



## **DIVIDENDS PAYOUT, MARKET CAPITALIZATION AND MARKET VALUE OF MANUFACTURING FIRMS IN NIGERIA**

Henry Wobo,

Asian Asian Umobong

Department of Accounting University of Port Harcourt, Choba

Port Harcourt, Nigeria

Corresponding Author email: aumobong2007@yahoo.com

### **ABSTRACT**

The aim of the study was to determine the nature of relationship between dividend payout, market capitalization, inflation and market value of manufacturing firms in Nigeria using secondary data obtained from firms listed on Nigeria stock exchange between 2013 and 2021. Multiple regression analysis to ascertain nature of relationship was used and Hausmann Test for selection of model. Also, various diagnostic tests were conducted on data set. The study found a positive significant relationship of dividend and inflation on market value measured by Tobin Q and Price earnings ratio. Based on findings we conclude dividend and inflation impact firm value positively. We noted market capitalization positively and insignificantly affect Tobin Q and positively and significantly affect Price earnings ratio. We conclude market capitalization has a positive effect on market value. We noted negative significant relationship of dividend and inflation on Enterprise value and a negative insignificant relationship of market capitalization on Enterprise value. We conclude a trade-off exist between the variables. Increases in variables increase market value while at the same time dampening enterprise value. Based on findings, we conclude that our study negates Dividend irrelevance theory and aligns with signaling theory and bird in hand theory which suggests that dividends impact firm value. We recommend that to maximize firm value corporate Managers should design an efficient and effective dividend policy depending on the firms financing and investment need taking into consideration the interest of shareholders.

### **KEYWORDS**

Dividend payout, market capitalization, inflation, Firm Value, Tobin Q, Enterprise value, Price Earnings ratio.

### **Introduction**

Business owners set up businesses with the motive of profit and maximization of wealth. Since the advent of firms where ownership is divorced from management corporate managers are constantly faced with three decision making dilemma which involves the right choice of investment portfolio, funding and compensation of shareholders in form of dividend payment. Dividend policy determines

the amount of dividend paid to shareholders. A firm at the declaration of profit must decide the portion which is retained in the business and what must be shared to shareholders. This policy decision is driven by funding needs of the entity as well as the tax bracket of shareholders. The Clientele effect theory by Petit (1972) captures this accurately and states that preferences for dividends vary from one group of clients or shareholders to another, depending on their other sources of income levels. It is sometimes argued that shareholders belonging to high tax bracket will prefer retained earnings to dividend payments and vice versa. Dividend involves distribution of profits by a business entity to owners of the business. When a firm makes profit or earn surplus income, it is able to pay a proportion of the profit as a dividend to shareholder the remainder of profit after dividend is retained and used for reinvestment into the business for future expansion and fulfillment of the funding needs of the entity. A high dividend payout implies less reinvestment of funds into the business while low dividends imply high reinvestment of funds back to the business. There is the argument that high dividend pay out to shareholders serve as an attraction to investors on the assumption that there is an assurance of steady streams of income from investment with high possibility of increase in share price (Khan et al.2019). Conversely low dividend payout signals re-investment in the business for growth, future gains, expansion and delayed gratification to shareholders. The dilemma faced by Corporate Managers have ignited a hot debate on the subject of firm value, funding and dividend payment. Many theoretical and conflicting postulations have been made by Scholars in the corporate finance literature in an attempt to assist Corporate Managers handle the problem. Modigliani and Miller (1958) had earlier argued that the funding arrangement of an entity does not affect its value but rather the asset does and from there suggested the irrelevance of the funding mix of an entity. This proposition further expanded by the same authors Miller and Modigliani (1961) enthused that based on perfect market conditions dividend policy has no effect on share prices and cost of capital and investors attach no importance to dividend history of the entity thus dividend is irrelevant in share valuation.. Contrasting with the position of Miller and Modigliani (1961) is the Bird in Hand Theory pioneered by Gordon(1962) ) which states that dividend are relevant to the value of the firm. This position is further supported by Litzenberger and Ramaswamy (1982) that dividend policy is relevant and influences investors' behaviour. The position is justified through the argument that disparity exist between taxation on dividends and capital gains. Investors are expected to show preference to low dividend business driven by the motive to minimize tax. Further supporting the relevance of dividend is signaling theory by Fama et al. (1969) and Spence (1973). Agency cost theory presents the implication that company's implementing high dividend outlay ratio has greater firm value as the agency costs are reduced (Gitman, 2010). There are arguments that firms could finance their operations through retain earnings by adopting low dividend payout policy and using the retained funds to finance its activities which yields profit and ultimately enhances firm value. Baker and Powell (1999) argues that dividend policy decisions is one of the most important corporate finance decision to be taken by Corporate Managers. In concurrence to the relevance of dividend Omran & Pointon (2004) explained that dividend has the potential to impact share prices, returns to investors, internal financing and equity base since retain earnings can be converted to shares through capital reserves.

The conflicts in the Finance literature with regards to the relevance or not of dividend is not limited to theoretical propositions as many studies produce mixed results. While Modigliani and Miller (1961) proposed irrelevance of dividend in determining firm value and is supported by other studies by De Angelo et al. (1996), Lang & Litzenberger (1989). Chen et al (2002), Uddin, (2005 and Irum et al.,

(2012) concluded that dividend payout has no significant impact on firm share price. There are other scholars who hold that dividends are relevant to firm value. They include Watts (1973), Lintner (1956), Miller (1987), Aharony & Swary (1980), Asquith & Mullins (1983), Pettit (1972), Benartzi, Mischealy, & Thaler (1997). Majanga (2015) and Sharif et al., (2011) in the study showed dividend payout positively impacts share price. The conflicts in theoretical propositions and mixed results from prior studies create gaps for further studies on the subject. Prior studies in Nigeria failed to consider the peculiar Nigerian situation with galloping inflation which could impact firm value. This study fills that gap and considers dividend payout, macroeconomic factor and its impact on firm value. Therefore, the aim of the study is to ascertain the effect of dividend and inflation on firm value

## Literature Review

### Theoretical Framework

Many theoretical propositions have been made in finance literature to explain the concept of firm and what determines its value. Modigliani and Miller (1958) through the irrelevance of capital structure proposed that the funding arrangement of a firm does not impact the value of the firm. This implies that equity finance and borrowing have no influence on the value of a firm. This line of argument was extended by the authors (Modigliani and Miller (1961) that dividend payout policy does not affect firm value. **The Pecking order theory** by Donaldson (1961) and modified by Myers and Majluf (1984) specifies that Managers follow a hierarchy in financing and funding decisions as internal finance is cheaper and convenient. The theory is rooted on information asymmetry as cause of imbalance in transaction power. Firm managers have privileged and superior information on performance, risks, prospects and future potentials better than external stakeholders such as investors and creditors. Therefore, to compensate for information asymmetry, external information users require higher returns to mitigate the risk taken. According to Myers & Majluf (1984) the market will attach no significance to the issue of new equity. In the presence of asymmetric information, the firm may sometimes pass up a positive NPV project as the market does not value the project as the owners do and is unwilling to make capital available at its true risk-adjusted cost to the firm. This restriction is therefore circumvented by the owners by taking recourse to internal financing. This shows that existing shareholders will prefer to use available liquid assets to finance positive NPV projects rather than going in for equity through new shares offering. Further, in a situation where external financing is essential, debt is perceived by the firm to be safer than equity, since its market value does not change much over time. Titman & Wessels (1985) study shows that more profitable firms will tend to use less external financing and provides support for the pecking order theory. Event studies show that issue of equity is interpreted as bad news by the market, with significantly negative announcement date effects on equity prices. Thus, pecking order theory confirms that dividend policy affects value of the firm as investors prefer internal financing rather than equity. Low payout is synonymous with high retention of funds instead of equity financing. **Behavioral theory** explained that investors are attracted to dividend because of different behavioral factors such as age, retirement status, income and these demographic factors may determine investors' preferences. In furtherance of this behavioral theory, Shefrin (2010) asserted that low level income households, older and retired persons prefer firms with high dividend payout while young investors with moderate to high income bracket do not show much preference to high dividend paying firms. **The agency cost theory** suggests that, dividend policy is determined by agency costs arising from the divergence of ownership and control. Managers may not always adopt a

dividend policy that is value -maximizing for shareholders but would choose a dividend policy that maximizes their own private benefits. Making dividend payouts which reduces the free cash flows available to the managers would thus ensure that managers maximize shareholders' wealth rather than using the funds for their private benefits (DeAngelo et al., 2006). Furthermore, agency theory shows a negative relation exist between investment and dividend policy of the firm implying increase dividend payout reduces firm over-investment problem and result in increase in firm value. Abor (2006) opined that firms pay dividends to mitigate agency cost and by implication when institutional holding is higher, dividend payout ratio will be lower.

**The signaling theory** proposes that dividend policy can be used as a device to communicate information about a firm's future prospects to investors. Cash dividend announcements convey valuable information, which shareholders do not have, about management's assessment of a firm's future profitability thus reducing information asymmetry. Investors may therefore use this information in assessing a firm's share price. Lintner (1956) indicates that companies have propensity of increasing the dividends when their managers were of the belief that increasing earning is permanent thereby sending signals that higher dividend payout is an indication of sustainability of earning in the long run from shares. Dividend policy under signaling model is therefore relevant (Al-Kuwari, 2009). **Bird in hand theory** proposes that a relationship exists between firm value and dividend payout. It states that dividends are less risky than capital gains since they are more certain. Investors would therefore prefer dividends to capital gains.

## Conceptual Framework

### Firm Value

There are many strategies to value a company depending on the intent and purpose of valuation. A firm can be valued for liquidation, for amalgamation or to write-off excess liability in case of diminution in capital and when assets do not fairly represent capital. A firm can also be valued for investment purpose in which case the future potential of the entity will determine the method being used. Assets alone do not constitute the yardstick for determination of the value of a firm as intangible assets such as goodwill, patents, franchises, proximity to sources of raw material, intellectual capital is also part of the consideration. In the market, value is derived based on the price that it is being offered and the price which the investors are willing to buy an existing share at a given period of time. Thus, share valuation in the market is driven by multiple factors and not limited to tangible assets. Outside the stock market a company can be sold based on its liquidation value in which case the historical and the realizable value of the assets of the firm is the major consideration. For investors assessing the future potentials of a firm, dividend valuation model can be utilized which considers the present value of future streams of income based on the cost of capital. Accurate determination of firm value under this scenario is a function of accuracy in determining future cash flows. The dividend model and contribution to firm value is a subject of debate. First, un-distributable profit is retained and use for internal financing for growth and stability of the firm. Second, a firm will still have value whether dividend is paid or not in the circumstance that retained earnings are ploughed back into the business to enhance asset base and cash flows to generate future earnings. Thirdly, reinvested earnings enhance capital appreciation and some investors prefer capital gains to dividends. Shefrin (1984) further conclude that shareholders prefer series of small gains rather than one-time big gain such as capital gain. Therefore, investors are willing to pay higher price for firm with dividend payment. Black (1990) also indicate that shareholders

more prefer dividend payout because it prevent them from consuming their own capital Dividend paid is valuable to shareholders as it enhances cash flow. While it is a widely held belief that dividend payments carry information which influences decision by investors and drives value in the market, this position is not always justified as questionable financial performance can dampen investors interest

## **Market Capitalization**

Market capitalization, which may also be referred to as market cap, represents how much a firm is worth in the publicly traded markets. It illustrates the value at which investors are placing on a firm at a given time. Market cap can be calculated by multiplying a stock's market value by the number of shares that a firm has outstanding, the latter of which are common stock shares that have been issued for trading in the public markets.

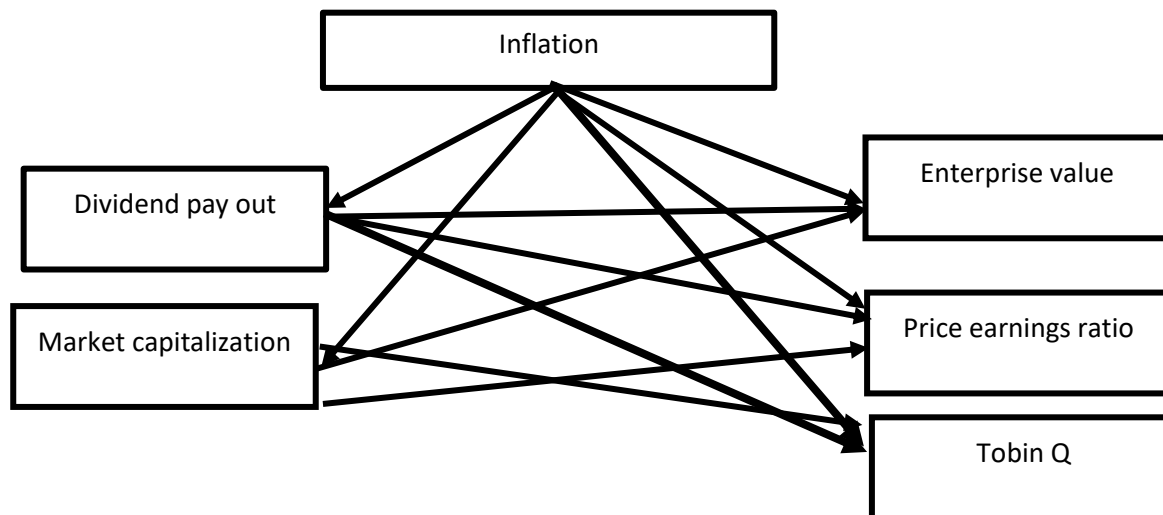
## **Dividend**

Dividend is the share of profit that is paid to shareholders. It is also the proportion of profits that are distributed to the shareholders in an amount that is proportional to the number of shares that is owned. A dividend paying firm is adjudged profitable as payment of dividends are expected to be made through gains derived from business activities. It is sometimes argued that dividend payment is a signal that firms are doing well and that there are a lot of factors that impact dividend payments. These factors are the funding and financing need of the entity, the tax bracket of the shareholders and the intent of Managers depending on the type of signals they want to send to the market. The firm's value can be seen on the firm's ability to pay dividends). There are circumstances when dividend is not distributed by the firm because the firm's desire is to plough back the profits earned into the business. The amount of the dividend may affect the stock price. Dividend payment is assumed to affect share price. High dividend is expected to make share prices high and vice versa. The capacity of a firm to pay dividend is associated with its capacity to make profit. When firms make high profit it is expected to be able to pay high dividends. Huge dividends in turn is expect to result in high firm value. The size of dividends paid to shareholders is a function of the dividend policy of each firm which is based on many factors. Gitman (2003) suggest that firm level factors that impact dividend policy are cash position, debt covenants, growth prospects of the firm, liquidity and majority shareholders control power. Dividends contain information that indicate the firm's future prospects. The greater the dividends distributed to shareholders, the firm's performance would be considered the better, and ultimately an assessment of the firm as reflected by the share price will be the better. Bhattacharya (1979) argued that high dividend indicate high amount of cash flows in future and growth prospects thereby indicating higher future dividends and higher firm value.

## **Inflation**

Inflation is a general increase in the money supply. Inflation affects the whole economy of the countries. This shows that inflation was very dangerous for all countries. In short run there was inverse relationship of inflation between unemployment, increase in inflation leads to decrease in unemployment and vice versa (Katria, 2010). In a forecast context, projections of overall consumer price inflation often converge to recent values of inflation measured from consumer prices apart from food and energy prices (Kiley, 2008). Interest rate is used to control the inflation rate because when then prices of products become high it's discourage the customers. This situation is not good for economy.





**Figure 1: Conceptualized Framework of Dividend payout, Market capitalization and Market value of Manufacturing Firms in Nigeria**

### Empirical Review

The empirical evidence revealed in the literature show that firm value is dependent on endogenous as well as exogenous factors. However, attempts to situate role of dividends in firm value through scholarly studies and theoretical postulations revealed mixed result. According to Miller and Modigliani (1961) through dividends irrelevant theory, dividend decision does not affect the firm's value and is therefore irrelevant under assumptions of perfect market conditions; no taxes, no transaction costs, perfect competition and costless information. Other renowned finance scholars who agreed with Modigliani and Miller (1961) are De Angelo et al. (1996), Lang and Litzenberger (1989). There are other scholars who hold that dividends are relevant. They include Watts (1973), Lintner (1956), Miller (1987), Aharony and Swary (1980), Asquith and Mullins (1983), Pettit (1972), Benartzi, Michealy, and Thaler (1997). Theoretical postulations under the Bird in Hand theory, signaling theory support findings by scholars that dividend is relevant for firm value. This conflicting theoretical propositions and mixed result from prior studies exacerbate the debate on the subject.

Obayagbona and Akinuli (2024) assessed the impact of dividend policy on Nigerian consumer goods companies, by examining the effects of dividend payout, dividend yield, and firm size on financial performance over a ten year period (2012-2021). The findings indicate that dividend payout, dividend yield, and firm size exerted a positive and significant influence on return on assets, while firm liquidity demonstrated a substantial adverse influence on the financial performance

Sanni (2022) investigated the effect of dividend policy on the financial performance (Return on Assets) of firms listed in food and beverage industry in Nigeria over a period of ten years, from 2010 to 2019. Panel data from audited financial statements from 14 purposely selected firms in the industry were extracted on Return on Assets (ROA) used to proxy financial performance. Data were also extracted on Dividend Payout Ratio (DPR); Dividend Yield (DY); Retention Ratio (RR) and Dividend Coverage Ratio (DCR) used to proxy dividend policy. An analysis of the data showed that they are stationary at level and that co-integration exists among them. Hausman test confirmed that fixed effect model was most appropriate. All the four variables used to proxy dividend policy jointly significantly affect performance though their individual results are mixed. DPR exerts a positive (coefficient = 1.886) and

significant ( $p = 0.008$ ) influence on performance. DY exerts a negative (coefficient = -0.002) and insignificant ( $p = 0.311$ ) influence while RR exerts a negative (coefficient = -2.002) and significant influence ( $p = 0.004$ ). DCR exerts an insignificant ( $p = 4.31$ ) positive influence (coefficient = 0.17

Mustapha and Abdulahi (2021) examined effect of dividend policy on financial performance of listed deposit money banks in Nigeria for the period 2015 to 2021. The result indicates that dividend per share significantly and positively affect performance it also showed that firm size is negative and significantly related with firm financial performances.

examines whether companies with increasing dividends and companies with decreasing and constant Tuoye et.al (2023) examined dividend policy and performance of money deposit banks in Nigeria study revealed significant and positive relationship between earnings per share and dividend per share, positive significant relationship between firm size and dividend per share and also positive significant relationship between return on asset and dividend per share.

Wilcox (1984) found a significant relationship of dividend with share price. (Rappaport (1986; Downs (1991); and Sharma (2011)); Gordon (1963) argues that dividend policy does affect the value of firm and market price of shares. Sharma & Singh (2006) examined the relationship between dividends per share. They found that dividend per share is a major determinants of share price value. Rahim et al. (2010) found underinvestment occur when there was positive relationship between dividend policy and the firm value. There was a trade-off between firm value and decrease in investment as increase in firm's value was contributed by decreased in investment, increased dividend and stagnant debt ratio. It was argued that reduced investment happens because the management cautiously chooses only secured investments and distributes the excess cash to shareholders as dividends. Kamunde (2011) examined the impact of dividend payout ratio and on firm value of listed telecommunication companies in Kenya, Study revealed significant negative association between firm value and dividend payout. Amarjit *et al.* (2012) studied 333 American firms listed on the New York Stock Exchange for the period from 2009 to 2011 and found dividend per share impact share prices. Samuel *et. al.* (2013) examined effect of dividend policy on market value of shares in Kenya and found significant positive correlation between market share value and dividend payout, dividend growth rate and dividend policy. Putu et al. (2014) using Path Analysis found that profitability affect dividend policy and dividend policy has a positive effect on firm value. Tiwari and Kumar (2015) study using panel regression found that dividend per share is a driver of firm value. Ayako and Wamalwa (2015) analyze secondary panel data over the period 2002 to 2012 and found that dividend ratio had no statistically significant individual effects on firm value. They however, found that market capitalization had statistically significant individual effects on firm value. Balagobei (2015) studied the nexus of dividend policy and shareholder's wealth using a sample size of twelve firms. Shareholder's wealth proxy was earnings per share while dividend per share, payout ratio and Returns on equity were the independent variables. Study revealed payout ratio, dividend per share and Returns per share significantly and positively relate with shareholders' wealth. Rauf (2015) identifies the possible factors that influence share prices for the listed banks in Colombo stock exchange over the period 2005-2014. He selected dividend per share, dividend payout, price earnings ratio as potential determinants of share prices. Employing the regression and correlation analyses he found positive correlation between the dependent and independent variables. Anton (2016) in a study of Romanian capital market for the period 2001 to 2011 on effect of dividend payout on firm value concluded that a positive correlation coefficient exist between dividend payout ratio and firm value. Ramadan (2016) in a study of 77 firms listed on Amman Stock Exchange (ASE) 2000-2014

industrial firms in the. He examines the influence of twelve firm-specific variables on the firm value and found that, dividend per share, and pay-out ratio, have a statistically significant impact on the value of the Jordanian industrial firms listed at ASE. Rehman (2016), Lubis et al. (2017) Kasmiaati and Santosa (2019) dividend policy has a positive effect on firm value. Kanwal et.al (2017) examined association of dividend payout ratio and financial performance of Pakistani firms listed in Karachi stock exchange for the period 2008 to 2012 and analyzing the data using correlation analysis and liner regression analysis. Dividend payout ratio was the independent variable while net profit after tax, return on equity, and return on asset were proxies for performance. Findings of the study revealed dividend payout positively influenced performance of the firms. Sugiastuti et al. (2018) indicate that profitability and dividend policy have no significant positive effect on firm value. Santosa (2020) who examined the effect of dividend policy on firm value, states that dividend policy has a positive and significant effect on firm value. Mendisand and Wijesinghe (2021) studied impact of dividend payout on market and financial performances of listed firms on Colombo Stock Exchange from 2014 to 2019. Dividend payout was used as independent variable, control variables as earning volatility, Net working capital, Capital structure while Stock return and Market Value Added (MVA) were used as proxies for market performance while return on equity, return on Assets and Economic Value Added (EVA) are proxies for financial performance. Findings revealed that there is a significant positive influence of dividend payout on firm stock return, return on equity, return on assets and Economic value Added.

## Methodology

The study used the cross-sectional ex-post facto design and adopted census method of sampling to examine firms in the subsector of food and beverage, health care, cement. Building material, confectionaries, Pharmaceuticals are being studied. Census sampling does not require any sample size determination. A total of twenty-two firms were examined in a population of sixty-five manufacturing firms with complete data. Data were extracted from the financial statements of the firms studied. Firms with incomplete information were eliminated to avoid pollution of data. The sample size represents ninety five percent of the firms in the Food and Beverage, Household, building, cement, health care, confectionaries subsector in terms of number, size of assets and market capitalization.

## Measurement of Variables:

### Independent variables

$DIV_i, t$  = Dividends payout ratio of firm  $i$  in year  $t$  as a proxy of firm dividend policy.

MCP = Market capitalization which is shares multiplied by the market value as quoted in the Nigeria stock exchange

INF = Inflation: High inflation tends to make firms borrow instead of raising equity. We Expect Inflation and firm value are positively related. This is a macroeconomic index as published Federal Office of

### Dependent variable

The dependent variable for this study are:

#### Tobin Q

**Tobin Q (TOBQ)** = ratio expresses the relationship between market value of a firm and the cost of replacing the asset.



We adopt Chung and Pruitt's approximating formulation of Tobin's  $Q = MVE + PS + DEBT/TA$

Where:

MVE = Firm's stock price multiplied by number of outstanding equity shares.

PS = Value of a firm's outstanding preferred stock on liquidation

Debt = Sum of short-term liabilities minus short term assets plus the book value of long term-debt;

TA = Total book value of all assets.

### Price to Earnings Ratios (PERR)

This ratio is a yardstick for measuring times share price cover earnings per share in a particular period thus providing an indication for payment by investors for each financial unit of measurement. The method is popular in judging or evaluating financial results. The ratio gives an indication of market perception of a firm's share and is calculated using current price and earnings.

$$\text{PE ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

Enterprise value

ENVA= Enterprise value

/SALES

### Model Specification

$$\text{TOBQ} = \alpha_0 + \alpha_1 \text{MCP} + \alpha_2 \text{DIV} + \alpha_{11} \text{INF} + U_{1,t} \quad (\text{i})$$

$$\text{PERR} = \beta_0 + \beta_1 \text{MCP} + \beta_2 \text{DIV} + \beta_3 \text{INF} + U_{2,t} \quad (\text{ii})$$

$$\text{ENVA} = w_0 + w_1 \text{MCP} + w_2 \text{DIV} + w_3 \text{INF} + U_{3,t} \quad (\text{iii})$$

### Result

#### Descriptive Statistics

The result obtained from data analysed on descriptive statistics is presented on table 4.2 below:

Table 1. Descriptive Analysis

	Mean	Median	Max	Min	Std. Dev.	Jarque-Bera	Prob	Obs
ENVA	1.327519	1.033682	6.077683	-0.37589	0.908881	277.9778	0	103
TOBIN	66564.33	680.3367	2576213	0.624091	379552.2	4718.986	0	103
PERATIO	89.6115	7.733333	8100	-64.3125	797.2917	42825.27	0	103
MCP	3.02E+11	2.28E+10	3.73E+12	63600000	7.45E+11	673.7763	0	103
DIVPAY	2.24602	0.352113	190	-5	18.71225	42366.79	0	103
INFL	11.54359	9.01	16.5	8.06	3.752132	16.58693	0.0003	103

Table 1 shows the descriptive statistics for the variables and as observed, the mean for ENVA is 1.3275 with maximum and minimum values of 6.0776 and -0.375. The mean value for TOBIN is 66564.33 which is high and indicates that the firms tend to have high market valuation with maximum and minimum values of 2576213 and 0.624091 respectively. PE-RATIO has mean value of 89.6115 which is quite high with maximum and minimum values of 8100 and -64.3125 respectively.. The mean for MCAP stood at 3.02e+11 with maximum and minimum values of 3.73e+12 and 63600000

respectively. DIVPAY has a positive mean value of 2.246 with maximum and minimum values of 190 and -5 respectively.. The mean for INFL stood at 11.5436 with maximum and minimum values of 16.5 and 8.06 respectively.

### Stacked Cross-section Trend of Variables

The stacked cross section average movements in the variables, reveals the presence of year on year fluctuations across the cross-sections for a number of the variables. ENVA shows significant heterogeneity in its behaviour across all firms but in the case of TOBIN Q, there is evidence of concentration of high values at a period for most of the firms as shown in the peaked nature of the graph. The same behaviour is also observed for PERATIO as considerable concentration is observed to be peaked at a year indicating less firm to firm and year on year heterogeneity. MCAP is observed to have witnessed high value in 2017, following a period of low market activity at 2014, 2015 and 2016. Dividend policy is a very critical issue for most companies because of shareholder interest. DIVPAY exhibits a rather distinct pattern across the stacked cross-sections indicating significant firm heterogeneity INFL show less variability year on-year as the rate as appeared stable at double digit and finally firm size as expected depicts significant firm heterogeneity

### Pearson Correlation Result

The result showing correlation amongst the variables are presented on Table 2 below

Table 2: Pearson Correlation table

	ENVA	TOBIN	PERATIO	LEV	MCP	EFFI	ATANG	DIVPAY	LIQ	INFL	FSIZE
ENVA	1										
TOBIN	0.3242	1									
<b>Prob</b>	0.0008										
PERATIO	-0.080	-0.017	1								
<b>Prob</b>	0.4211	0.8644									
MCP	0.2875	0.6465	0.04945	-0.25	1						
<b>Prob</b>	0.0032	0.000	0.6199	0.011							
DIVPAY	-0.083	-0.0172	0.99899	0.15	0.0469	-0.06	-0.031	1			
<b>Prob</b>	0.4031	0.8631	0.000	0.132	0.6382	0.519	0.7568				
INFL	0.0094	0.0838	0.10817	-0.02	-0.015	-0.04	-0.117	0.1	0.0996	1	
<b>Prob</b>	0.9251	0.4001	0.2768	0.857	0.8771	0.728	0.2413	0.3147	0.3167		

Table 2. Shows the Pearson product moment correlation and the significant p-values for the variables. The result as presented in table 4.2 and it shows that ENVA is positively correlated with MCAP ( $r=0.2875$ ,  $p=0.003$ ), INFL ( $r=0.0094$ ,  $p=0.9251$ ) but negatively correlated DIVPAY ( $r=-0.083$ ,  $p=0.4031$ ). In addition, the table shows the correlations between TOBIN Q and the other independent variables and as observed TOBINQ is positively correlated with MCAP ( $r=0.6465$ ,  $p=0.000$ ), INFL ( $r=0.0838$ ,  $p=0.4001$ ) but negatively correlated with DIVPAY ( $r=-0.0172$ ,  $p=0.8631$ ) In addition, the table shows the correlations between PERATIO and the other independent variables and as observed

PERATIO is positively correlated with MCP ( $r=0.049$ ,  $p= 0.6199$ ), DIVPAY ( $r=0.998$ ,  $p= 0.000$ ), INFL ( $r=0.1082$ ,  $p= 0.2768$ ). The positive correlations indicate that a rise in one variable will result in a rise in the other and vice versa. However, corrections are not best suited for functional dependence causality and hence the study proceeds to perform the panel regression analysis.

### Multicollinearity Test

The test is carried out for multicollinearity amongst the variable of study Variance inflation test is conducted for this purpose and result is presented on table 4.4 below:

**Table 3. Variance Inflation Factors**

Variable	Variance	VIF
MCP	2.49E-27	2.189849
DIVPAY	1.90E-06	1.0564
LIQ	2.19E-05	1.056286
INFL	4.63E-05	1.043943

Multicollinearity among the independent variables implies that they are perfectly correlated. If there exists perfect correlation between the independent variables, the parameter coefficients will be indeterminate. In the presence of multicollinearity, there will be large standard errors of the estimated coefficients. In this study, the variance inflation factor test is constructed to test for multicollinearity. The rule for the VIF is that the values less than 10 indicates the absence of serious collinearity. As shown, the VIF values of all the variables are all less than 10 and hence there is no threat of multicollinearity amongst the variables.

### Dividend, Market capitalization and Enterprise Value

The econometric relationship for determinants of firm value and Enterprise value is stated as follows:

$$ENVA = w_0 + w_1MCP + w_2DIV + w_3INF + U_{3,t}$$

The regression result for this model is stated on table 4.4 below:

**Table 4. Dividend, Market Capitalization and Enterprise Value**

Variable	Aprori Sign	FE Model	RE Model
C	+	0.9820 (0.4590) [0.0358]	1.2202 (0.2746) {0.000}
MCP	+	-6.63e+14 (4.63e-14) {0.1566}	4.16e-14 (4.74e-14) {0.3827}
DIVPAY		-0.0009 (0.0002) {0.000}	-0.00102 (0.0013) {0.4373}
INFL		-0.00209 (0.0012) {0.0972}	-0.00617 (0.0064) {0.3245}
Model Parameters			

R <sup>2</sup>		0.9834	0.9290
Adjusted R <sup>2</sup>		0.9766	0.9214
F-statistic		144.582	121.775
Prob(F-stat)		0.000	0.00
Durbin-Watson		1.99	0.9349
<i>Model Diagnostics</i>			
Hausman	0.000		
Ramsey Reset test		0.410	
Period Hetero.Test		0.112	
Cross-section Hetero.Test		0.709	
Pesaran CD for serial correlation		0.483	

Table 4 show the regression results and white adjusted standard errors was employed to control for potential heteroskedasticity in the estimation and hence the estimation results are free from heteroskedasticity while the Cochrane Orcutt autoregressive (AR) procedure was employed to correct for serial correlations where it is detected. The Hausman test statistic with p-value = 0.00, indicates that the FE is the preferred model to the random effects indicating the presence of correlations between the errors and the explanatory variables which is the key assumption of the fixed effects (Hausman, 1998). Both panel period heteroskedasticity and cross-sectional heteroskedasticity test confirm that the estimations were found to be free from such. The Peseran cross-dependence test was employed to confirm the threat of the serial correlation in the errors and the statistic reveals the absence of cross-section dependence in the residuals. The Ramsey reset test confirms that the model is correctly specified. The R<sup>2</sup> is 98.34% with and adjusted value of 97.66%. The F-stat of 144.582 (p-value = 0.00) and significant at 5%. The Durbin Watson value of 1.99 suggest that the presence of serial correlation between the errors is unlikely in the model. MCP has a negative effect (850.4034) though not significant at 5% (p=0.01566). The effect of DIVPAY is negative (-0.0009) and statistically significant (p=0.000) at 5. The effect of INFL is negative (-0.00209) and statistically significant (p=0.0972) at 10%.

### Dividend, Market Capitalization and Tobin Q

The econometric relationship for dividend, market capitalization and Tobin as firm value is as stated below:

$$TOBQ = \alpha_0 + \alpha_1 MCP + \alpha_2 DIV + \alpha_3 INF + U_{1,t}$$

The regression result based on the model specified above is stated on Table 5:

Table 5. Dividend, Market capitalization and TOBIN Q

<i>Variable</i>	<i>Aprori Sign</i>	<i>FE Model</i>	<i>RE Model</i>
C	+	3979154. (177449.9) [0.000]	961664.2 (79261.09) {0.000}
MCP	+	3.14e-08 (3.34e-08) {0.3504}	2.18e-07 (1.37e-08) {0.000}
DIVPAY		276.5317	-416.517

		(78.7190) {0.000}	(378.79) {0.2744}
INFL		6948.854 (1519.7) {0.000}	12250.1 (1866.9) {0.000}
Model Parameters			
R <sup>2</sup>		0.9418	0.7785
Adjusted R <sup>2</sup>		0.9179	0.753
F-statistic		39.3933	32.695
Prob(F-stat)		0.000	0.000
Durbin-Watson		1.7	0.5529
Model Diagnostics			
Hausman		0.000	
Ramsey Reset test		0.291	
Period Hetero.Test		0.893	
Cross-section Hetero.Test		0.1194	
Pesaran CD for serial correlation		0.110	

Table 5 show the regression results for TOBIN Q and identified corporate determinants. The Hausman test statistic with p-value = 0.038, indicates that the FE is the preferred model to the random effects indicating the presence of correlations between the errors and the explanatory variables which is the key assumption of the fixed effects (Hausman, 1998). The R<sup>2</sup> is 94.18% with and adjusted value of 91.79%. The F-stat of 39.393 (p-value = 0.00) and significant at 5%. The Durbin Watson value of 1.7 suggest that the presence of serial correlation between the errors is unlikely in the model. MCP has a negative beta (3.14e-08) though not significant at 5% (p=0.3584). The effect of DIVPAY is positive (276.5317) and statistically significant (p=0.000) at 5%. INFL has a positive beta (6948.9) and statistically significant (p=0.000) at 5%.. Both panel period heteroskedasticity and cross-sectional heteroskedasticity test confirm that the estimations were found to be free from such. The Pesaran cross-dependence test was employed to confirm the threat of the serial correlation in the errors and the statistic reveals the absence of cross-section dependence in the residuals. The Ramsey reset test confirms that the model is correctly specified.

### Dividend, Market Capitalization and Price earnings ratio

The econometric model for dividend, market capitalization and price earnings ratio is stated below:

$$PERR = \beta_0 + \beta_1MCP + \beta_6DIV + \beta_3INF + U_{2,t}$$

Based on this relation, regression result to ascertain the nature of relationship between the variables of study is presented on Table 6 below



Table 6. PERR and Value Determinants

<i>Variable</i>	<i>Aprori Sign</i>	<i>FE Model</i>	<i>RE Model</i>
C	+	-52.2849 (8.5441) {0.000}	74.9118 (45.324) {0.1018}
MCP	+	1.27e-11 (4.28e-08) {0.0040}	4.05e-12 (7.77e-12) {0.6040}
DIVPAY		42.639 (0.0229) {0.000}	42.4822 (0.2076) {0.000}
INFL		0.7194 (0.2315) {0.0027}	1.8438 (1.01629) {0.0729}
<i>Model Parameters</i>			
R <sup>2</sup>		0.999	0.998
Adjusted R <sup>2</sup>		0.999	0.997
F-statistic		1005.57	4816.000
Prob(F-stat)		0.000	0.000
Durbin-Watson		2.2	2.5
<i>Model Diagnostics</i>			
Hausman	0.000		
Ramsey Reset test		0.531	
Period Hetero.Test		0.387	
Cross-section Hetero.Test		0.681	
Pesaran CD for serial correlation		0.295	

Table 6 show the regression results for Price earnings ratio and identified value determinants. The Hausman test statistic with p-value = 0.000, indicates that the FE is the preferred model to the random effects indicating the presence of correlations between the errors and the explanatory variables which is the key assumption of the fixed effects (Hausman, 1998). The R<sup>2</sup> is 99% which indicates a very good fit validating the choice of variables selected as determinants of PERATIO. The F-stat of 1005.57 (p-value = 0.00) and significant at 5%. The Durbin Watson value of 2.2 suggest that the presence of serial correlation between the errors is unlikely in the model. The analysis of coefficients reveals that MCP has a negative beta (1.27e-011) and significant at 5% (p=0.004). The effect of DIVPAY is positive (42.639) and statistically significant (p=0.000) at 5%. LIQ has a positive beta (0.0666) though not statistically significant (p=0.7958) at 5%. INFL has a positive beta (0.7194) and statistically significant (p=0.00) at 5%. heteroskedasticity and cross-sectional heteroskedasticity test confirm that the estimations were found to be free from such. The Peseran cross-dependence test was employed to confirm the threat of the serial correlation in the errors and the statistic reveals the absence of cross-section dependence in the residuals. The Ramsey reset test confirms that the model is correctly specified.

### Summary of Regression Result

The summary or regression results from Table 4, 5 and 6 is presented on 7 for ease of comprehension and application.

Table 7: Result Summary

<i>Variable</i>	<b>ENVR MODEL</b>	<b>TOBIN Q Model</b>	<b>PERATIO Model</b>
C	0.9820* (0.4590) [0.0358]	3979154* (177449.9) [0.000]	-52.2849* (8.5441) [0.000]
MCP	-6.63e+14 (4.63e-14) {0.1566}	3.14e-08 (3.34e-08) {0.3504}	1.27e-11* (4.28e-08) {0.0040}
DIVPAY	-0.0009* (0.0002) {0.000}	276.5317 (78.7190) {0.000}	42.639* (0.0229) {0.000}
INFL	-0.00209** (0.0012) {0.0972}	6948.854* (1519.7) {0.000}	0.7194* (0.2315) {0.0027}

The summary of the results reveals that looking at the proxies for market value; ENVR, TOBIN Q and PERATIO, the estimation shows that MCP is a significant predictor of PERATIO at 5%, DIVPAY shows up as a significant predictor of both PERATIO and TOBINQ at both 5% significant level.. INFL is observed to be a significant determinant of TOBIN Q and PERATIO all at 5% significant level and PERATIO at 10% level.

### Test of Hypotheses

#### **HO1: There is no significant relationship between market capitalization and Tobin Q.**

Based on Table 5 with positive co-efficient of 3.14e-08 and P-value of 0.3504 > 0.05 Indicating a positive insignificant relationship of market capitalization with Tobin q. Based on result we accept the hypothesis that there is no significant relationship between MCP and Tobin Q

#### **HO2: There is no significant relationship between dividend and Tobin Q.**

Based on Table 5 with positive co-efficient of 276.5317 and P-value of 0.0000 < 0.05 Indicating a positive significant relationship of profitability with Tobin Q. Based on result we reject the hypothesis that there is no significant relationship between profitability and Tobin q

#### **HO3: There is no significant relationship between market capitalization and Price Earnings Ratio**

Based on Table 6 with positive co-efficient of 1.27e-11 and p-value of 0.0040 < 0.05  
0.05 Indicating a positive significant relationship of market capitalization with Price earnings ratio. Based on result we reject the hypothesis that there is no significant relationship between MCP and Price earnings ratio.

**HO4: There is no significant relationship between dividend and Price Earnings ratio.**

Based on Table 6 with positive co-efficient of 42.639 and P-value of  $0.0000 < 0.05$  Indicating a positive significant relationship of dividend with price earnings ratio. Based on result we reject the hypothesis that there is no significant relationship between dividend and price earnings ratio.

**HO5: There is no significant relationship between market capitalization and Enterprise Value.**

Based on Table 7 with negative co-efficient of  $-6.63e+14$  and P-value of  $0.1566 > 0.05$  Indicating a negative insignificant relationship of market capitalization with Enterprise Value. Based on result we accept the hypothesis that there is no significant relationship between market capitalization and Enterprise

**HO6: There is no significant relationship between dividend and Enterprise Value.**

Based on Table 7 with negative co-efficient of  $-0.0009$  and P-value of  $0.0000 < 0.05$  Indicating a negative significant relationship of dividend with Enterprise Value. Based on result we reject the hypothesis that there is no significant relationship between dividend and Enterprise Value

**Discussion of Findings**

The objective of the study was to ascertain the nature of relationship between, market capitalization, and dividend and market value measured by Tobin Q, price earnings ratio and Enterprise value multiple. The study found a positive significant relationship of dividend with Tobin q implying that increases in firm dividend increases Tobin q. Michaely and Roberts (2007) dividend positively impact firm value. Sharma and Singh (2006) found that dividend payout is a determinant of firm value. Samuel et. al. (2013) found significant positive correlation between market share value and each of dividend payout, dividend growth rate and dividend policy. Sorin (2016) employing a fixed effects model found that dividend pay-out ratio positively influences firm value after controlling for other firm-specific variables. Tiwari and Kumar (2015) dividend per share is a driver of firm value. The result of our study conforms to findings by Shin-Ping and Hui-Ju (2011), Sharma and Singh (2006), Samuel et.al, (2013) Ganton (2016); Tiwari and Kumar, (2015) and Gordon (1963) which argues that dividend policy does affect the value of firm and market price of shares while contrasting with the study of Ayako and Wamalwa (2015,) which reported that dividend ratio had no statistically significant individual effects on the firm. . Dividend and market capitalization also have a significant positive association with price earnings ratio. The indication of this finding is that the higher the dividend and market capitalization the higher the speed which it is converted by the market to share price. This conforms to signaling theory which emphasizes that dividend could be used as a signal to the market and conveys an information about the future prospects of the firm to the would-be investors. Our study contrast with that of Gharaibeh and Qader (2017) which found insignificant negative relationship of dividend with firm value. Our study also confirms that dividend has significant negative association with enterprise value. While market capitalization insignificantly and negatively affects enterprise value. This indicates a trade-off between impact of dividend and market capitalization on market value measured by Price earnings ratio and Tobin Q and enterprise value. Increase in dividend increases Tobin Q and Price earnings ratio and a reduction in enterprise value. Our study confirms that the speed with which firms convert earnings to market valuation is affected by market price is significant but insignificantly affect enterprise value and Tobin Q thus confirming that market capitalization has a weak association

with firm value. The study confirms that changes in prices affect market value measured by Tobin Q and the speed which earnings are converted to market price based on price earnings ratio. The reason is not farfetched as macro-economic conditions play a role in market reactions. Increases in price within country impact on pricing of shares and securities resulting in cost push inflation. At this juncture we must discuss the negative effect and the direction of movement of the variables of study concerning the relationship between market capitalization, dividend and inflation on ENVA, Tobin Q and inflation. While dividend, market capitalization and inflation impact price earnings ratio and Tobin q positively the reverse impact is noticed on Enterprise value. This suggests that increases in inflation, dividend and market capitalization reduces enterprise value. A trade-off effect which requires deeper analysis and further studies.

## Conclusion

The objective of the study was to determine the nature of relationship between market capitalization, dividend and firm values proxied by Tobin q, price earnings ratio and Enterprise value. The study found a positive relationship of market capitalization and dividend on Tobin Q and Price earnings ratio. Dividends significantly impact Tobin Q and price earnings ratio. We conclude that dividend is a determinant of firm value and also plays a role in the speed which earnings are converted to share price for capital gains. We also conclude that market capitalization has a weak positive relationship with market value. Inflation is noted to have a positive relationship with Tobin Q and Price earnings ratio. Based on findings we conclude inflation impact firm value.

## Recommendations

Based on findings of the study we recommend that depending on the corporate goal of the firm Managers should pay special attention to and dividend policy with the objective of maximising value to stakeholders.

## Implications for Theory and Practise

The implication of our study to Practise is that, market capitalization and dividend play a significant role in determining firm value. Inflation as a Macroeconomic factor affects firm value. Therefore, policy makers should be conscious of the impact of inflation on firm value as well as that of dividend policy as both affects firm value. Theoretically our study supports the signalling theory and Bird in hand theory which specifies that dividends have impact on firm value and negates Modigliani and Miller's irrelevance theory of dividends.

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