

Determinants of the Value of Listed Consumer Goods Companies in Nigeria

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Abstract— The study examines the effect of dividend per share, earnings per share, firm size, leverage, and profit after tax on the value of listed consumer goods firms in Nigeria. Panel regression was used to analyze data for the period of 2012 to 2019. A sample of fifteen (15) consumer goods companies was selected using the purposive sampling technique. The results of the study indicated that earnings per share and firm size have a significant effect on the value of listed consumer goods companies in Nigeria measured by the market price per share. Dividend per share, leverage and profit after tax of consumer goods companies did not significantly affect their value measured by the market price per share. The study concluded that the major determinants of firm value are the size of the firm and its earnings per unit of shares. The study recommended that managers of consumer goods companies should engage in those activities that will boost their earnings per unit share to create value for their shareholders.

Keywords— Earnings per share, dividend per share, firm size, leverage, profit after tax.

I. INTRODUCTION

In the present highly competitive business environment, companies leave no stone unturned for the right valuation. Company valuation has cracked the attention of corporate financial analysts (Bhullar, 2017). Company valuation is important because it is an indication of the wealth that has been created for stockholders on their investments. The basic economic objective of a firm capitalist in nature is to maximize the wealth of its owners through increased profitability and market share price. Before a person invests in a company in any capital market. The investor must acquire information on the capital market. When a capital market is informative efficient prices of securities reflect all relevant information. For very efficient capital markets information is quickly and accurately reflected in share price (Sampurna & Romawati, 2019). Sudiyatno, Puspitasar, Suwarti and Asyif, (2020) opined that information on share prices helps investors in their investing policies.

Sudiyatno, Puspitasar, Suwarti and Asyif, (2020) argued that the fundamental aspect of a firm becomes part of its basic valuation. This is because the value of a company shares reflects both the intrinsic value of the company and expectations about its prospects. Some factors influencing a company's value may be out of the company's control. It is however important for companies to identify those factors that influence the value that is within their control to be able to control them to get a maximal valuation. Du, Wu and Liong, (2016) argued that corporate size, corporate liquidity and innovation can affect firm value.

Consumer goods companies listed on the Nigerian stock exchange have witnessed strong volatility in their share prices in recent years despite their huge earnings. Previous studies including Sudiyatno, Puspitasar, Suwarti and Asyif, (2020) have argued that the share price of a company is a reflection of its value to shareholders. It is based on the volatility in their share prices that this study investigates the determinants

of the firm value of consumer goods companies measured in their share prices.

II. LITERATURE REVIEW

Firm Value

Firm Value has been viewed by several authors and scholars. Kusiayah and Arief (2017) view firm value as certain conditions that have been achieved by a company after going through a process of several years, since the company was founded until now. In a similar vein Awan, Lodhi, and Hussain, (2018). Stated that firm value is a sum of the values of a company's total assets that make the market value. It reveals the total wealth of the owners of the entity. Firm value is the total value of the company's asset that determines the market value of a company, it indicates the total wealth to the company (Awan, Lodhi, and Hussain, 2018). Firm value can also be seen as the present net worth of a company often measured by its net book value or its present market value.

Determinants of Firm Value

Empirical evidence suggests that firm value could be determined by several factors Awan, Lodhi, and Hussain, (2018). Identified some possible determinants of firm value to include future performance, financial leverage, financial returns, net profit, and total assets among others. Endri and Fathony (2020) stated that the determinants of firm value could include; Dividend per share, Return on Assets, company size, debt to equity ratio, and growth. For this study Dividend per share, Earnings per share, firm size, leverage, and profit after tax will be considered as possible determinants and their effect on the firm value measured by the market price per share analyzed.

The value of consumer goods companies in Nigeria continues to fluctuate without a clear indication of what factors are responsible for these fluctuations. It is pertinent to empirically investigate the factors that contribute to the fluctuation of the firm value measured by the market price per

share in the consumer goods sector of the Nigerian Stock Exchange.

Empirical Evidence

Endri and Fathony (2020) analyzed the effect of dividend policy, profitability, firm size, leverage, and growth on firm value in financial sector firms listed on the Indonesia Stock Exchange. The study used a sample of 21 companies. Data were analyzed using panel regression. The results of the study indicated that firm size, leverage, and growth did not have any significant effect on firm value in the financial sector companies in the period 2013-2017 while dividend policy and profitability proved to have a significant positive effect on firm value in financial sector companies for the period under investigation.

Husna and Satria, (2019) analyzed the effect of Return on assets, debts to asset ratio, current ratio, firm size, and dividend payout ratio to the value of manufacturing companies listed on the Indonesia Stock Exchange for the period 2013 -2016. The study used the purposive sampling technique and obtained a sample of 32 companies out of 138 firms that met the criteria. Multiple regression was used to analyze the data. The results indicated that return on assets and firm size affect firm value. While, the debt to asset ratio, current ratio, and dividend payout ratio does not affect firm value.

Sampurna and Romawati (2019) examined the determinants of the firm value of listed manufacturing companies in the Indonesia Stock Exchange during five years. The study used a sample of 84 companies listed on the Indonesia Stock Exchange. Panel regression was used to analyze data. The results of the study indicated that firm size return on assets and market to book value has a positive effect on firm value. The results also proved that debt to total assets has a negative significant effect on firm value. While institutional ownership has a negative insignificant effect on firm value.

Awan, Lodhi, and Hussain (2018) analyzed the importance of chemical industries of Pakistan and the major factors affecting their working and profitability. The study used a sample of 19 chemical companies listed on the Pakistan Stock Exchange. Multiple regression was used to analyze data. Results of the study indicated that firm value increases with an increase in networking capital and earnings per share while financial leverage, firm size and return on assets did not significantly affect stock prices.

Endrir (2018) analyzed the influence of capital structure, profitability, liquidity, and market share on company value. The study was conducted in the consumer goods sector of the cigarette sub-sector in Indonesia Stock Exchange for the period of 20012 – 2016. The study used a sample of 4 companies and multiple regression was used to analyze data. The results proved that capital structure and profitability have a positive and significant influence on firm value. Liquidity has a negative and insignificant influence on the value of the company. Market share has a positive but insignificant effect on firm value.

Oktarina (2018) examined the effect of profitability, capital structure, managerial ownership, and institutional ownership on the firm value of property and real estate companies listed on the Indonesia stock exchange for the period 2014 to 2017. The

sample was derived using the purposive sampling technique. Data were analyzed using multiple regression. The results of the study indicated that profitability, capital structure, and managerial ownership affect the firm value.

Gharaibeh and Qadar (2017) examined the endogenous (firm-specific) determinants of firm value as measured by Tobin's Q. A sample of 40 companies was selected. Data for the period (2005-2014) were analyzed using panel regression. The results of the OLS regression suggested that one-year lagged firm value, market capitalization, growth opportunities, profitability, and solvency of the firm have statistically significant relationships with firm value. Firm size, efficiency, and tangibility were found to have a positive but statistically insignificant relationship with firm value. Leveraging and dividend policy was found to have a negative thought statistically insignificant relationship with the value of the firm. The study suggests that firm size, efficiency, tangibility, leveraging and dividend policy are not significant determinants of the value of firms listed in the Saudi Stock Exchange.

Kusiyah and Arief (2017) studied the impact of investment decisions, financing decisions, and dividend policy on the value of commercial banks in Indonesia. The study used secondary data obtained from the company's financial statements for the period of 2011-2015. The study used panel regression to analyze data. Results of the study indicated that investment decisions and dividend policy affects the value of the company while funding decisions do not affect the value of the company, simultaneously, investment decisions, financing decisions, and dividend policy affect the value of the company. The results suggested a positive relationship between investing decisions, financing decisions, and dividend policy on firm value.

Sucuahi and Cambarihan (2016) investigated the influence between a company's profile such as industry, company age, and its profitability with the firm value using Tobin's Q model. The study used a sample of 86 diversified companies in the Philippines, annual reports for 2014 were analyzed using multiple regression. The results of the study revealed that only profitability shows a significant positive impact on a firm's value

Hermuningsih (2013) examined the influence of profitability, growth opportunity, and capital structure on firm value. The study used a sample of 150 listed companies on the Indonesian stock exchange from 2006 to 2010. Using Structural Equation Model (SEM) the study showed that profitability, growth opportunity, and capital structure positively and significantly affect a company's value. Capital structure intervenes in the effect of growth opportunity on a company's value but not for profitability.

Rajhans and Kaur (2013) Investigated the determinants of firm value creation for 16 companies of four sectors namely metal, fast-moving consumer goods (FMCG) information technology (IT), and the Automobile industry listed on the Bombay Stock Exchange from 2002 to 2011. A pooled regression model was applied to identify the significant factors. The results of the study indicated that capital structure doesn't influence the value of the firm, while the Weighted Average Cost of Capital (WACC) has a significant effect on firm value.

Fixed assets, net sales, and profit had a significant effect on firm value.

Cheng and Tzeng (2011) estimated the effect of leverage on firm values and contextual variables. A sample of 645 companies listed in Taiwan was selected. Data for the period 2000-2009 were analyzed using the generalized method of moment (GMM). The results of the study proved that the values of leveraged firms are greater than that of unleveraged firms. The study also revealed that leveraged is significantly positively related to the firm value before reaching the firm's optimal capital structure. The study tends to be stronger when the firm financial quality is better. The study however considered only leverage and failed to consider other determinants.

From the reviewed literature. Different factors have been identified as having an effect on firm value. This could be due to the different methodologies used and different economic environments where the research was carried out. Looking at the consumer goods sector in Nigeria as one of the largest sectors contributing to the nation's GDP, it is pertinent to examine the factors that affects the value of companies in this sector.

Objectives of the Study

The study seeks to investigate the determinants of the firm value of consumer goods firms listed on the Nigerian stock exchange. In specific terms it seeks to:

1. To examine the effect of Earnings per share (EPS) on the market price per share (MPS) of consumer goods firms listed on the Nigerian Stock Exchange.
2. To analyze the effect of Dividends per share (DPS) on MPS of consumer goods firms listed on the Nigerian Stock Exchange.
3. To assess the effect of Firm Size (FS) on the MPS of consumer goods companies listed on the Nigerian Stock Exchange.
4. To investigate the effect of Leverage (LV) on the MPS of consumer goods companies listed on the Nigerian Stock Exchange.
5. To analyze the effect of profit after tax (PAT) on Market price per share of consumer goods firms listed on the Nigerian Stock Exchange.

The Research hypothesis

The following five (5) research hypotheses are formulated in null form for testing to identify the potential factors determining the firm value of consumer goods firms listed on the Nigerian Stock Exchange.

H0₁: There is no significant relationship between EPS and MPS of consumer goods firms listed on the Nigerian Stock Exchange (NSE).

H0₂: There is no significant relationship between DPS and MPS of consumer goods firms listed on the Nigerian Stock Exchange (NSE).

H0₃: There is no significant relationship between FS and MPS of consumer goods firms listed on the Nigerian Stock Exchange (NSE).

H0₄: There is no significant relationship between LV and MPS of consumer goods firms listed on the Nigerian Stock Exchange (NSE).

H0₅: There is no significant relationship between PAT and MPS of consumer goods firms listed on the Nigerian Stock Exchange (NSE).

III. DATA AND METHODOLOGY

This study analyses data of 15 consumer goods firms listed on the Nigerian Stock Exchange for the period of 2012-2019. The eight year period is thought to be adequate for determining the determinants of firm value in the consumer goods sector in Nigeria.

The Study Model

This study uses panel regression to examine the effect of specific firm variables on the value of consumer goods firms in Nigeria measured by the market price per share (MPS). The independent variables include DPS, EPS, FS, LV, and PAT. The dependent variable used is firm value and it is measured by MPS as observed in the stock market for various years.

Firm Size: Agency theory suggests that managers are often tempted by incentives to expand in company size, buy assets that have nothing to do with their business because this action will enable them to maintain their positions as managers, Firm size (FS) is measured in the study by total assets.

Profitability: Profitability is the ability of the company to earn a profit it is measured in this study through profit after tax (PAT) and earnings per share (EPS).

Dividend: Dividends are payments out of a company's profit to its shareholders. Dividend payments in this study are measured by dividend per share calculated by total dividend declared/total number of shares (Kusiyah and Arief 2017).

Leverage: Debt is a source of external funding for companies and companies often find it attractive to recapitalize or restructure capital and develop their business operations. In addition, debt financing can increase earnings per share. However excessive debt can increase the financial risk and cause financial distress. Leverage in this study is measured by Total liabilities / Total assets Gharaibeh and Qadar (2017).

Firm Value: firm value is the dependent variable in the study and is measured by the market price per share as observed on the Nigerian Stock Exchange.

Below is the economic regression model estimated to test the above-mentioned study hypothesis

$$\text{LogMPS}_{it} = \beta_0 + \beta_1 \text{EPS}_{it} + \beta_2 \text{DPS}_{it} + \beta_3 \text{FS}_{it} + \beta_4 \text{LV}_{it} + \beta_5 \text{LogSPAT}_{it} + \mu_{it}$$

Where

β_0 = Intercept or constant

$\beta_1 - \beta_5$ = Coefficients of explanatory variables

μ = error term

log MPS = log of Market Price Per Share as observed in the stock market.

DPS = Dividend Per Share calculated by total declared dividends/Total number of shares

EPS = Earnings Per Share calculated by total earnings/total number of shares

FS = Firm Size measured by total assets

LV= firm leverage measured by total liabilities to total assets as a proxy of the leverage, capital structure, or debt ratio.

Log PAT=Log of Profit after tax

μ =error term

i_t = firm I at time t

IV. DATA ANALYSIS AND RESULTS

Descriptive statistics

	LOGMPS	EPS	DPS	FS	LV	LOGPAT
Mean	1.276496	3.516991	3.058934	10.54043	2.452172	8.005992
Maximum	3.192007	57.63294	63.50041	12.36791	21.91966	10.65976
Minimum	-0.337242	-3.233028	0.000000	8.417862	0.153013	0.000000
Std. Dev.	0.750259	9.397152	8.759585	0.815275	3.051087	3.386120
Skewness	0.442732	4.132523	4.671666	-0.678871	4.941847	-1.777645
Kurtosis	3.376578	20.69554	27.22823	2.910457	27.54288	4.577983
Jarque-Bera	4.629293	1907.216	3371.526	9.257406	3500.203	75.65057
Probability	0.098801	0.000000	0.000000	0.009767	0.000000	0.000000
Observations	120	120	120	120	120	120

Source: E View output in the study appendix

The descriptive statistic table above reveal a total number of observation for the study as 120. From the observed statistics, the means and standard deviations of the variables (LOGMPS, EPS, DPS, FS, LV & LOGPAT) are 1.276496, 3.516991, 3.058934, 10.54043, 2.452172, 8.005992 and 0.750259, 9.397152, 8.759585, 0.815275, 3.051087, 3.386120 respectively.

In respect to the maximum and minimum values, the study reveals the maximum values of 3.192007, 57.63294, 63.50041, 12.36791, 21.91966 and 10.65976 for LOGMPS, EPS, DPS, FS, LV and LOGPAT. Also, the study further reveal minimum values of -0.337242, -3.233028, 0.000000, 8.417862, 0.153013 0.000000 for LOGMPS, EPS, DPS, FS, LV and LOGPAT respectively.

The values for the means and standard deviation shows the average values, as well as the level of deviation in dividend policy and financial performance proxy of the listed firms in Nigeria with its' respectively skeweness test for normality. Data for the variables reveal skeweness values between -2 and +2 which signifies that the data are normalized at a platykurtic direction except data for EPS, DPS and LV which are not normally distributed. Furthermore, the Jarques-Bera test for stationarity reveal that the data for LOGMPS meets the stationarity criteria with a probability value >0.05 while data for both EPS, DPS, FS, LV, and LOGPAT require further checks to ascertain the level of stationarity since they have probability values of <0.05. The level of variation within the study data signifies the presence of firms' specific variation which needs to be observed. Thus, the Unit root test for stationarity and the cointegration test for long run adjustment of the variable means will be deployed to correct the non-normality of the data set.

Diagnostic statistics

Variable	LLC (Common P-value)	ADF (Individual P-Value)	Order	Cointegration criteria	
LOGMPS	0.0000	00000	I(1)	1 st Dif	0.0056
EPS	0.0000	0.0523	I(0)	Level	0.0056
DPS	0.0000	0.0001	I(1)	1 st Dif	0.0056
FS	0.0000	0.0017	I(0)	Level	0.0056
LV	0.0000	0.0362	I(0)	Level	0.0056
LOGPAT	0.0000	0.0032	I(0)	Level	0.0056

Source: E View output in the study appendix

From the diagnostic statistic table above, it is inferred that, EPS, FS, LV and LOGPAT are all stationary at level order of integration, except LOGMPS and DPS which are stationary at 1st difference order. As a result, the study further conducts a cointegration test to ascertain if there are adjustment for data fluctuation in the long run. From the table above, the cointegration result for both LOGMPS against EPS, DPS, FS, LV, LOGPAT model reveal that, there is no need for the study to adopt an Error correction model given the fact that, Kao cointegration criteria reveal a probability value of <0.05 which means; the mean of the variable data will adjust for corrections in the long run. Therefore, the study adopts the panel least square regression model.

Regression result for market price per share model Pre estimation test table

Criteria	Tau Stat.	Fisher Stat.	Chi-Sq. Stat	Prob.
Hausman Test			15.603994	0.0081
Breusch-Pagan LM	205.7661			0.000
Wald Test		636.9443		0.000
Wald Test			3821.666	0.000

Source: E View output in the study appendix

To enable the study chose the most appropriate estimated model in regards to the panel linear model for EPS, DPS, FS, LV, LOGPAT against LOGMPS, Hausman, Breusch-Pagan LM and Wald test are conducted. From the table able, the Hausman test result reveal a Chi Square (15.603994) probability value of 0.0081. This means the random effect model is not appropriate since the firms considered show no satisficing evidence of specific variation in the data set used for the study. As a result, the Breusch-Pagan LM test is considered to enable the study chose between the random effect test and the pooled effect test. The Breusch-Pagan LM test reveal a Tau statistic (205.7661) probability value of <0.05 which means that the pooled effect test is most preferred against the random effect test. Finally, to ensure that there are no time specific variation in the pooled effect result, the Wald test is conducted using a;

C(1,2,3,4,5,6)=0 criteria model for the variables. The Wald test result reveal a Chi-square (3821.666) and Fisher (636.9443) statistics probability values of <0.05 which means; there are no time specific variations contained in the data set. Thus, the pooled effect test is the most appropriate model to be adopted for the study.

Pooled regression result

Variable	Coefficient	Prob.
C	-2.377069	0.0002
EPS	0.036699	0.0287
DPS	0.008842	0.6141
FS	0.328084	0.0000
LV	-0.005902	0.7010
LOGPAT	0.006716	0.6622
R-squared	0.562906	
Adjusted R-squared	0.543735	
Durbin-Watson stat	0.298296	
F-statistic	29.36269	
Prob(F-statistic)	0.000000	

Source: E View output in the study appendix

For LOGMPS coefficient, if the independent variables are held constant, there will be a -2.377069 unit change in the LOGMPS of listed firms in Nigeria. But a unit variation in EPS coefficient will lead to approximately 3.6% increase in LOGMPS, and a unit variation in DPS will lead to approximately 0.8% increase in LOGMPS of the listed firms. Also, a unit variation in FS will lead to increase in LOGMPS by approximately 32.8% while a unit variation in LV will lead to decrease in LOGMPS by 0.5%. Finally, a unit variation in LOGPAT will lead to increase in LOGMPS by approximately 0.6%.

Result for the overall pooled model revealed an R square value of approximately 0.563. This means that 56.3% variation in market price per share of the listed firms is caused by fluctuations in EPS, DPS, FS, LV and LOGPAT while the remaining 43.7% is caused by other factors (Business operations) not included in this study. With an adjusted R square of approximately 0.544, it means that, when business operational factors are considered, this result will deviate by 1.9% (0.563 – 0.544= 0.019). The Durbin Watson statistics value of approximately 0.298 revealed proves that the model is free from autocorrelation issues (Gujarati & Porter, 2010).

Test of Hypotheses

The hypotheses formulated for this study are tested in this section of the study. Each of the hypotheses is tested using the p-values as presented in pooled regression table above. For each of the hypothesis, if the p-value is less than 0.05 (p<0.05), the null hypothesis is rejected in favour of the alternative hypothesis.

Test of Hypothesis One

HO₁: Earnings per share has no significant effect on the market price per share of consumer goods companies listed on the Nigerian Stock Exchange.

Results presented in the table above revealed a p-value of 0.0287 for EPS. Since 0.0287 <0.05, the null hypothesis is rejected and the alternative accepted. It is therefore concluded that earnings per share has a significant effect on the market price per share of consumer goods companies listed on the Nigerian stock exchange market.

HO₂: Dividend per share has no significant effect on the market price per share of consumer goods companies listed on the Nigerian Stock Exchange.

Results presented in the table above revealed a p-value of 0.6141 for DPS. Since 0.6141 >0.05, the null hypothesis is accepted and the alternative rejected. It is therefore concluded that dividend per share has no significant effect on the market price per share of consumer goods companies listed on the Nigerian stock exchange market.

HO₃: Firm size has no significant effect on the market price per share of consumer goods companies listed on the Nigerian Stock Exchange.

Results presented in the table above revealed a p-value of 0.0000 for FS. Since 0.000 <0.05, the null hypothesis is rejected and the alternative accepted. It is therefore concluded that firm size has a significant effect on the market price per share of consumer goods companies listed on the Nigerian stock exchange market.

HO₄: Leverage has no significant effect on the market price per share of consumer goods companies listed on the Nigerian Stock Exchange.

Results presented in the table above revealed a p-value of 0.7010 for LV. Since 0.7010 >0.05, the null hypothesis is accepted and the alternative rejected. It is therefore concluded that leverage has no significant effect on the market price per share of consumer goods companies listed on the Nigerian stock exchange market.

HO₅: Profit after tax has no significant effect on the market price per share of consumer goods companies listed on the Nigerian Stock Exchange.

Results presented in the table above revealed a p-value of 0.6622 for PAT. Since 0.6622 >0.05, the null hypothesis is accepted and the alternative rejected. It is therefore concluded that profit after tax has no significant effect on the market price per share of consumer goods companies listed on the Nigerian stock exchange market.

Discussion of Findings

This study examined the determinants of firm value in terms of EPS, DPS, FS, Lev and PAT on the market price per share of consumer goods companies listed on NSE. Findings from the study revealed that earnings per share and firm size have significant positive effect on the value of consumer goods companies measured by market price per share while dividend per share, leverage and profit after tax has no significant effect on the market price per share of consumer goods companies listed on the NSE.

Results however indicate a positive relationship between DPS and MPS. This implies that an increase in dividend payment to shareholders will increase the market price per share, such increase is not significant. This corroborates with the dividend irrelevance theory which is of the notion that the value of a firm depends on revenue earned by its assets and not in what way the firm divides the revenue into retained earnings and dividends. Therefore, dividend per share does not significantly predict the value of a firm. This substantiates the findings of Husna and Satria, (2019) but contradicts the findings of Endri and Fathony (2020).

Findings revealed that Earnings per share (EPS) has a significant positive effect on the market price per share (MPS) of consumer goods companies listed on the NSE. The relationship existing between EPS and MPS is positive in nature, indicating that an increase in Earnings per share will lead to an increase in the market price per share. This may be attributed to the fact that Investors are attracted to companies with higher earnings on their investment. This is consistent with the findings of Awan, Lodhi and Hussain (2018).

The study also found that firm size (FS) has a significant effect on the market price per share (MPS) of consumer goods companies listed on the NSE. Generally, investors would prefer to invest in large companies with known years of success. The nature of the relationship between firm size and market price per share is positive, showing that an increase in the size of the companies lead to an increase in market price per share Sampurna and Romawati (2019) who found a significant relationship between firm size and share prices of companies.

In relation to whether LEV has an insignificant effect on the MPS of consumer goods companies listed on the NSE. Findings also indicates a negative relationship existing between leverage and market price per share of the companies. Lev is the ratio of total liabilities to total assets. This result indicates that the higher the total liabilities are to total assets the lower the market price per share. This may be attributed to the fact that investors are risk averse and are not willing to invest in highly leveraged companies as there exist a tendency of takeover in this companies. Company's performance. This is similar to the findings of Gharaibeh and Qadar (2017) who found an insignificant negative relationship between leverage and stock prices.

Finally, the study found that that Profit after tax has no significant effect on the market price per share of consumer goods companies listed on the NSE. Findings also revealed a positive relationship existing between PAT and MPS of the companies. PAT represents the profitability of the firm. Investors will definitely prefer the stocks of a company with high returns. However, a higher profit after tax leads to a higher market price per share PAT of consumer goods firms does not significantly affect share prices.

V. CONCLUSION

The study provided empirical evidence on the relationship between the determinants of firm value (proxied by earnings per share, dividends per share, firm size, leverage and profit after tax and the firm value (proxied by market price per share) of

listed consumer goods companies in Nigeria. Earnings per share and firm size increases the value of the companies in a statistically significant manner. This can be attributed to the fact that investors are attracted to companies with higher returns per share.

VI. RECOMMENDATION

Management of corporate entities should consider investment opportunities for increasing their earnings before deciding on the amount of earnings to pay to shareholders as dividends and the amount to reinvest in the company. Managers of corporate entities should also reinvest their returns and encourage growth in the size of their firm. If opportunities for higher earnings exist retention and efficient utilization of earnings could increase the value of the firm.

REFERENCES

1. Awan, G., Lodhi, U., & Hussain, D. (2018). Determinants of Firm Value: A Case Study of Chemical Industry of Pakistan. *Global Journal of Management, Social Sciences and Humanities*, 4(1), 46-61.
2. Bhullar, P. (2017). Empirical analysis of Operating efficiency and Firm value. *International Journal of Economics and Financial Issues*, 7(3), 671-675.
3. Cheng, M., & Tzeng, Z. (2011). The Effect of Leverage on Firm value and how the firm's financial quality influence on this. *World Journal of Management*, 3(2), 30-53.
4. Du, J., Wu, F., & Liang, X. (2016). Corporate liquidity and firm value: evidence from china's listed firms. *SHS web Conferencing*. Guangzhou: EDP Sciences.
5. Endri, E., & Fathony, M. (2020). Determinants of Firm's value: Evidence from Financial Industry. *Management Science Letters*, 10, 111-120.
6. Endrir, C. D. (2018). Determinants of Firm value: A case study of Cigarette companies listed on the Indonesia Stock Exchange. *International Journal of Managerial Studies and Research*, 6(8), 51-59.
7. Gharaibeh, A., & Qadar, A. (2017). Factors affecting Firm Value as measured by Tobin's Q: Empirical Evidence from Saudi Stock Exchange. *International Journal of Applied Business and Economics Research*, 15(6), 333-358.
8. Gujarati, D. N., & Porter, D. C. (2010). *Investment and Econometria*. Mexico: McGraw-Hill.
9. Hermuningsih, S. (2013). Profitability, Growth opportunity, Capital structure and the Firm value. *Bullentin of Monetary, Economics and Banking*, 116-136.
10. Husna, A., & Satria, I. (2019). Effects of Return on Assets, Debt to Assetsratio, Current ratio, Firm size and Dividend payout ratio on Firm value. *International Journal of Economics and Financial Issues*, 9(5), 50-54.
11. Kusiyah, U., & Arief, . (2017). The Determinants of Firm Value on Commercial Banks in Indonesia. *Journal of Engineering and Applied Sciences*, 12(2), 408-416.
12. Oktarina, D. (2018). The Analysis of Firm value in Indonesia Property and Real Estate Companies. *International Journal of Research Science & Management*, 5(9), 85-92.
13. Rajhans, K., & Kaur, K. (2013). Financial Determinants of Firm's Value: Evidence from Indian FirmsI. *International Journal of Business, Economics and Management Research*, 3(5), 70-76.
14. Sampurna, D. S., & Romawati, E. (2019). Determinants of Firm Value: Evidence in Indonesia Stock Exchange. *Advances in Economics, Business and Management Research*, 132(6), 12-15.
15. Sucuahi, W., & Cambarihan, J. M. (2016). Influence of profitability to the firm value of diversified companies in the Philippines. *Accounting and Finance Research*, 5(2), 149-153.
16. Sudiyatno, B., Puspitasari, E., Suwanti, T., & Asyif, M. (2020). Determinants of firm value and profitability: Evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 7(1), 769-778.

Appendix 1

	LOGMPS	EPS	DPS	FS	LV	LOGPAT
Mean	1.276496	3.516991	3.058934	10.54043	2.452172	8.005992
Median	1.265759	0.925248	0.467854	10.69599	1.793535	9.338253
Maximum	3.192007	57.63294	63.50041	12.36791	21.91966	10.65976
Minimum	-0.337242	-3.233028	0.000000	8.417862	0.153013	0.000000
Std. Dev.	0.750259	9.397152	8.759585	0.815275	3.051087	3.386120
Skewness	0.442732	4.132523	4.671666	-0.678871	4.941847	-1.777645
Kurtosis	3.376578	20.69554	27.22823	2.910457	27.54288	4.577983
Jarque-Bera	4.629293	1907.216	3371.526	9.257406	3500.203	75.65057
Probability	0.098801	0.000000	0.000000	0.009767	0.000000	0.000000
Sum	153.1795	422.0389	367.0720	1264.852	294.2606	960.7191
Sum Sq. Dev.	66.98369	10508.47	9130.910	79.09611	1107.787	1364.432
Observations	120	120	120	120	120	120

Unit root

Panel unit root test: Summary
 Series: LOGMPS
 Date: 10/14/21 Time: 10:16
 Sample: 2012 2019
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic lag length selection based on SIC: 0 to 1
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.03833	0.5153	15	100
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.45158	0.9267	15	100
ADF - Fisher Chi-square	24.0070	0.7717	15	100
PP - Fisher Chi-square	24.2064	0.7626	15	105

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
 Series: D(LOGMPS)
 Date: 10/14/21 Time: 10:16
 Sample: 2012 2019
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic lag length selection based on SIC: 0
 Newey-West automatic bandwidth selection and Bartlett kernel
 Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-13.0836	0.0000	15	90
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.20709	0.0000	15	90
ADF - Fisher Chi-square	89.5665	0.0000	15	90
PP - Fisher Chi-square	130.548	0.0000	15	90

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: EPS
Date: 10/14/21 Time: 10:16
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.24175	0.0006	15	98
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.15331	0.4391	15	98
ADF - Fisher Chi-square	43.5538	0.0523	15	98
PP - Fisher Chi-square	29.1800	0.5082	15	105

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: DPS
Date: 10/14/21 Time: 10:17
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.85807	0.0000	14	97
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.77181	0.2201	14	97
ADF - Fisher Chi-square	37.4229	0.1098	14	97
PP - Fisher Chi-square	55.6389	0.0014	14	98

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: D(DPS)
Date: 10/14/21 Time: 10:17
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.2440	0.0000	14	84
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.08101	0.0010	14	84
ADF - Fisher Chi-square	65.0711	0.0001	14	84
PP - Fisher Chi-square	86.9783	0.0000	14	84

** Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: FS
Date: 10/14/21 Time: 10:17
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-15.2490	0.0000	15	101
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.62903	0.0043	15	101
ADF - Fisher Chi-square	57.7745	0.0017	15	101
PP - Fisher Chi-square	54.2819	0.0043	15	105

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: LV
Date: 10/14/21 Time: 10:18
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.53436	0.0000	15	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.55432	0.0601	15	102
ADF - Fisher Chi-square	45.3006	0.0362	15	102
PP - Fisher Chi-square	48.7407	0.0167	15	105

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: LOGPAT
Date: 10/14/21 Time: 10:18
Sample: 2012 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.46650	0.0000	14	93
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.13178	0.0165	14	93
ADF - Fisher Chi-square	52.6821	0.0032	14	93
PP - Fisher Chi-square	39.7542	0.0695	14	98

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Cointegration Test

Kao Residual Cointegration Test
Series: LOGMPS EPS DPS FS LV LOGPAT
Date: 10/14/21 Time: 10:20
Sample: 2012 2019
Included observations: 120
Null Hypothesis: No cointegration
Trend assumption: No deterministic trend
Automatic lag length selection based on SIC with a max lag of 1
Newey-West automatic bandwidth selection and Bartlett kernel

	t-Statistic	Prob.
ADF	-2.533460	0.0056
Residual variance	0.052125	
HAC variance	0.040905	

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID)
Method: Least Squares
Date: 10/14/21 Time: 10:20
Sample (adjusted): 2013 2019
Included observations: 105 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID(-1)	-0.671037	0.090389	-7.423869	0.0000
R-squared	0.344625	Mean dependent var		-0.012013
Adjusted R-squared	0.344625	S.D. dependent var		0.232956
S.E. of regression	0.188590	Akaike info criterion		-0.489003
Sum squared resid	3.698889	Schwarz criterion		-0.463727
Log likelihood	26.67266	Hannan-Quinn criter.		-0.478761
Durbin-Watson stat	1.388018			

Model Result

Dependent Variable: LOGMPS
Method: Panel Least Squares
Date: 10/14/21 Time: 10:24
Sample: 2012 2019
Periods included: 8
Cross-sections included: 15
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.377069	0.627129	-3.790397	0.0002
EPS	0.036699	0.016568	2.215119	0.0287
DPS	0.008842	0.017488	0.505602	0.6141
FS	0.328084	0.062264	5.269289	0.0000
LV	-0.005902	0.015330	-0.385006	0.7010
LOGPAT	0.006716	0.015333	0.438003	0.6622
R-squared	0.562906	Mean dependent var		1.276496
Adjusted R-squared	0.543735	S.D. dependent var		0.750259
S.E. of regression	0.506780	Akaike info criterion		1.527227
Sum squared resid	29.27817	Schwarz criterion		1.666602
Log likelihood	-85.63365	Hannan-Quinn criter.		1.583828
F-statistic	29.36269	Durbin-Watson stat		0.298296
Prob(F-statistic)	0.000000			

Dependent Variable: LOGMPS
 Method: Panel Least Squares
 Date: 10/14/21 Time: 10:24
 Sample: 2012 2019
 Periods included: 8
 Cross-sections included: 15
 Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.524150	1.051373	-0.498538	0.6193
EPS	0.005595	0.008007	0.698749	0.4865
DPS	0.004940	0.007463	0.661934	0.5097
FS	0.161496	0.098410	1.641053	0.1042
LV	-0.003016	0.007407	-0.407239	0.6848
LOGPAT	0.008870	0.008230	1.077799	0.2839

Effects Specification

Cross-section fixed (dummy variables)
 Period fixed (dummy variables)

R-squared	0.944377	Mean dependent var	1.276496
Adjusted R-squared	0.928826	S.D. dependent var	0.750259
S.E. of regression	0.200158	Akaike info criterion	-0.184316
Sum squared resid	3.725863	Schwarz criterion	0.442870
Log likelihood	38.05896	Hannan-Quinn criter.	0.070387
F-statistic	60.72911	Durbin-Watson stat	1.245650
Prob(F-statistic)	0.000000		

Dependent Variable: LOGMPS
 Method: Panel EGLS (Cross-section random effects)
 Date: 10/14/21 Time: 10:24
 Sample: 2012 2019
 Periods included: 8
 Cross-sections included: 15
 Total panel (balanced) observations: 120
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.206163	0.838468	0.245880	0.8062
EPS	0.012269	0.008513	1.441277	0.1522
DPS	0.000773	0.008006	0.096520	0.9233
FS	0.082193	0.077258	1.063884	0.2896
LV	0.001915	0.007619	0.251421	0.8019
LOGPAT	0.019206	0.008686	2.211092	0.0290

Effects Specification

	S.D.	Rho
Cross-section random	0.480287	0.8181
Idiosyncratic random	0.226436	0.1819

Weighted Statistics

R-squared	0.113139	Mean dependent var	0.209878
Adjusted R-squared	0.074242	S.D. dependent var	0.246042
S.E. of regression	0.236733	Sum squared resid	6.388837
F-statistic	2.908661	Durbin-Watson stat	1.005509
Prob(F-statistic)	0.016490		

Unweighted Statistics

R-squared	0.298147	Mean dependent var	1.276496
Sum squared resid	47.01271	Durbin-Watson stat	0.136645

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	15.603994	5	0.0081

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
EPS	0.007665	0.012269	0.000002	0.0028
DPS	0.000381	0.000773	0.000000	0.3103
FS	-0.025201	0.082193	0.001927	0.0144
LV	0.003342	0.001915	0.000001	0.1459
LOGPAT	0.015662	0.019206	0.000005	0.1139

Cross-section random effects test equation:
Dependent Variable: LOGMPS
Method: Panel Least Squares
Date: 10/14/21 Time: 10:25
Sample: 2012 2019
Periods included: 8
Cross-sections included: 15
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.380425	0.956997	1.442454	0.1523
EPS	0.007665	0.008651	0.885978	0.3778
DPS	0.000381	0.008015	0.047482	0.9622
FS	-0.025201	0.088860	-0.283609	0.7773
LV	0.003342	0.007682	0.435109	0.6644
LOGPAT	0.015662	0.008971	1.745781	0.0839

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.923454	Mean dependent var	1.276496
Adjusted R-squared	0.908911	S.D. dependent var	0.750259
S.E. of regression	0.226436	Akaike info criterion	0.018300
Sum squared resid	5.127313	Schwarz criterion	0.482882
Log likelihood	18.90198	Hannan-Quinn criter.	0.206969
F-statistic	63.49522	Durbin-Watson stat	1.249486
Prob(F-statistic)	0.000000		

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability

F-statistic	636.9443	(6, 100)	0.0000
Chi-square	3821.666	6	0.0000

Null Hypothesis: C(1)=0,C(2)=0,C(3)=0,C(4)=0,C(5)=0,C(6)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	1.380425	0.956997
C(2)	0.007665	0.008651
C(3)	0.000381	0.008015
C(4)	-0.025201	0.088860
C(5)	0.003342	0.007682
C(6)	0.015662	0.008971

Restrictions are linear in coefficients.

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in Residuals

Equation: Untitled

Periods included: 8

Cross-sections included: 15

Total panel observations: 120

Note: non-zero cross-section means detected in data
Cross-section means were removed during computation of Correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	205.7661	105	0.0000
Pesaran scaled LM	5.918423		0.0000
Pesaran CD	5.205472		0.0000