Determinants of Dividend Policy among Banks Listed on the Ghana Stock Exchange

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ABSTRACT
Purpose: The concept of dividend policy has been widely researched by scholars, however, a consensus on the factors that determine dividend policies among firms has not been yet established as findings differ depending on the industry and sector. This study aims to contribute to the stock of literature already available by observing the major factors that affect dividend decisions of banks listed on the Ghana Stock Exchange (GSE). **Methodology**: The study employed secondary data extracted from published financial statements of the listed banks over a 10year period. Data was also extracted from the 2015 Ghana Banking Survey Report and the 2015 Bank of Ghana annual financial report. The study was conducted on seven banks which were listed on the GSE. The study used a panel data framework constructed from secondary data of the banks between the years 2006 – 2015 using Ordinary Least Squares model to estimate the regression equation. **Findings:** The findings of the study showed that Returns on Asset (ROA) which represents profitability ratio was significant and a positive predictor of dividend payment among listed banks on the GSE. Other significant determinant of dividend payments include free cash flow, the leverage level of the banks, the banks ratio of non-performing loans to total administered loans (NPL/TA), the average level of inflation and Bank of Ghana's policy rate (BPR). Number of bank branches (BBR) was found to have no significant relationship with Dividend payment by banks.**Study Contribution:** The study revealed that NPL/TA and BPR has negative and strong influence on dividend payment among listed banks on the GSE. No relationship existed between BBR and DPS hence the number of branches owned by listed banks does not affect their dividend payments. Banks must therefore improve on their credit risk management techniques to improve profitability in order to maintain sustainable payment of dividends. Bank of Ghana must also maintain lower BPR since high BPR was found to negatively affect payment of dividend.**Recommendations:** The study recommends that, future studies should include more independent variables, more banks and as well increase the years for the time series data. Future studies can also consider and compare the determinants of dividend payments among banks in Africa.
Keywords: Dividend policy, Banks, Ghana Stock Exchange

1. Background to the Study

Maximizing shareholders wealth synonymously means that increasing the profitability and cash flow of firms. The concept of dividend policy focuses on how to make shareholders rich through the payment of sustainable dividend or improving share prices for capital gains. Dividend policy remains very significant in the life of firms yet one of the most complex concept in corporate decision making. The battle between how much dividends must be paid out to shareholders and amount to be retained for investment and growth purposes is quite critical as it also has an influence on the behavior of investors at large.

The financial market in Ghana is liberalized and the economy is characterized by different kinds of firms. Firms differ on sizes, registered or unregistered, ownership structure, listed or unlisted etc. hence, dividend decision thereto differs among Ghanaian firms. Interestingly, Dividend payment is a common practice among listed banks on the GSE regardless of how insignificant the dividend amount may be. Perhaps, Ghanaians are naturally risk averse, and the weak form efficiency of the GSE market has a greater influence on this action hence paying dividend maybe be a road map to journey and enroll potential investors unto the stock market.

A considerable number of scholars, including Bhattacharya (1979; 1980), Linter (1956), Linter (1962), Miller & Rock (1985) posit that the payment of dividend is a signal to inform investors and the market of a firms earnings prospects. Dhanani, (2005) survey research to capture managerial views on dividend policy revealed that dividend policy enhance corporate performance. Baker, Farrely and Edelman (1985) found that, in the USA, managers consider future expected profit, past dividend payment, and the availability of free cash flow as the major determinant dividend payment.

"*The harder we look at the dividend picture, the more it looks like a puzzle with pieces that just do not fit together*" (Black, 1976). Thus, the specific issues and factors that affect dividend policy decision have still not been resolved. Though several factors have been found to influence the decision of firms to pay dividend, these factors vary from industry to industry as well as country to country depending on the sensitivity and efficiency of the financial market.

Lintner (1956) posits that firm's earnings is a major determinant of how much dividend firms will pay. Foong, *et al* (2007) argued that dividend has informational content which sends positive signal shareholders and that is the major concern of firms. In Ghana, the study of Abor and Aminu (2007) which concentrated on determinants of dividend policy on firms listed on the Ghana Stock Exchange found profitability, cash flow and taxation of firms as the main determinants of dividend policy among firms listed on the GSE.

A study by Badu, (2013) using Panel data of financial institution listed on the GSE covering 2005-2009 showed a statistically significant and positive relationship between Age and liquidity but saw statistically insignificant relationship between profitability, collateral and dividend payment. He concluded that the major determinants of dividend policy of financial institutions in Ghana are age of the firm, collateral and liquidity but failed to agree with the study of Abor and Aminu (2006) which found profitability of listed firms as a major determinant of dividend policy. Though both studies used the same panel data within a specific period of time (2005-2009), the study of Badu (2013) focused on financial institutions listed on the GSE as compared to the study of Abor and Aminu (2006) which focuses on all listed firms on the GSE. Both study however found liquidity/cash flow as a significant predictor of dividend policy. The findings of these two studies shows how complex and unique the dividend policy decision can be.

Another twist and interesting findings from Nuhu (2014) who sought to revisit the determinant of dividend payments in Ghana through an ordinary least squares panel regression model of 30 listed firms on the GSE between 2000 - 2009 reveals that, profitability, board size, board independence, leverage, and audit type are important determinants of dividend payout in Ghana. Other studies in Ghana and other parts in the world at large may as well find different factors as a major determinant of dividend. This assumption is an evidential fact to the study of Brealey and Myers (2003) which listed dividends as one of the ten important unresolved problems in the field of finance.

The studies of Abor and Aminu (2007), Badu (2013) and Nuhu (2014) studies focused on panel data between the period 2000 – 2009 hence their result may not be relevant in current studies and may not be a true reflection of what is actually happening currently among firms. There have been several regulatory reforms by the GSE, reforms by the BoG on financial regulatory and as well investors have become more sophisticated and wiser in the financial market. This study will fill the time Gap by focusing on the determinants of dividend payment by banks listed on the GSE.

Banks play a very significant role in economic development hence their active participation in the stock market will help them raise enough capital for their operations. It is speculated that customers who deposit funds and invest in banks will be more secured and have more hope in the banking system if consistent dividend is paid to shareholders as a signal of financial strength. Banks need customers funds to efficiently perform the intermediation role hence once there is enough security for depositors funds the likely the economy will grow. This was a major factor that informed the study to look into the factors that determines dividend policy among banks listed on the stock exchange.

In light of these assumptions, the study seeks to ascertain the determinant of dividend policy among banks listed on the GSE. Thus, what determines the dividend payout ratio of banks listed on the GSE?

2. REVIEW OF LITERATURE

Corporate dividends policy can be defined as the decision on whether to retain part of the earnings to reinvest them or distribute them among shareholders. Thus, dividend policy involves decisions on how much and when earnings should be paid as dividends. The puzzle of how much to retain and how much to distribute remains one of the most controversial and dynamic decisions among corporate organizations. In this regard, different theories have been advanced by experts, practitioners and researchers in the field of finance just to explain the dynamism of corporate dividend policy.

Theoretical Review

The theoretical rationale for corporate payout has been an important topic in corporate finance for more than fifty years. After the payout-irrelevance proposition by Miller and Modigliani (1961), the following theories attempt to explain why and how companies pay out the cash generated by their business operations.

In the famous Miller and Modigliani's (MM) dividend irrelevance theory, the writers suggested that dividend policy is immaterial to the value of the firm. The MM Theory states that shareholder wealth will remain unaffected by dividend policy, in that without tax as a consideration, investors place equal weight in receiving returns as dividends or capital gains as long as the firm's investment strategy is not affected by dividend policy (Shapiro 1956).

The Dividend Signaling Theory argues that dividends are used by companies to signal higher than expected future free cash flow. If managers have private information about the future or current cash flow, then investors will interpret a current dividend increase (decrease) as a signal that managers expect permanently higher (lower) future free cash flow levels. Because paying dividends is costly, good companies pay dividends to separate themselves from bad companies that cannot afford to pay such a steep price to mimic good companies. Outside

financing transaction costs (Bhattacharya (1979), underinvestment (Miller and Rock (1985) and taxes John and Williams (1985) are some of the costly instruments used to achieve a separating equilibrium in Dividend Signaling models.

The free cash flow theory explained by Jensen (1986), argues that agency problems arise in companies where ownership and control are separated, such as in public companies with disperse shareholding. Managers have an incentive to overinvest relative to their first best optimal level in companies with sizable free cash flows or cash reserves. The overinvestment stems from the empire building or perks-prone attributes embedded in the managers' utility function. An increase in dividend reduces the free cash flow available to managers and therefore limits the Overinvestment problem, creating value for the company. Conversely, a dividend cut augments the cash on hand to the managers and therefore aggravates the overinvestment problem.

The maturity theory is another dividend theory advanced by Grullon, Michaely, and Swaminathan (2002), Famaand French (2001), and DeAngelo and DeAngelo (2006), they are of the view that, as a company matures, its investment opportunity set reduces with a consequent decline in systematic risk. A positive price reaction to a dividend increase suggests that the company has entered a matured life-cycle stage of lower profitability and lower risk. According to the Maturity theory, reaction to news about systematic risk reduction dominates reactions about lower future profits and therefore the stock price response to a dividend increase announcement is positive.

Again, the Residual theory hammers on the first priority given to profitable investment opportunities. If there are profitable opportunities, the firm invests in those and residual income (if any) is distributed to shareholders. Residual theory of dividends means,' a theory that suggests that the dividend paid by the firm should be the amount left over after all acceptable investment opportunities have been undertaken. Because of the cost of retained earnings is less than the cost of new common stocks; retained earnings would be used to meet the equity requirement determined. If retained earnings are inadequate to meet this need, new common stock would be sold. If the available retain earning are in excess to this needs, the surplus amount would be distributed as dividends (Gitmen, 2001)

In wealth maximization theory, large dividends is announced and distributed to shareholders in order to maximize the wealth of the shareholders. Basically, it is applicable for those companies, which are just established and to those companies it will be beneficial whose financial profits are decreasing in trends. The main purpose of the wealth maximization theory of dividend is to make assurance to the stockholders that they are interesting in the firm, which has better market value.

Lastly, the Catering theory which was proposed by Baker and Wurgler (2004), assumes that for either institutional or psychological reasons, some investors have an uninformed and perhaps time-varying demand for dividend paying stocks. For instance, dividend clientele theories argue that changes in tax code, transaction costs or institutional investment constraint can lead to changes in the demand for dividend paying stocks. Behavioral explanations, such as the bird-in- the-hand or self-control arguments, could also lead to a time-varying demand for dividend paying stocks. The market therefore assigns a time-varying premium to dividend paying stocks. Managers cater to this premium by paying out more dividends when the dividend premium is high, and by holding cash inside the company when the dividend premium is low. Although dividend payers and nonpayer's are consistently different in many characteristics, such as size, life-cycle, stage and profitability, Baker and Wurgler (2004) provide some evidence that managers cater to investor sentiment, and their conclusions are robust to a variety of alternative explanations

Empirical Studies

Pruitt and Gitman (1991) revealed that risk (year-to-year variability of earnings) determines firms' dividend policy. A firm that has relatively stable earnings is often able to predict approximately what its future earnings will be. Such a firm is therefore more likely to pay out a higher percentage of its earnings than a firm with fluctuating earnings.

In another studies, conducted by Rozeff (1982), Lloyd et al (1985), and Collins et al. (1996) used beta value of a firm as an indicator of its market risk. They found statistically significant and negative relationship between beta and the dividend payout. Their findings suggest that firms having a higher level of market risk will pay out dividends at lower rate. D'Souza (1999) also finds statistically significant and negative relationship between beta and dividend payout.

Alli et al. (1993) reveal that dividend payments depend more on cash flows, which reflect the company's ability to pay dividends, than on current earnings, which are less heavily influenced by accounting practices. They claim current earnings do not really reflect the firm's ability to pay dividends. Thus, the liquidity or cash-flow position is an important determinant of dividend payouts. A poor liquidity position means less generous dividend due to shortage of cash.

Baker, Viet, and Powell (2001) surveyed management of both financial and non-financial NASDAQ firms to determine the influential factors on dividend policy. Of the twenty-two factors evaluated, highly relevant factors in dividend policy decisions of both financial and nonfinancial firms included the past pattern of

dividends, earnings stability, and current and predicted future earnings levels, though significant differences exist between the degree of importance that non-financial and financial firms" management place on several factors, including legal constraints, capital structure maintenance, and the degree of financial leverage.

The significance of the pattern of dividends can be indicated through Dickens, Casey, and Newman's (2002) assessment that the historical stability of dividend payments can communicate substantial information about a firm. Dickens, Casey, and Newman (2002) found that dividends convey value-related information about a firm that earnings and other financial variables failed to communicate; one instance in which this is true is in the case where earnings patterns are highly irregular while dividends are smooth, dividends can better portray profitability potential than earnings.

Aivazian, Booth, and Cleary (2003) concluded that both return on equity and profitability positively correlate with the size of the dividend payout ratio. They also concluded that companies with high debt ratios often had lower dividend payments, and firm size also positively correlated with dividend payout. Mohd, Perry, and Rimbey (1995) also concluded that dividend payout related positively with firm size. Holder, Langrehr, and Hexter (1998) suggest that companies who placed their business focus on a single business line had lower payout ratios than less focused firms.

Other suggested determinants of dividend policy have been the corporation's level of liquidity, access to capital, cash flow, depreciation methods, current inflation level, and level of debt. Mick and Bacon (2003) also found that past dividend patterns as well as current and expected earnings levels are empirically relevant in explaining the dividend decision, with future earnings being the most influential variable.

In Ghana, Abor and Aminu (2007) examined the determinants of dividend payout ratios of listed companies in Ghana using an Ordinary Least Square. They found a positive relationship between dividend payout ratios and profitability, cash flow, and tax. The results also showed negative associations between dividend payout and risk, institutional holding, growth and market-to-book value. Badu (2014) found a statistically significant and positive relationship between Age and liquidity but statistically insignificant relationship between profitability, collateral and dividend payment. The results of Nuhu (2014) showed that, profitability, the square of profitability, board size, board independence, leverage, and audit type are important determinants of dividend payout in Ghana.

In summary, the literature review points out to the fact that many factors affect the dividend policy decision of firms. Past researches revealed that corporate profitability, cash flow, tax, sales growth, market-to-book ratio, debt-to-equity ratio among other variables may impact on the dividend policy decision of firms. Though some of the studies were conducted in Ghana, most were conducted in other countries with different financial markets and development stages. This study concentrated on only cash dividend and used variables that will directly or indirectly affect the dividend policy decisions of listed banks on the Ghana Stock Exchange.

Methodology

This research utilized an explanatory type of studies and intended to explain, rather than simply describe the phenomena studied. This study used panel data constructed from audited financial statements of the seven (7) banks listed on the Ghana stock exchange for a period of 10 years, thus from 2006 – 2015. As at the time of study, there were 31 registered and licensed banks in Ghana; however, only seven of these banks were listed on the Ghana Stock Exchange (GSE) hence constitutes the population for the study.

Table 3.1 presents information on the sampled listed banks on the GSE

Bank	Date Listed	Authorized shares
UT Bank Limited	2008	750,000,000
Standard Chartered Bank	2006	250,000,000
HFC Bank Ltd	1995	1,000,000,000
CAL Bank Limited	2004	1,000,000,000
Ecobank Ghana Ltd	2006	500,000,000
Ghana Commercial Bank Limited	1996	1,500,000,000
Societe Generale Ghana Limited	1995	500,000,000

Source: GSE, 2015

Model Specification: Determinants of Dividend Policy among Banks

Ordinary Least Square (OLS) regression method was used to study the determinants of dividend policy among the listed banks. In this model, Dividend Per Share (DPS) was used as the dependent variable and regressed against several explanatory variables which include profitability (ROA, ROE), Risk (RISK), Free Cash Flow (FCF), Growth (GRW) and Leverage(LEV). Additional variables include Inflation (INFL), Credit Risk measured by the ratio of Non-performing loans to total loans (NPL/TL), BoG's Policy rate (BPR) and Number of bank branches in the country (BBR). Most models related to dividend policies, including the works Anil and Kapoor (2008), Abor and Aminu (2006), Badu (2013), Nuhu (2014) and Marfo (2011) focused on factors such as profitability, free cash flow, growth, size, leverage, taxation and risk as predictors of dividend paymentS. None of their studies considered credit risk, BoG's policy rate and number of bank branches as a predictor of dividend

payments. The study therefore inculcates these three new factors (variables) into the regression model and intends to find out if it can predict and influence the payment of dividend. Policy rate and credit risk feeds into the price of loanable funds hence its importance cannot be underestimated. Banks with many branches are considered as highly profitable and more concentrated than banks with fewer branches. The combination of such variables have not yet been specified by contemporary research in Ghana and it is important for banks to understand how policy rate, credit risk and their number of branches influence dividend payments. Especially, at a time when banks in Ghana are facing one of the highest policy rate in Africa between the periods of study and as well the BoG financial report (2016) which indicated an increased in credit default among bank customers between the year 2015 and 2016.

The general form of the panel data model can be specified as:

$$Y_{i,t} = \alpha_i + \beta X_{i,t} + \varepsilon_{i,t}$$

Where the subscript i denotes the cross-sectional dimension and t representing the time-series dimension. $Y_{i,t}$ in the equation represents the dependent variable in the model, thus, the dividend per share on each stock invested by a shareholder in the bank. $X_{i,t}$ represents explanatory variables used in the estimation model whiles α_i is used as a constant over time t and specific to the individual cross-sectional unit i. as adopted by Aminu and Abor (2006), the model for this study follows the one used by D'Souza (1999) to explain the relationships between dividend payout ratios and the determinants.

The model is specified as follows:

$$DPS_{i,t+1} = \alpha_0 + \beta_1 ROE_{i,t} + \beta_2 ROA_{i,t} + \beta_3 RISK_{i,t} + \beta_4 FCF_{i,t} + \beta_5 GRW_{i,t} + \beta_6 LEV_{i,t} + \beta_7 NPLTA_{i,t} + \beta_8 INFL_t + \beta_9 BPR_t + \beta_{10} BBR_{i,t} + \varepsilon_{i,t}$$

Where:

DPS $_{i,t+1}$ = Dividend per Share for Bank i at time t+1.

ROE $_{i,t}$ = Return on equity (ROE) for Bank i at time t (Net Income/Average Shareholder's Equity)

ROA $_{i,t}$ = Return on equity (ROA) for Bank firm i at time t (Net Income/Average Shareholder's Assets)

FCF $_{i,t}$ = Net cash flow for Bank i in period t.

GRW $_{i,t}$ = Growth in Sales for Bank i at time t.

LEV $_{i,t}$ = Debt to equity ratio for Bank i at time t.

RISK $_{i,t}$ = Beta for firm i

NPLTA $_{i,t}$ = Nonperforming loans-to-assets (Non-performing loans/total asset portfolio) for Bank i at time t

INFL $_t$ = Ghana Statistical Service average Inflation rate over the period of years studied.

BPR $_t$ = Bank of Ghana Average Policy Rate over the period of years studied

BBR $_{i,t}$ = Number of Bank branches / Number of regions located

β_0: = the intercept of equation

β_i: = Coefficients of X it variables

i: = Financial institutions

t : = Time= 1,2,3,4,5,6,7,8,9,10 years

ε: = the error term

Based on the theoretical and empirical review, profitability, free cash flow, growth and leverage is expected to have a strong and significant relationship with dividend policy decisions. The new variables added monetary policy rate (BPR) and NPL/TA is expected to have a negative influence on dividend payments by banks.

4. Discussion of Findings

A descriptive statistics for all the regression variables is presented in Table I below. The descriptive statistical analysis as depicted in the table represents the average results and standard deviation of the variables computed as extracted from the Bank of Ghana audited Statement of the seven banks between the years 2006 - 2015. The average Dividend per Share (measured as Total dividend payment / number of shareholders) is 27.9 percent. This means that on average, each shareholder earns about 28 percent as dividend on each stock invested. The mean for ROE (Return on Equity) and ROA (Returns on Assets) which was used to measure profitability of the listed banks recorded an average mean of 44.5% and 28.4% respectively. This means that firms pay about 45% of their ROE as dividends to shareholders. The mean for the bank risk recorded an average and (median) of 0.57103 (0.69341) for the period under study. Free cash flow, measured as natural logarithm of cash balance recorded a mean (median) of 37.23 (19.03). The average (median) growth rate in sales was 43.3percent (40.72 percent). The mean (median) of the banks debt to equity ratio under the period reviewed was 41.99 percent (29.25 percent). The mean (median) NPLTA, Inflation and bank policy rate recorded 39.57 percent (9.63 percent), 14.63 percent (16.25 percent) and 18.08 percent (13.75 percent) respectively. The mean (median) of BBR recorded 59.14 (7.85).

Table I: Descriptive Statistics of Dependent and Independent Variable

Variables	Mean	Std. Dev	Minimum	Median	Maximum
DPS	0.27930	25.35218	0.56971	0.39907	0.93411
ROE	0.44531	0.39676	-0.23332	0.42779	1.21007
ROA	0.28416	0.34633	9.60993	0.14641	17.68011
RISK	0.57103	2.76284	-9.74486	0.69341	13.83112
FCF	37.23217	3.75012	13.10411	19.03001	23.72071
GRW	0.43311	0.74131	-0.00695	0.40728	1.72513
LEV	0.41997	3.60630	0.13200	0.29251	9.18003
NPLTA	0.39576	0.39261	0.15041	0.09637	0.25687
INFL	0.14633	0.24209	0.12512	0.16251	0.31225
BPR	0.18083	0.35147	0.20499	0.13751	0.26125
BBR	59.14826	43.88436	2.42000	7.85000	13.50000

The regression results explained the relationship between the dependent and the independent variables used in the study. The table 4.2 below represents the regression results per the model specified. The study used the OLS panel, hence the results presented in the table is in relation with OLS panel regression. The dividend per share (DPS) was regressed against ten variables including *ROE, ROA, RISK, Free Cash Flow, Growth, Leverage, NPLTA, Inflation and Bank of Ghana policy rate and number of branches of the banks.*

Table 2: Regression Model

Variable	Co-efficient	Std. Error	t-Statistic	Prob.
DPS	6.7513	0.72176	0.76810	0.02811
ROE	9.8295	2.56835	3.25322	0.01673
ROA	12.533178***	1.34131	2.11022	0.00195
RISK	-0.00545	0.10031	-0.03141	1.46265
FCF	0.05595***	0.01031	17.51113	0.00001
GRW	0.10245	0.03031	2.00731	0.13485
LEV	-0.423327**	0.12157	-2.32126	0.03150
NPLTA	-0.36015*	0.11541	-1.28126	0.00611
INFL	-0.0402**	0.11123	-2.03341	0.01951
BPR	-0.0804**	0.09132	-1.73121	0.03910
BBR	2.70012	0.05773	65.03112	13.72210
R2	0.87087			
Adjusted R2	0.96997			
S.E. of regression	3.51462			
F-Statistics	108.1401			
Prob(F-statistic	0.00000			

***, **, *indicate significance at the 1%, 5 % and 10% levels.

From the regression table, the coefficient of determination (R^2) among all independent variables and the dependent variable recorded a very strong relationship of 0.87. This means that all the independent variables have some extent of strong relationship with the dependent variable. Returns on Assets (ROA) is a significant predictor of dividend payment among listed banks on the GSE. Thus, the table recorded a positive and significant relationship between the ROA which is a measure of profitability and mostly a measure of returns on investment of the banks and their dividend payments as denoted by (12.53; p-value = 0.001). It is expected that, the higher the ROA the more dividend the banks will pay.

Surprisingly, the Return on Equity (ROE), which was also used as a measure of profitability recorded a positive (9.82, p-value = 0.016) but insignificant relationship with the dividend payment among the banks. Thus, ROE does not influence or determine the banks dividend payment per share. This also means that, though both ROE, ROA are indicators of profitability, ROA is more recognized as a predictor of dividend payment per share by banks. The study agrees with the finding of Aminu and Abor (2006). Dickens, Casey, and Newman (2002) also found a positive relationship between profitability and dividend payment and posited that dividends convey value-related information about a firm that earnings and other financial variables failed to communicate. The findings is in agreement with the dividend signaling theory, which holds the assumptions that firms paying the highest level of dividends are more profitable than firms at the same industry who do not.

The results as well shows a negatively insignificant association between risk and dividend payment per share. This is an indication that banks with high-risk pay lower dividends to their shareholders. Though there is an inverse relationship between Risk and DPS of banks, this relationship may not necessarily predict the payment of dividends as the relationship is statistically insignificant. Rozeff (1982), Lloyd et al (1985), and Collins et al. (1996) found statistically significant and negative relationship between beta and the dividend payout. Their findings suggest that firms having a higher level of market risk will pay out dividends at lower rate.

D'Souza (1999) also finds statistically significant and negative relationship between beta and dividend payout. This is not the case of listed banks in Ghana, the negative relation between dividend and Risk does not have any significance.

In another studies, conducted by Rozeff (1982), Lloyd et al (1985), and Collins et al. (1996) used beta value of a firm as an indicator of its market risk. They found statistically significant and negative relationship between beta and the dividend payout. Their findings suggest that firms having a higher level of market risk will pay out dividends at lower rate. D'Souza (1999) also finds statistically significant and negative relationship between beta and dividend payout.

The results revealed that, Free Cash Flow (FCF) determines the amount of dividend payment to shareholders. This is depicted by the positive and 1% significant level (0.05, p-value = 0.016) relationship between FCF as measured by total net cash flow of the banks over the period studied and dividend per share. FCF also denotes liquidity position hence can be concluded that DPS is significantly influenced by high liquidity. Aminu and Abor (2006), Alli et al. (1993) also concluded that firms with good and stable cash flows are able to pay dividend easily compared with firms with unstable cash-flow position.

Growth (GRW) in income as measured as the growth in sales over the period of time reported an insignificant relationship with dividend payment. The regression established a positive but insignificant relationship of (0.102, p-value 0.134) between GRW and dividend per share. This means that, an increase in sales of the banks may not necessarily influence how much dividend must be paid by the listed banks. Perhaps, growth in income is more likely to provide additional market power which firms can use to increase performance. Increase in sales may also come with its own associated expenses which may be the cause of this insignificant influence. This study conforms to the findings of Marfo-Yiadom and Agyei (2011) but disagrees with the findings of Aminu and Abor (2006) who found a negative relationship between growth and dividend pay-out ratio.

Leverage (LEV) is reported to have a negative impact on dividend policy. Thus, the leverage of the listed banks recorded a statistically negative and significant association with dividend payment per share. It is right to say that, high debt levels of banks will discourage dividend payments. This findings is in consonance with Nuhu (2014) Abiodun (2008), Kebewar and Ahmed (2013), Dogan (2013), Aivazian, Booth, and Cleary (2003) however in complete dissonance with Weill (2001), Young and Jang (2005), who concluded that financial leverage has no impact on dividend policy of firm. High debt in banks can cause financial turbulence and may pose financial risk to banks due to fluctuations of interest rates which is normally associated with this debts. In as much as debt if utilized well can improve shareholders wealth, banks are more pleased paying dividend when the debt level is low.

The table reported a negative and significant relation between NPLTA and dividend payment per share. According to Saunders (2005), more than 85% of banks money are deposit from customers hence the need to manage it effectively. The intermediation role of the bank is to bridge the gap between the deficit spending unit and the surplus spending unit hence in this process banks assume several risk including credit risk. The results from the regression table indicates a significantly negative relationship (-0.360, p-value = 0.006) between NPLTA which measures the level of credit risk and DPS. In as much as the table recorded a negative insignificant relationship between RISK and DPS, Credit risk stands out as a major determinant of dividend payment per share. Perhaps, credit risk is one major risk that can prompt banks failure hence the level of significance. More clearly, it can be concluded that, the higher the credit risk of the banks, the lower the dividend payment and the lower the credit risk faced by the bank the higher the dividend payment. This relationship was predicted and expected by the researcher considering the high level of credit risk facing Ghanaian banks.

The regression results statistically reported an inverse relationship between the average inflation rate on the market and the dividend payment among banks. It can be explained that a 1% rise in inflation would cause banks to reduce their dividend by 4%. This is expected as various literatures have considered inflation to be a significant determinant of dividend policy decision. It can therefore be concluded that, higher inflation will reduce dividend payment and lower inflation will increase dividend payment by banks listed on the stock market. This can be attributed to the notion that unexpected rises in inflation cause cash flow difficulties for borrowers which can lead to premature termination of loan arrangements and precipitate loan losses. Perry (1992), Jiang (2003) and Guru (2002) supports the above by sharing the same ideology.

Bank of Ghana's policy rate (BPR) had negative relationship with dividend payment. The table showed a significant and negative relationship between BPR and DPS. A percentage change in the Bank of Ghana's policy rate will cause a reduction of dividend payment by 4%. The policy rate is an interest rate set by the central bank in order to control monetary variables like consumer prices, exchange rate or credit expansion in an economy. The BPR also determines the levels of interest rates among banks, as it represents the price at which banks obtain money from the central bank. It is therefore expected that high BPR will feed into the general prices of loans advanced to customers. High interest rate has been one of the major cause of credit risk among defaulters.

Lastly, the number of branches owned by the listed banks as measured by the ratio of the number of bank

branches and the regions located was found to have a positive relationship on dividend payment per share. However, this relationship was not significant hence cannot predict or determine how much dividend banks must pay on each share. The number of bank branches owned by a single bank may predict how concentrated and profitable they are in the sector, however, the study findings revealed that owning more branches does not necessarily means paying more or less dividends.

From the regression table and findings, the new regression model can now be estimated as follows:

$$\textbf{DPS} = 6.75 + 12.53\ ROA + 0.05FCF - 0.42LEV - 0.36NPLTA + 0.0402INFL - 0.08\ BPR$$

From the results so far, it can be explained that the major determinants of dividend policy among listed banks on the stock exchange are returns on assets, free cash flow, the leverage level of the banks, the banks ratio of non-performing loans to total administered loans, the average level of inflation and Bank of Ghana's policy rate.

5. Conclusion

The issue of dividend policy is a very crucial and complex corporate finance issue in contemporary research. This study was related to the determinants of dividend policy among listed banks on the stock exchange. The main objectives for the study was to ascertain the factors that determine dividend payments among listed banks on the GSE.

Ordinary Least Square (OLS) regression method was used to study the determinants of dividend policy among the seven listed banks. Dividend per Share (DPS) was used as the dependent variable and regressed against several explanatory variables which include profitability (ROA, ROE), Risk (RISK), Free Cash Flow (FCF), Growth (GRW) and Leverage (LEV). Additional variables include Inflation (INFL), Credit Risk measured by the ratio of Non-performing loans to total loans (NPL/TL), BoG Policy rate (BPR) and number of branches owned by banks (BBR).

The results found Returns on Assets (ROA) as a significant predictor of dividend payment among listed banks on the GSE. This findings conform to the study of Aminu and Abor (2006), Dickens, Casey, and Newman (2002). The results as well showed a negatively insignificant association between risk and dividend payment per share.

The results revealed a positive and significant relationship between FCF. FCF also denotes liquidity position hence can be concluded that DPS is significantly influenced by high liquidity. Growth (GRW) in income was found to have an insignificant relationship with dividend payment. This means that an increase in sales of the banks may not necessarily influence how much dividend must be paid by the listed banks.

Leverage (LEV) of the listed banks recorded a statistically negative and significant association with dividend payment per share. The findings was in consonance with Nuhu (2014) Abiodun (2008), Kebewar and Ahmed (2013), Dogan (2013). The study as well established a negative and significant relation between NPLTA and dividend payment per share. The results from the regression table indicates a significantly negative relationship (-0.360, p-value = 0.006) between NPLTA which measures the level of credit risk and DPS.

There existed an inverse relationship between the average inflation rate on the market and dividend payment among banks. It was reported that a percentage rise in inflation would cause banks to reduce their dividend by 4percent. The findings of Perry (1992), Jiang (2003) and Guru (2002) supports the above by sharing the same ideology. As expected, Bank of Ghana's policy rate (BPR) had negative and significant relationship with dividend payment. The BPR determines the prices at which banks sell loans to customers hence high BPR will feed into the general prices of loans advanced to customers. The number of branches owned by the listed banks as measured by the ratio of the number of bank branches and the regions located was found to have a positive relationship on dividend payment per share. However, this relationship was not significant hence cannot predict or determine how much dividend banks must pay on each share

The study concluded that the major determinants of dividend policy among listed banks on the stock exchange are returns on assets, free cash flow, the leverage level of the banks, the banks ratio of non-performing loans to total administered loans, the average level of inflation and Bank of Ghana's policy rate.

It is recommended that banks must consider and practice sound credit risk management to reduce the amount of Non-Performing loans which was found to statistically influence dividend decisions.

The researcher also recommends that, future studies should include more independent variables, more banks and as well increase the years for the time series data. The determinants of dividend payment among banks may change or vary if future studies consider more variables, increase sample and increase the years of study. Future studies can also consider and compare the determinants of dividend payment among banks in Africa.

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