 6 different sectors) listed on the Ghana Stock Exchange for the period 2006-2011. Findings show that the main determinants of dividend policy for companies listed on GSE are return on equity, profit after tax and size of the companies. It also reveals that most of the firms, however show statistically insignificant and weak relation between their dividend payout and share price.

Kumar and Waheed (2015) examine the determinants of dividend policy in GCC market based sample firms in United Arab Emirate. In all, 120 companies were involved for the 3-year period, 2011-2013. Using partial least squares structural equation modeling to test the hypothesis, results reveal support for residual theory and pecking order argument of dividends. Specifically, growth and liquidity are important determinants of dividend policy of the sample firms during the period of study.

METHODOLOGY

Research Design

This study is empirical in nature and data derived from secondary source only. Specifically, data required for this study were collected from the following sources: annual published financial reports of the 25 listed non-financial firms for the 15-year period covering 1997-2011; the Nigerian Stock Exchange Fact Books; and Securities and Exchange Commission Annual Reports.

Population and sample

The population of the study consists of 102 firms that were listed at the beginning of 1997. The 25 firms that make up the sample were purposeful selected from the total population. Financial firms were excluded because of their peculiar characteristic. More importantly, small firms were not used in the sample selection because of difficulties in accessing their financial reports, as a result of the fact that they were mainly unlisted and being privately controlled.

Variable description and hypotheses

Profitability: This is considered to be one of the prime factors that determine dividend policy of a firm. Section 379 of the Nigerian Companies and Allied Matters Act 2004 specifically states that dividends are payable only out of distributable profits of the company. It is argued that a firm with huge profit is expected to pay more dividends than another firm with less profit (Baker and Powell, 2000, Eriostis and Vasiliou 2003, Al-Malkawi, 2007, Ahmed and Javid, 2009 and Badu, 2013). The relationship between profitability and dividend payout is expected to be positive. Thus, the following alternative hypothesis is to be tested:
H1: There is a positive relationship between profitability and dividend payout.

Liquidity: This is considered as an important determinant of dividend policy. This is because liquidity is related to cash payment. Legally, firms are expected to pay dividends when they are

liquid. A positive relationship is expected between a firm's liquidity position and dividend payout, hence the need to test the following alternative hypothesis:

H2: There is a positive relationship between liquidity and dividend payout.

Tangibility: It is argued by the proponents of Agency cost theory that firms with more tangible assets have greater tax benefits without relying on debt and therefore might be more inclined to use dividend policy to influence asymmetry and agency costs. Tangibility is expected to have a positive relationship with dividend payout (Bradley, Jarell and Kim, 1984 and Badu, 2013). The following alternative hypothesis is hereby tested:

H3: There is a positive relationship between asset tangibility and dividend payout.

Growth opportunity**:** Gavers and Gavers (1993), Chang and Rhee (2003) and Chen and Dhiensiri (2009) suggest that the higher the growth opportunities, the more the need to finance expansion and the more the likely the firm is to retain earnings than pay them as dividends. A negative relationship is expected between growth opportunity and dividend payout. The following alternative hypothesis is to be tested:

H4: There is a negative relationship between growth opportunity and dividend payout.

Size: A firm's size has capacity to influence the dividend policy of the firm. A large firm is considered to be matured and has easy access to the capital market than a small firm. Hence, it is expected to have the capacity to pay more dividends than a small firm. This position is confirmed by Chang and Rhee (2001), Ho (2003) and Aivazian, Booth and Cleary (2003). A positive relationship between firm size and dividend payout is expected. This will require the testing of the following alternative hypothesis:

H5: There is a positive relationship between size and dividend payout.

Leverage: This is considered a key factor which determines the dividend policy of firms. The Agency cost theory provides explanation for the relationship between leverage and dividend payout. It argues that firms with high leverage ratios have high transaction costs and are in a weak position to pay higher dividends to avoid the cost of external financing. Al-Kuwari (2009) and Al-Shubiri (2011) provide empirical support to the assertion above. Kowalewski, Stetsyuk and Talavera (2007) argue that more indebted firms prefer to pay lower dividends. It is therefore expected that the relationship between leverage and dividend payout is negative. The following alternative hypothesis is required to be tested:

H6: There is a negative relationship between leverage and dividend payout.

Changes/ volatility in dividend payout: Dividend payment by a firm does not solely depend on current earnings but also on previous earnings and dividend paid during those periods (see Pruitt and Gitman, 1991). Although, some firms may indulge in dividend smoothening because of its negative signal to the market if it decides to cut down the dividend to be paid in the current year; the amount to be declared in the current year still have bearing on what was paid in the previous period. A negative relationship between changes or volatility in dividend payout and dividend payout is expected. The present study seeks to test the following alternative hypothesis:

H7: There is a negative relationship between dividend volatility and dividend payout.

Table 1: Measurement of variables

Variable	Abbreviation	Description
Dividend Payout Policy	DVP	$\dfrac{\text{Dividend paid}}{\text{Profit After Tax}}$
Profitability	PROF	$\dfrac{\text{Earnings Before Interest and Tax}}{\text{Total Assets}}$
Liquidity	LIQ	$\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$
Tangibility	TANG	$\dfrac{\text{Fixed Tangible Assets}}{\text{Total Assets}}$
Growth opportunity	GO	Change in the natural log of Sales
Size	SIZ	Log of Sales
Leverage	LEV	$\dfrac{\text{Total Debts}}{\text{Total Debts + Total Equity}}$
Dividend volatility	DVO	Changes in dividend payout ratios

Model specification

The study adopts a panel methodology (which combines simultaneously time series with cross-sectional data). Specifically, the model used in this study is as stated in equation 1:

$$DVP_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 LIQ_{it} + \beta_3 TANG_{it} + \beta_4 GO_{it} + \beta_5 SIZ_{it} + \beta_6 LEV_{it} + \beta_7 DVO_{it} + e_{it} \quad (1)$$

EMPIRICAL RESULTS AND DISCUSSIONS

Descriptive Statistics

Table 2 presents the descriptive statistics of all the variables used in the study. From the table we observe that the average dividend payout by the sampled firms during the period of study was about 42.89% (approximately 43 kobo per share). The mean profitability was about 6.56%. The average liquidity of the firms was 1.452 (which is less than the generally acceptable value of 2:1). Asset tangibility, which measured the ratio of fixed (non-current) assets to total assets value of 0.3592, indicated that on the average about 36% of the total assets was represented by

the fixed (non-current) assets. The average debt in the capital structure of the sampled firms was 30.63%. This shows that these firms were low geared, although, few of the firms could be categorized as highly geared firms as shown by the maximum value of 99.8%.

Table 2: Descriptive statistics (E-View 7.0 output)

	Mean	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
DVP	0.4289	0.0000	11.3710	0.7362	9.7058	135.0960
PROF	0.0656	-0.3340	0.5080	0.0802	0.0331	8.5384
LIQ	1.452	0.2720	7.9940	0.8060	3.598	20.473
TANG	0.3592	0.0070	10.4400	0.5547	16.0754	292.4334
GRW	0.0639	-0.8750	0.7740	0.1106	-0.4154	21.8187
SIZE	9.6190	0.1330	11.3330	0.9326	-2.6981	29.7796
LEV	0.3063	0.0000	0.9980	0.2733	0.3950	1.8938
DVO	-0.0029	-11.3710	10.9810	0.9796	-0.3147	92.9873

From Table 3 we observe that there is a positive and significant correlation between dividend payout policy and two explanatory factors (profitability at 10% level and dividend volatility at 1%). On the other hand, there is insignificant association between the dividend payout ratio and the other five factors (size, growth opportunity, leverage, tangibility and liquidity). The table also shows minimal level of multicollinearity among the variables.

Correlation Analysis

Table 3: Pearson's correlation matrix of the variables

	DVP	PROF	SIZE	GRW	LEV	DVO	TANG	LIQ
DVP	1.000							
PROF	0.094* (0.068)	1.000						
SIZE	0.077 (0.136)	0.198*** (0.000)	1.000					
GRW	-0.010 (0.843)	0.159*** (0.002)	0.113** (0.029)	1.000				
LEV	0.021 (0.679)	-0.518*** (0.000)	-0.067 (0.198)	-0.061 (0.237)	1.000			
DVO	0.657*** (0.000)	0.045 (0.388)	0.007 (0.889)	0.029 (0.575)	-0.017 (0.738)	1.000		
TANG	-0.043 (0.429)	-0.012 (0.821)	-0.399*** (0.000)	-0.014 (0.791)	-0.069 (0.185)	-0.014 (0.791)	1.000	
LIQ	-0.001 (0.991)	0.209*** (0.000)	-0.238*** (0.000)	0.095* (0.065)	-0.449*** (0.000)	0.002 (0.962)	-0.033 (0.525)	1.000

*, ** and *** indicate significant at 10%, 5% and 1% levels, respectively.

Correlation matrix only shows association between variables and not the strength of the relationship; hence its outcomes cannot be used to make inferences. It in this regard that we prepare the pooled Ordinary Least Squares (OLS), which is one of the best methods in establishing a test of relationship between the dependent variable and explanatory variables.

Regression results

From Table 4 (Simple pooled OLS results), we observe that there is a positive and significant relation between Dividend payout policy (DVP) of the sampled firms with four determinants (profitability, size, leverage and dividend volatility. The table further reveals a low Durbin-Watson value of 0.8674. This implies that the simple pooled OLS estimation technique is not strong enough to explain the relationship between the dependent and explanatory variables. A better estimation technique, which will provide a robust result, is therefore needed.

In line with the position of Marfo-Yiadom and Agyei (2011) and Dawood et al (2011), Least Squares with Fixed effects model and Random effects model where lagged values are not included among the regressors are applied. This will help to alleviate the endogeneity problem that may occur due to omitted variables, measurement error of explanatory variable or reverse causality between the dependent variable and the explanatory variables.

Table 4: Simple pooled OLS results

Dependent variable: DVP

Variable		Co-efficient	t-stat	prob
Constant		-0.386	0.964	0,336
PROF		0.9710**	2.2670	0.0240
LIQ		0.0470	1.0850	0.2790
TANG		0.0110	0.1910	0.8480
GRW		-0.3530	-1.3350	0.1830
SIZE		0.0630*	1.7200	0.0860
LEV		0.3050**	2.2360	0.0260
DVO		0.4920***	16.8800	0.0000
R-square		0.4476		
Adj R-square		0.4386		
DW		0.8674		
F-stat	42.724			
(prob)	0.0000			
Observation	375			

*, ** and *** indicate significant at 10%, 5% and 1% levels respectively.

The fixed effects technique take into account the individuality of each firm or cross-sectional unit included in the sample by letting the intercept vary for each firm but assumes that the slope

coefficients are constant across firms. Random effects model, according to Sheikh and Wang (2010), estimates the coefficients under the assumption that the individual or group effects are uncorrelated with other explanatory variables and can be formulated.

In order to determine which of the two analytical techniques is to be used for the purpose of making conclusion, the Hausman's specification test was conducted. The null hypothesis underlying the Hausman's specification test is that fixed and random effects models do not differ substantially. Empirically, if the prob value of the chi-square is greater (less) than 0.05, the estimation based on the Random effects (Fixed effects) will be better off.

Tables 5(a) and 5(b) present the Regression results with Fixed effects and Random effects models respectively.

Table 5(a): Fixed effects model

Dependent variable: DVP

Variable	Co-efficient	t-stat	Prob
Constant	1.0723	0.6704	0.5031
PROF	0.1551*	0.3040	0.0763
LIQ	0.0624	1.3651	0.1731
TANG	-0.1287	-0.7781	0.4370
GRW	-0.1369	-0.5182	0.6047
SIZE	-0.8630*	-0.5414	0.0586
LEV	0.4645***	2.6082	0.0095
DVO	0.4969***	18.7365	0.0000

R-square	0.6053
Adj R-square	0.5513
DW	1.1648
F-stat	11.2105***
(prob)	0.0000
Observation	375

*, ** and *** indicate significant at 10%, 5% and 1% levels respectively.

The Hausman's specification result reveals a Chi-square (7) of 2.7960 and prob value of 0.9032. This indicates that the outcome of the Random effects model is a better estimation technique for inference purpose.

From Table 5(b), there is positively and significantly relationship between dividend payout policy (DVP) and PROF (profitability proxy) at 5% level. This is consistent with the findings of Eriostis and Vasiliou (2003), Ahmed and Javid (2009), Marfo-Yiadom and Agyei (2011) and Alam and Hossain (2012) and provides support for the profitability theory. The alternative hypothesis 1 is hereby validated. Thus, there is a positive relationship between

profitability and dividend payout. It further indicates that profitability is a major determinant of dividend payout policy of firms in Nigeria.

Table 5(b) Random effects model

Dependent variable: DVP

Variable	Co-efficient	z-stat	Prob
Constant	-0.2502	-0.4336	0.6649
PROF	0.3979**	0.8571	0.0399
LIQ	0.0611	1.4295	0.1537
TANG	0.0046	0.0659	0.9475
GRW	-0.2409	-0.9958	0.3200
SIZE	0.4780**	0.8695	0.0382
LEV	0.3904**	2.4965	0.0130
DVO	0.4953***	19.1685	0.0000

R-square	0.5095
Adj R-square	0.4970
DW	1.8934
F-stat	53.7992***
(prob)	0.0000
Observation	375

*, ** and *** indicate significant at 10%, 5% and 1% levels respectively.

The relationship between dividend policy and liquidity is positive but not significant. Alternative hypothesis 2 is hereby rejected. Thus, firm's liquidity is not a significant determinant of the sampled firms' dividend payout policy decision during the period of study.

Tangibility is also not a major determinant of the sampled firms' dividend payout policy decision during the period of study. This is because of the insignificant relationship between dividend policy and asset tangibility. Alternative hypothesis 3 is rejected.

Firm growth opportunity is seen from Table 5(b) to have negative but insignificant relationship with dividend policy of the sampled firms. Thus, growth opportunity is not a major determinant of firm's dividend policy in Nigeria. Alternative hypothesis 4 is rejected.

There exists a positive and significant relationship between a firm's size and dividend payout policy decision at 5% level. This is consistent with the findings of Chang and Rhee (2001), Ho (2003) and Aivazian et al (2003) and provides evidence that firm's size is a major determinant of dividend payout policy in Nigeria. Alternative hypothesis 5 is hereby confirmed.

Firm's leverage and dividend policy, as shown in Table 5(b) have a positive and significant relationship at 5% level. This is contrary to expectation (as many studies in the developed economies confirmed negative relationship) but it is likely that the sampled firms utilized debt judiciously during the period of study to generate more profit to offset the interest

and at the same time pay dividend to their shareholders. The outcome of this study is consistent with the findings of Marfo-Yiadom and Agyei (2011) and UK-based firms in Alam and Hossain (2012) and provides support for the Agency cost hypothesis. The significant relationship between the dividend policy and leverage show clearly that leverage is an important determinant of dividend payout policy in Nigeria. However, the alternative hypothesis cannot be confirmed (due to the direction of the relationship).

Finally, the relationship between dividend policy and volatility of dividend payment (DVO) is positive and significant at 1%. It means that current year's dividend is influenced by the dividend paid by a firm last year. The studies conducted by Pruitt and Gitman (1991), Eriostis and Vasiliou (2003) and Marfo-Yiadom and Agyei (2011) also confirmed this outcome, which invariably provided support for the signaling hypothesis of dividend policy. Alternative hypothesis 7 is validated. Thus, volatility of dividend payment is an important determinant of dividend policy in Nigeria.

CONCLUSION AND RECOMMENDATION

The study was conducted to determine the factors that influenced the dividend payout policy of 25 listed non-financial firms in Nigeria for the period 1997-2011. Panel data methodology was adopted and Random effects model was used as estimation technique. Seven determinants factors were used. In all, seven hypotheses derived from the empirical literature were tested.

The outcomes of the study indicate that four determinant factors (profitability, size, leverage and volatility of dividend payment) influence positively the dividend payout of the sampled firms during the period of study. This provides support for the profitability, agency cost and signaling hypotheses of dividend policy. The study could not, however, provide empirical evidence to support the importance of three factors (growth opportunity, asset tangibility and liquidity) as dividend payout policy determinants.

It is hereby recommended that Board of Directors of listed firms in Nigeria should consider profitability, size, leverage and volatility of dividend payment when designing their decision payout policy decisions.

For future line of research, attempt should be made at increasing the sample size and also include some other determinant factors such as business risk, cash flow, ownership characteristic and firm's age.

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