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## The Impact of Cash Flow on Stock Price in the Banking Sector of Nigeria

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**Abstract:** This study examined the impact of cash flow on stock price in the banking sector of Nigeria. The study adopted market price per share (MPPS) as proxy for stock price and the dependent variable, while cash flow per share ratio (CFPS), cash flow to total assets ratio (CFTA), and dividend to operating cash flow ratio (DOCF) were adopted as the independent variables. Data on the study variables for the period 2005 – 2014 were collected from the annual reports and accounts of ten commercial banks listed on the NSE. The study employed multiple regression technique based on Windows SPSS 20 version to analysis the data. The findings of the study revealed that CFPS, CFTA and DOCF had positive significant impact on MPPS. Thus, the study concluded that cash flow has positive significant impact on stock price in the banking sector of Nigeria. The study recommended that preparers of financial statements should view the statement of cash flow as an important component of the annual report, while investors should put attention on the statement of cash flow in making investment decisions.

**Keywords:** Stock price; Share, cash flow; Operating; Dividend; Market price; Earnings.

### 1. Introduction

The main purpose of preparing financial statements is to present information needed by users of accounting data, including investors who need information to make financial decisions. One of the most important issues which have always been considered by the participants in the capital market is the stock value of a company (Nyong, 2003) and (Nwaogwugwu, 2008). It has been noted that the stock price of a firm depends on the earnings of the company and its operating cash flow Osinubi and Amaghionyeodiwe (2003) and Osaze (2007).

Today's view of financial theories indicates that the value of a company can be judged by its cash flow. Accounting earnings alone cannot provide appropriate information for investors because it is based on accounting principles and assumptions. The content of the financial statement which communicates the accounting earnings can easily be affected by the choices and actions of corporate managers. In contrast, the statement of cash flow is a cash-based report and it is more objective and less affected by the choices and actions of managers Hussain and Hasan (2011) and Obamiro (2005).

The statement of cash flow is a component of the financial statement that explains the difference between profitability and liquidity of an enterprise during a financial year (Aborode, 2004). It is usually segmented into the following parts (IAS 7): cash flows from or applied on operating activities; cash flows from or applied on investing activities; cash flows from or applied on financing activities; and statement of cash and cash equivalents. As provided by IAS 7 (Kirk, 2009), the objective of the statement of cash flow is to provide relevant information that will enable users of the financial statements to know how a firm raised the cash required for its activities, the activities cash was used for and the cash balance at the end of the period under report. The statement of cash flow is the component of financial statement that provides information about the historical changes in cash and cash equivalent of a firm (IAS 7).

Ross *et al.* (2001) stated that 'expenses shown on the income statement are based on the matching principle of accounting. This means revenue earned in a particular period is to be matched with the expenses that generated it, so credit sales though with no real cash inflow is treated as income. The implication is that the actual cash flow in an income statement may not correspond with the period reported upon. Again an income statement contains noncash items such as depreciation. Depreciation deduction is another application of the matching and accrual concepts. The actual timing of cash flow and income are not always actual, and actual cash flow are critical for a reasonable estimation of market value of share, hence the accounting system provides the statement of cash flow to remedy this deficiency in the income stated for decision making by investors. Ross *et al.* (2001) pointed out that the statement

of cash flow plays two distinguished roles, historical analysis of a firm's position which helps in showing the establishments strong and weak points and the firm's future financial estimation based in its previous performance.

Stock price is the price of a single share of a number of saleable stocks of a company, derivative or other financial asset. Stock price is the most obvious and important criteria for determining a firm's value (Mohtadi and Agarwal, 2004). Stock price maximization is the most important goal for most corporations to maintain their economic growth and credibility in the mind of investors. To answer the question, what determines stock prices? The answer would be that it depends upon the company's ability to generate cash flow now and also have the potential to generate cash flows in the future. Investors during the investment process compare the value of a company which is determined by the price of the stock; (Leuz and Idysocki, 2006).

In financial literature, stock prices are believed to be linked to cash flow, and this is supported by the definition of stock and other stock valuation theories, such as efficient market hypothesis (Fama and French, 1992). In spite of the widely accepted belief on the relationship between cash flow and stock prices, there are some controversies about whether cash flow is a better value driver, compared to earnings and dividend per share (Ernst and Young, 2013).

The review of past empirical literature on this subject shows a lack of consensus among the study findings of previous researchers. This lack of consensus is indicative of the existence of a research gap. Besides, the study could not cite any extant study on this topic in Nigeria. Therefore this study examining the impact of cash flow on stock price in the banking sector of Nigeria is an attempt to fill this research gap. At the same time this study has added a Nigerian voice to studies on this topic and contributed to existing literature.

The main objective of this study was to examine the impact of cash flow on stock price in the banking sector of Nigeria. In more specific terms, the study investigated the impact of cash flow per share ratio (CFPS), cash flow to total assets ratio (CFTA) and dividend to operating cash flow ratio (DOCF) on stock price, proxy by market price per share (MPPS) in the banking sector of Nigeria. The aforementioned objectives formed the basis of the three hypotheses tested in this study.

The rest of the paper is structured as follows: section two deals with the review of empirical literature, while section three presents the methodology adopted for the study. The results of the study and consequent discussions are provided in section four, while section five dwells on the conclusion and recommendations.

## 2. Review of Empirical Literature

The section presents the review of past empirical study that provided the foundation for this study to examine the impact of cash flow on stock price in the banking sector of Nigeria. For example, Fah and Mohamad (2008) examined the relevance of cash flows for stock pricing in Malaysia. The study revealed that cash flows have significant impact on share price only in the short run, but in the long run cash flows have no impact on share prices. They therefore concluded that investors are contented with the announcement of earnings for share price valuation.

Sayari and Mugan (2013) investigated the effect of cash flow components on financial distress in Turkey with a sample of 124 companies listed on the Istanbul Stock Exchange. The study adopted bankruptcy risk and financial health of companies as proxy for financial distress and the dependent variable, while three components of cash flow such as cash flow from operations, investing and financing activities were the independent variables. They employed descriptive statistics for analyzing the study data, and the analysis showed that cash flow from operations had negative relationship with financial distress, and cash flow from financing activities had positive relationship with financial distress, while cash flow from investing activities had a statistically insignificant relationship with financial distress. This can therefore be interpreted to mean that cash flow from operations would be a useful determinant of share prices since it had a negative relationship with financial distress.

In a similar study Khaled (2012) examined the impact of cash flows on market value per share among Jordanian commercial banks during the financial crisis in the banking sector from 2000 - 2009. The study found that cash flows have significant impact on market value per share in Jordanian commercial banks, but that cash flows had no impact on market value per share in the years 2007 and 2008 because of the crisis.

Jiang (2009) conducted an empirical study on the information content of accounting and cash flow using data obtained from listed Chinese manufacturing firms covering the period 2003 – 2005. The study employed descriptive statistics and multiple regression techniques to analyze data. The model involved two multiple regression equations, used to capture the relationship between stock price and accounting earnings on one hand and stock price and cash flows on the other. The study variables include stock price (dependent variable); and earnings per share, return on assets, cash earnings per share, and cash return on assets (as the independent variables). The study revealed that the statement of cash flows has higher information quality and therefore had more relevance and stronger influence on stock prices than accounting earnings.

Novianti (2012) examined the influence of cash flow changes and accounting profit on stock prices in Indonesia using 64 manufacturing companies listed on the Indonesian Stock Exchange. The study identified cash flow from operations, cash flow from investing activities, cash flow from financing activities and accounting profit as the independent variables. These were regressed against stock price, the dependent variable. The study employed descriptive statistics and multiple regression techniques to test the study hypotheses, and the results showed that all the independent variables had impact on the stock prices of manufacturing companies in Indonesia. However, cash flow from investing activities and accounting profit had positive significant impact on stock price, while cash flow from operating activities and cash flow from financing activities had no significant impact on stock prices.

Also, Gunanta *et al.* (2015) investigated the effect of cash flow statement, earning per share on stock prices in manufacturing companies in Indonesia. Data was collected from manufacturing companies listed on the Indonesian Stock Exchange for the period 2008 – 2012. The study employed multiple regression technique based on the computer software Windows SPSS 18 version to analyze data. They identified stock price as the dependent variable, and statement of cash flow information and earnings per share as the independent variables. The study found that earnings per share had significant influence on stock price of listed manufacturing companies in Indonesia.

Kanani *et al.* (2014) examined the relationship between changes in the statement of cash flows components and market value of companies listed on the Tehran Stock Exchange for the period covering 2001 – 2004. They employed multiple regression technique to analyze data collected from the sampled companies. In all, they tested six hypotheses and found that changes in the components of cash flow statement had no significant correlation with market of value of companies in Tehran. Similarly, Dastgir *et al.* (2010) investigated the association between components of income statement, components of cash flow statement and stock prices using 65 companies listed on the Tehran Stock Exchange for the period 2003 – 2005. They adopted both descriptive statistics and multiple regression techniques to test their hypotheses. Their study revealed that net loss in the statement of comprehensive income and cash flow from investing activities (in the statement of cash flow) had strong relationship with stock prices. However, they also found that the components of the income statement showed a stronger relationship with stock returns than the components of the statement of cash flow.

In another study Jabbari *et al.* (2013) examined the role of operating cash flow in predicting and detecting stock price crash risk in Tehran for the period 2006 - 2010. The study sample involved companies listed on the Tehran Stock Exchange. They employed descriptive statistics, Pearson's test and multiple regression analysis to test the study hypotheses. It was found that operating cash flows had significantly inverse relationship with stock price crash risk as well as earning capacity. This means in Tehran, the higher the operating cash flow the lower the stock price crash risk, and also the lower the earning capacity.

### 3. Methodology

This study examined the impact of cash flow on stock price in the banking sector of Nigeria, using secondary time series data for the period 2005 – 2014. Thus, the study adopted a longitudinal research design which deals with already existing data where the researchers lack the power to manipulate the data. The study identified cash flow per share ratio (CFPS), cash flow to total assets ratio (CFTA) and dividend to operating cash flow ratio (DOCF) as components of cash flow and the independent variables. These were regressed against stock price in the banking industry proxy by market price per share (MPPS), the dependent variable. The time period covered by the study was considered long enough to establish a causality relationship between the study variables. Also, the availability of data relating to the study variables was the justification for the choice of the time period.

This study used annual data for the period covering 2005 to 2014, extracted from the annual reports and accounts of ten commercial banks listed on (and obtained from) the Nigerian Stock Exchange (NSE). Also the availability of the relevant required data relating to the study variables was the justification for the inclusion of each one of the ten listed banks in the study. Besides, this source of data is considered reliable and dependable because the accounts had been prepared based on the requirements of the law which had also been so certified by independent professional accountants.

The study employed the multiple regression analysis with Ordinary Least Square (OLS) econometric technique for data analysis. This technique possesses the unique property of best linear unbiased estimator (BLUE) as well as the desirable qualities of consistency and efficiency. The statistics tested for among the variables in the regression equation include coefficient of determination ( $R^2$ ), T- test, F-test and Durbin Watson (DW) statistics, based on the computer software Statistics Package for Social Sciences (SPSS) 20 for windows. Where: coefficient of determination ( $R^2$ ) measures the explanatory power of the independent variables on the dependent variable; student T-Test measures the individual significance of the estimated coefficients of the independent variables; the F-test tests for the overall statistical significance of the models, which was used to generalize the hypotheses; and the Durbin Watson (DW) Statistics tests for the auto correlation of the variables in the regression equation.

#### 3.1. Model Specification

To facilitate the analysis of data, a regression model of the following order was developed to capture the causality relationship between CFPS, CFTA, DOCF and MPPS:

$$MPPS = f(CFPS, CFTA, DOCF)$$

The above regression model was explicitly translated into a regression equation as stated below:

$$MPPS = c + \beta_1 CFPS + \beta_2 CFTA + \beta_3 DOCF + e \quad \text{equation 1}$$

Where;

*MPPS* = Market price per share, the dependent variable and proxy for stock price

*CFPS* = Cash flow per share ratio, one of the independent variables

*CFTA* = Cash flow to total assets ratio, the second independent variable

*DOCF* = Dividend to operating cash flow ratio, the third independent variable

*c* = is the constant term

$\beta_1, \beta_2, \beta_3$  = are the coefficients of the independent variables, and each, as expected  $\neq 0$

*e* = is the error term of the equation

## 4. Results and Discussion

This study examined the impact of CFPS, CFTA and DOCF on MPPS, using multiple regression analysis technique based the computer software package windows SPSS 20 version. The data so far collected for the study was computed into a summary and is presented in table 1 below

**Table-1.** Aggregate ratios of MPPS, CFPS, CFTA and DOCF for the period 2005 – 2014 for the ten banks selected for the study.

Year	MPPS	CFPS	CFTA	DOCF
2005	25.7	0.234	12.7	0.01
2006	32.1	18,01	0.41	32.1
2007	38.4	23.01	59.21	42.1
2008	44.7	60.4	72.8	16.1
2009	51.1	56.7	34.7	11.2
2010	57.3	90.1	43.7	38.5
2011	63.9	2.12	2.12	60.3
2012	70.2	92.5	76.1	43.5
2013	74.7	0.12	11.9	12.3
2014	76.6	57.3	9.7	55.3

Source: Researchers' computation 2016

In table 1 above, are the cash flow ratios computed from the annual reports and accounts ten banks listed on the NSE selected for the study reflecting the variables: cash flow per share ratio (CFPS), cash flow to total assets ratio (CFTA), dividend to operating cash flow ratio (DOCF) and market price per share (MPPS).

**Table-2.** Regression Results Dependent variable = MPPS

Variables	Coefficient	Std. Error	T-Statistics	Sig
Constant	1.045	1.045	13.556	0.000
CFPS	0.416	0.416	4.800	0.000
CFTA	0.580	0.580	2.804	0.007
DOCF	0.739	0.739	3.300	0.002
R <sup>2</sup>	0.787			
Adjusted R <sup>2</sup>	0.768			
F- stat	39.998			
Prob. F- stat	0.000			
Durban Watson	2.160			

Source: Windows SPSS 20

Table 2 above shows the summary of the regression results, that is, the correlation between CFPS, CFTA, DOCF and MPPS. From the results it is found that all the independent variables are significant and positively related to MPPS. The results of this study supports the research findings of [Dastgir et al. \(2010\)](#), [Jiang \(2009\)](#), and [Khaled \(2012\)](#).

The explanatory power of the model as given by the R<sup>2</sup> 0.79 or about 79 per cent is statistically significant given the high value of the adjusted R<sup>2</sup> value of 0.77 or about 77 per cent. This also means the independent variables jointly and adequately explained or accounted for changes in the dependent variable. The calculated Durbin Watson (DW) value is 2.160, which is a little higher than 2.0 indicating that there was autocorrelation between the independent variables. However, this is not significant to adversely affect the regression results.

The regression model demonstrates a good fit given that about 77 per cent of the variation in the dependent variable (MPPS) is jointly explained by changes in the behaviour of CFPS, CFTA and DOCF. The relatively high adjusted R<sup>2</sup> of 0.77 or 77 per cent showed that the model is a good fit.

CFPS have statistically positive significant relationship with MPPS, with a coefficient of determination of 0.416. This means a unit change in CFPS will lead to 41 per cent change in MPPS. More so, given that the Prob. value of CFPS is 0.000, which is less than the critical value of 0.05, this is strongly significant.

In addition, CFTA had statistically positive significant relationship with MPPS, with a coefficient of determination of 0.580. Meaning that a unit change in CFTA will lead to 58 per cent change in MPPS. This is also highly significant given the Prob. value of 0.007 which is less than critical value of 0.05.

Also, DOCF has statistically positive significant relationship with MPPS with a coefficient of determination of 0.739. What this means is that a unit change in DOCF will lead to 74 per cent change in MPPS. Again, this is strongly significant given the Prob. value of 0.002 and less than critical value of 0.05.

This means that all the independent variables CFPS, CFTA and DOCF have positive effect on MPPS. The results of the analysis of this study have therefore shown that cash flow per share ratio, cash flow to total assets ratio and dividend to operating cash flow ratio have positive impact on stock price of banks in Nigeria.

## 5. Conclusion

This study examined the impact of cash flow per share ratio, cash flow to total assets ratio and dividend to operating cash flow ratio on stock price in the banking sector of Nigeria. The study adopted market price per share as proxy for stock price and the dependent variable, while cash flow per share ratio, cash flow to total assets ratio, dividend to operating cash flow ratio were adopted as the independent variables. Data on the study variables for the period 2005 – 2014 were collected from the annual reports and accounts of ten commercial banks listed on the NSE. These reports prepared in line legal requirements and certified by professional accountants were obtained from the NSE. The study employed multiple regression technique based on Windows SPSS 20 version to analysis the data. The findings from the statistical analysis of data revealed that cash flow per share ratio, cash flow to total assets ratio and dividend to operating cash flow ratio have positive significant impact on market price per share. The study therefore concluded that cash flow has positive significant impact on stock price in the banking sector of Nigeria.

Based on the above findings, the study recommended that preparers of financial statements should view the statement of cash flow as an important component of the annual report, while investors should conduct a careful analysis of the statement of cash flow in making investment decisions. The study also recommended that further studies be carried out on this topic in other sectors of the economy for any generalized conclusions to be tenable. Besides, future studies on this topic should consider a longer time period than the period this study covered.

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