# Effect of Cash Flow Management on Tax Aggressiveness of Quoted Non-Financial Firms in Nigeria

**Obiora Fabian Ph.D**
Department of Accountancy
Chukwuemeka Odumegwu Ojukwu University,
Igbariam, P.M.B 002 Uli, Anambra State, Nigeria

**Onuora, J. K. J. Ph.D**
Department of Accountancy
Chukwuemeka Odumegwu Ojukwu University,
Igbariam, P.M.B 002 Uli, Anambra State, Nigeria

**Okolie Fidelis, O**
Department of Accountancy
Chukwuemeka Odumegwu Ojukwu University,
Igbariam, P.M.B 002 Uli, Anambra State, Nigeria

***Abstract***

*This study empirically investigated the relationship which exists between cash flow management and tax aggressiveness of quoted non-financial firms in Nigeria. The study is vital as it portrays the extent to which cash flow management influences firms' tax aggressiveness. In order to determine the relationship between cash flow management and tax aggressiveness, cash flow management was proxy using operating activities (OA), financing activities (FA) and investing activities (FA) while tax aggressiveness on the other hand was represented by effective tax rate (ETR). Three hypotheses were formulated to guide the investigation and the statistical test of parameter estimates was conducted using OLS regression model operated with STATA V.15. Ex Post Facto design was adopted and data for the study were obtained from the published annual financial reports of the entire ICT firms, health care firms and oil & gas firms quoted on Nigerian Exchange Group (NGX) spanning from 2016-2020. The findings of the study generally indicate that operating activities (OA), financing activities (FA) and investing activities (FA) have significant and positive influence on firms' tax aggressiveness measured by effective tax rate (ETR) at 1-5% significant level respectively. Thus, the study concludes that cash flow management determines tax aggressiveness of the quoted firms. The study however suggests the need for firms to re-evaluate their cash flow management strategies in order to enable them to generate enough cash sufficient to meet their investing activities and operating activities. Net cash flow from financing activities on the other hand should be maintained as it has proven to have a significant effect on the financial performance of the quoted firms in Nigeria.*

**Keywords:** *Operating Activities; Financing Activities; Investing Activities; Effective Tax Rate; Tax Aggressiveness*

## 1.0 Introduction

Cash flow management has become a critical element of many firms' operational strategies. According to Efobi (2008) cash flow management plays a major role in the company's operations and financial performance. Cash flow management is the nucleus of a business entity for short and long-term survival and concerned with both the short term and long-term financial objectives (Uwonda & Okello, 2013). A firm's cash flow management policies, which manage working capital in the form of cash receivables from customers, inventory holdings, and cash payments to suppliers, are widely linked to improved firm financial performance (Kroes & Subramanyam, 2012).

The amount of cash available in any given organization influences the level of financial performance. Appah (2018) stated that cash is the lifeblood of any corporate entity because it is needed to acquire assets used in the generation of goods and services provided by the entity for determination of profit in order to maximize the wealth of shareholders. Liman and Mohammed (2018), Turcas (2011) argue that the corporate financial performance of any given entity depends on the ability of such a firm to generate sufficient cash flows from the various components of cash flow statement. Therefore, insufficient cash flow will have a negative effect on the corporate financial performance by reducing the level of cash inflow and improving the cash outflow.

Tax aggressiveness is an effort to apply lawful hitches to circumvent recompensing or minimize the payment of tax (Uniamikogbo, Bennee & Adeusi, 2019). However, when this is achieved through some illegal means, acts protect investors and other stakeholders interest and enhance the credibility of financial reporting or procedures, it is seen as a deceit or fraud and so criminal. According to Kiabel and Nwikpasi (2001), tax aggressiveness is the planning and operation of business activities within the context of existing legislation in such a way that the business realizes the optimal or best tax position while achieving its set goal. In other words, tax aggressiveness include not only the strategies aimed at minimizing tax liability of a business, it also looks at the cash flow consequence on the business regarding when it is most beneficial for a corporate entity to settle its tax liability and not incur any punishment. It is an act of transferring value from the state to the firm to promote corporate governance in business and increase shareholders' wealth. Thus, tax aggressiveness plays a very significant role in corporate organizations.

A substantial number of prior studies have examined whether cash flow accounting influence corporate financial performance (Ghanbari, Haidari, Nazarzadeh & Abasi, 2015; Guda 2013,Tariverdi, Amanolahi & Faal, 2014, Gheshlaghi, Ahmadzadeh & Faal, 2014; Velnampy & Kajananthan, 2013; Bingilar & Oyadonghan, 2014; Nwanyanwu, 2015, Amah, Michael & Ihedinihu, 2016; Nangih, Ofor & Onuorah, 2020; Liman & Mohammed, 2018; Abughniem, Al-Aishat & Hamdam, 2020; Appah, Awuji & Anuogwo, (2021) etc. However, there is a dearth of research addressing the influence of cash flow polices and management on the tax aggressive behaviour to reflect the extent of tax planning activities. This opens an opportunity to assess cash flow management effects on tax aggressiveness since most research focused on performance other than tax aggressiveness.

Also from the a priori expectations, none of the empirical literature in the developed and developing nations' related cash flow management to tax aggressiveness of quoted firms based on available literature. Hence, the present study examined the effect of cash flow management on tax aggressiveness of firms quoted under health care sector, information communication technology (ICT) sector and oil & gas sector of Nigerian Exchange Group (NGX).

To achieve this purpose, the following hypotheses were formulated:

**$H_{01}$:** Operating Activities has no significant effect on Tax Aggressiveness of Quoted Non-Financial Firms in Nigeria

**$H_{02}$:** Financing Activities has no significant effect on Tax Aggressiveness of Quoted Non-Financial Firms in Nigeria

**$H_{03}$:** Investing Activities has no significant effect on Tax Aggressiveness of Quoted Non-Financial Firms in Nigeria

## 2.0 Review of Related Literature

### 2.1 Conceptual Frame work

#### 2.1.1 Cash Flow Management

Ward (2020) sees cash flow management as a process of monitoring, analyzing, and optimizing the net amount of cash receipts minus cash expenses. Net cash flow is an important measure of financial health for any business. Cash flow management entails frequent cash flow analysis so as to solve cash flow problems like illiquidity. Cash flow performance is the planning, organizing, and controlling of cash inflows and outflows in an entity during a particular period. Cash flow is the total value of the money that is actually received by or paid out by an entity for over a certain time period (Albrecht, 2003).

#### 2.1.2 Tax Aggressiveness

Tax Aggressiveness also known as tax sheltering or tax planning has been variously defined by scholars. Hoffman (1961) viewed it as the taxpayer's ability to organise his financial businesses in such a way as to suffer a minimum tax liability. Tax sheltering is generally defined as the procedure of arranging one's affairs in order to defer, decrease or even eliminates the amount of taxes to be paid to the government (Pniowsky, 2010). Tax aggressive practices are usually implemented to minimise the tax burden to achieve greater after-tax earnings per share and cash available for shareholders (Lanis & Richardson, 2012). Thus, it could also reflect a decline in taxable income when managed through tax planning practices that are legal as well as activities that may be viewed as illegal in some circumstances to reduce tax liability. Lanis, Richardson and Taylor (2015) provide that tax aggressiveness can be substituted with tax avoidance, tax planning and tax sheltering. Since tax aggressiveness is a form of corporate decision and action that could reflect both executives and non-executives aversion to risk, it presents a suitable setting to assess gender differences in risk taking for board members.

The recent study of Uniamikogbo, bennee, and Adeusi (2019), Lanis, McClure and Zirnsak (2017), Nwaobia, Kwarbai, and Ogundajo (2016) proxy tax aggressiveness using effective tax rate (ETR). For the purpose of this study, tax aggressiveness was proxy using effective tax rate (ETR) which is in consonance with the apriori expectations. This is shown below thus:

$$ETR = \frac{\text{Current Reporting Tax}}{\text{Pre Tax Profit}} \times 100$$

**2.2 Theoretical Framework**

The theoretical framework which gives the meaning of a word in terms of the theory on cash flow management and tax aggressiveness established in this study is Agency Theory (AT). It assumes that both the knowledge and acceptance of this theory that this research work depends upon.

**2.2.1 Agency Theory**

This study on the relationship which exists between cash flow management and tax aggressiveness is anchored on the agency theory by Jensen and Meckling (1976) and Fama and Jensen (1983). Izedonmi (2016) suggested that agency problem arises in a situation where the principal (owners, shareholders) employs the agent (board/management) to undertake number duties on behalf of the owners for a reward. Olugbenga, Olusola, Zacchaeus and Oluwagbemiga (2014) state that agency theory is the application of game theory to the explanation of the circumstances in which a person (the agent) acts on behalf of the principal for the advancement of the principal's objectives. According to Adeyemi, Omobude, and Udofia (2019), agency theory is a unit of finance and accounting that explains the conflicts of interest between stakeholders with diverse interests in the same asset.

Agency theory explains that companies with better cash flows provide an increase in companies' cash holdings. Harford, et al (2008) concluded that firms with excess cash and poor governance lead to occurring of wasteful investments. Cunha (2013) finds that value-destroying acquisitions due to excess cash are significantly less likely when firms raise cash from financing sources such as debt issuance. Agency theory provides that agency conflicts arise from the possible difference between the interest of the owners and that of the managers of organisations. Therefore, the basic responsibility of managers is to manage the organisations in such a way that it generates returns to owners thereby improving the financial performance and cash flows (Elliot & Elliot, 2002). As cited in Appa, Awuji and Anuogwu (2021), agency costs can be examined in different ways such as taking advantageous behaviour from a number of managers who focus on increasing their own power or position, extra consuming from the obtained incomes, ineffective investment decisions and mismanagement in accounting or frauds in firm's business contracts. Negative consequences of these actions emerge as destroying stock holders' assets and properties and also the performance. Agency theory therefore examines how management's behaviour could be directed at owner's interest by decreasing agency cost in other to improve corporate financial performance.

According to Jensen and Murphy (1990), principal-agent theory can be used to justify the positive correlation between cash flow management and firm's tax aggressiveness.

The linkage between cash flow management and tax sheltering should provide an attractive incentive for firm to succeed since tax sheltering gives taxpayer the ability to organize his financial businesses in such a way as to suffer a minimum tax liability.

According to Desai and Dharmapala (2009), tax sheltering is a form of tax avoidance which integrates more aspects of the agency conflicts between managers and investors. From the agency viewpoint of tax, management skirting is the major problem that must be resolved by investors. Managerial opportunism or resource diversion is another form of agency problem considered under avoidance. According to Jensen and Meckling (1976), managers who are agents of the principals (shareholders), are employed to work for maximizing the returns to the shareholders. Managers of organizations are agents to the shareholders. Therefore, in order to maximize shareholders' wealth they would need to reduce their operating costs. One of such ways to reduce operating costs is to engage in tax sheltering (aggressiveness) to reduce their tax liability. However, in order to reduce the tax burden of firms, tax sheltering must be done within the legal framework. The primary reason managers of organisations involve in tax sheltering is because of the benefits they derived from an increase in after-tax returns.

Similarly, agency theory and definitions of tax sheltering have revealed significantly that, after tax returns could be uninterestedly influenced by tax minimization, while minimization of tax could be seen as tax aggressive. Hence, the study is anchored on this theory.

## 2.3 Empirical Review

Appah, Awuji and Anuogwu (2021) investigated the effects of cash flow accounting on corporate financial performance of listed consumer goods firms in Nigeria for the period 2015 to 2019. The study employed ex-post facto and correlational research designs. The population of the study comprised of twenty-six firm and Taro Yamene formula was utilized for the determination of sample size of twenty three firms. The data for the study was collected from the annual reports of sampled companies listed on the Nigerian Stock Exchange and descriptive, bivariate and multivariate analysis was employed for the purpose of data analysis. The result from the data analysis revealed a positive and significant relationship between operating cash flow, financing cash flow and firm size to profit after tax of listed consumer goods manufacturing companies while investing activities and financial leverage revealed a negative and significant relationship. On the basis of the findings, the paper concludes that cash flow accounting influences the corporate financial performance of firms in Nigeria. Hence the paper recommended amongst others that firms should always strike a balance between liquidity and profitability in their capital expenditure decision making.

Musah and Kong (2019) investigated cash flows and financial performance of non-financial firms listed on the Ghana Stock Exchange for the period 2008 to 2017. The study employed ex post facto and correlational research design. The study target population comprised all non-financial companies listed on the exchange as at 31 December 2017 and the sample consisted of fifteen (15) companies after proper filtrations. The data for the study was obtained from secondary sources of data collection mainly from the published financial statements of the sample companies for the period under review. The data obtained from the published financial statements were analysed with descriptive and inferential statistics. The descriptive statistics used include minimum, maximum, mean, standard deviation, range, skewness and kurtosis whilst the inferential statistics employed Pearson moment correlation coefficient. The result from the analysis suggested that cash flows positively and significantly affects return on assets (ROA) while it showed a positive but insignificant relationship with return on equity (ROE) and return on capital employed (ROCE) for the sampled companies and period under review.

Nangih, Ofor and Onuorah (2020) conducted a study on cash flow management and corporate financial performance of oil and gas companies listed on the Nigerian Stock Exchange for the period 2013 to 2018. The study employed judgemental research designs and data for this study was collected the published financial statement of the sampled five oil and gas companies. The dependent variable for corporate performance was profit margin while the independent variable employed cash flow from operating activities, cash flow from investing activities and cash flow from financing activities as proxies for cash flow management. The data obtained from the annual reports were analysed using descriptive statistics, correlational matrix and random effect regression analysis. The random effect results revealed a negative and insignificant association between cash flow from operating and investing activities on corporate financial performance while cash from financing activities suggested a positive and significant association on corporate financial performance.

Ugo and Egbuhuzor (2022) examined the effect of cash flow management on financial performance: Evidence from the pharmaceutical industry in Nigeria. The ex post facto research design was adopted for the study with a population of ten (10) listed pharmaceutical companies in Nigeria as listed by the Nigerian Exchange Group in 2021. Data were retrieved from the annual reports of the selected listed pharmaceutical companies for the period 2011 to 2020. Multiple regression analysis and the Pairwise Granger Causality tests were used to analyze the data gathered with the aid of E-Views10 statistical software. The study revealed a positive and insignificant effect of operating activities on liquidity. Also, it revealed a positive and insignificant effect of investing activities on liquidity. And finally, it revealed a negative but significant effect of financing activities on the liquidity of listed pharmaceutical companies in Nigeria. Therefore, it was recommended that listed pharmaceutical companies in Nigeria should be encouraged to build a reasonable cash flow control strategy that will bring efficiency to the firm, thereby enhancing the firm financial performance. Also, pharmaceutical companies should re-evaluate their cash flow management strategies in order to enable them to generate enough cash sufficient to meet their investing activities.

Liman and Mohammed (2018) conducted a study on the effects of operating cash flow on corporate financial performance of listed conglomerates in Nigeria for the period 2005 to 2014. The study employed ex post facto and correlational research designs. The population of the study consisted of six conglomerate and a sample size of five companies were selected for the purpose of data analysis. The study employed secondary sources of data collection from the financial statements of the sampled companies. The secondary data collected were analysed with descriptive, correlation and panel regression analysis. The panel regression analysis employed ordinary least square and random effects. The result revealed a positive insignificant relationship between operating cash flow and corporate financial performance for the period under review.

Egwu, Orugun and Adelakun (2021) investigated the exploration of cash flow management for enterprise's business performance in Nigeria. The survey research design was utilized for the study. Data gathered were analyzed using the descriptive method and regression analysis. The study revealed that cash flow management influences the fulfilment of financial obligations and that cash flow management strategies influence the performance of enterprises in Abuja. The study concluded that cash flow is critical to the success of enterprises.

Soet, Muturi and Oluoch (2018) examined the effect of operating cash flow management on financial performance of mutual funds in Kenya. The objective of the paper was to look into relationship between operating cash flow management. The study employed causal research. Secondary panel data from the audited financial statements of 22 mutual funds was retrieved from financial reports for the period 2011-2016. Using panel regression model, the study found out that operating cash flow management had significant and positive effect on return on assets and insignificant and positive effect on return on equity. Thus, the study concludes that operating cash flow management had significant and positive effect on return on assets and insignificant and positive effect on return on equity. The study recommends that managers should come up with a compulsory cash flow policy such as investment policy and divided policy. Mutual funds should come up with clear policies for cash flow management including the investments of surplus funds needs to be established.

## 3.0 Methodology

In this study, ex-post facto design was adopted. The use of ex-post facto design was based on the fact that our data is secondary in nature which has existed and cannot be manipulated. The population of the study consists of the entire 31 firms quoted under health care sector, information communication technology (ICT) sector, and oil and gas sector spanning from 2016-2020 according to their financial statements. Out of 31 firms that formed the population of the study, 14 firms were tax aggressive firms, 12 were tax conservative firms while the remaining 5 firms have empty financial information within the period under review (*MTN Nigeria Comm Plc, Airtel Africa Plc, Omatek Ventures Plc, Evans Medical Plc and Nigerian German Chemical Plc)* which were removed. Based on this, a total of 14 tax aggressive firms formed our sample size with 70 observations. These firms include (Fidson Plc, Morrison Plc, Pharma Deko Plc, Union Diagnostic Plc, Ekocorp Plc, Neimeth Plc, Triple Gee & Company Plc, Chams Plc, NCr Nig Plc, Etransact Intl Plc, Ardova Plc, Japaul Oil Plc, Capital Oil Plc, and 11 Plc).

### 3.1 Operationalization and Measurement of Variables

#### 3.1.1 Dependent and Independent Variable

The dependent variable used in the study is tax aggressiveness and it was proxy and measured using effective tax rate. This is in harmony with the works of Uniamikogbo, bennee, and Adeusi (2019), Nwaobia, Kwarbai and Ogundajo (2016). The Independent variable of cash flow management was captured using operating activities (OA), financing activities (FA) and investing activities (IA) as shown on Table 1 below:

**Table 1: Measurement for Independent Variable**

| Variable | Measurement | A Priori Expectations |
|---|---|---|
| **Dependent** | | |
| Tax Aggressiveness | **ETR** = {Current Reporting Tax/Pre Tax Profit} X 100 | Uniamikogbo, bennee, and Adeusi (2019), Nwaobia, Kwarbai and Ogundajo (2016). |
| **Independent** | | |
| Operating Activities | Natural Logarithm of the cash flow from operating activities | Nangih, Ofor and Onuorah (2020)Liman and Mohammed (2018)Amah, Micheal and Ihendinihu (2016), Appah, Awuji and Anuogwu (2021) |
| Financing Activities | Natural Logarithm of the cash flow from financing activities | Nangih, Ofor and Onuorah (2020); Amah, Micheal and Ihendinihu (2016), Appah, Awuji and Anuogwu (2021) |
| Investing Activities | Natural Logarithm of the cash flow from investing activities | Amah, Micheal and Ihendinihu (2016), Appah, Awuji and Anuogwu (2021) |

Source: Empirical Survey (2022).

### 3.2 Model Specification

In line with the previous studies, the study adapted and modified the Model of Appah, Awuji and Anuogwu (2021) used in determining the relationship which exist between cash flow accounting and corporate financial performance of listed consumer goods companies in Nigeria. Thus, the present study modified the model in determining the effect of cash flow management on tax aggressiveness of quoted firms in Nigeria.

Appah, Awuji and Anuogwu (2021): $LogPATit = \beta_0 + \beta_1 LogOCFit + \beta_2 LogICFit + \beta_3 LogFCFit + \beta_4 LogFISit + \beta_5 FILit + \varepsilon$

The explicit form of the regression modified for the study is expressed as thus:

$$ETRt = \beta_0 + \beta_1 \, OAt + \beta_2 \, FAt + \beta_3 \, IAt + \mu$$

Where:
ETR = Effective Tax Rate
OA = Operating Activities
FA = Financing Activities
IA = Investing Activities

**Decision Rule:** accept Ho if P-value > 5% significant level otherwise reject Ho

## 4.0: Data Analysis and Results

**Table 2: Descriptive Statistics**

| STATS | ETR | OA | FA | IA |
|---|---|---|---|---|
| Mean | 2.741429 | 2.604286 | 2.167143 | 1.928571 |
| Std. Dev. | .7793518 | 5.182955 | 1.442393 | 1.227126 |
| Maximum | 5 | 45 | 8 | 4.3 |
| Minimum | 1.4 | .8 | .9 | 0.1 |
| Observations | 70 | 70 | 70 | 70 |

**Source: Researcher's Computation (2022).**

Table 2 shows that on the average, in a 5-year period (2016-2020), the listed health care, oil and gas and ICT firms in Nigeria were characterized by positive effective tax rate (ETR) value of 2.741429. This is an indication that the selected firms in Nigeria have positive effective tax rate value with a standard deviation value of .7793518. The average operating activities (OA) value for the sampled firms was 2.604286 with a standard deviation value of 5.182955. This means that firms with OA values of 2.604286 and above have a positive operating cash flow performance. There is also a high variation in maximum and minimum values of OA which stood at 45 and .8 respectively. This wide variation in OA values among the sampled firms justifies the need for this study as the researcher assumes that firms with high OA values have operating cash flow performance than those firms with low OA values.

On the other hand, the average financing activities (FA) value for the sampled firms was 2.167143 with a standard deviation value of 1.442393. This means that firms with FA values of 2.167143 and above have a positive financing cash flow performance. There is also a high variation in maximum and minimum values of FA which stood at 8 and 0.9 respectively. This wide variation in FA values among the sampled firms justifies the need for this study as the researcher assumes that firms with high FA values have financing cash flow performance than those firms with low FA values.

Also, the average investing activities (IA) value for the sampled firms was 1.928571with a standard deviation value of 1.227126. This means that firms with ICFA values of 1.928571 and above have a positive investing cash flow performance. There is also a high variation in maximum and minimum values of IA which stood at 4.3 and 0.1 respectively. This wide variation in IA values among the sampled firms justifies the need for this study as the researcher assumes that firms with high IA values have a positive investing cash flow performance than those firms with low IA values.

### 4.1 Test of Hypotheses

**Table 3: Result on Effect of Cash Flow Management on Tax Aggressiveness of Quoted Non-Financial Firms in Nigeria.**

| Source | SS | df | MS |
|---|---|---|---|
| Model | 17.0501600 | 3 | 5.68338663 |
| Residual | 24.8596965 | 66 | .376662068 |
| Total | 41.9098565 | 69 | .607389225 |

| | |
|---|---|
| Number of obs | = 70 |
| F (3, 108) | = 15.090 |
| Prob > F | = 0.0000 |
| R-squared | = 0.4068 |
| Adj R-squared | = 0.3799 |
| Root MSE | = .61373 |

| ETR | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| OF | .0277591 | .0158008 | 1.76 | 0.048 | .0037882 | .0593065 |
| FF | .2256058 | .0570628 | 3.95 | 0.000 | .1116763 | .3395353 |
| IF | .1811830 | .0611120 | 2.96 | 0.004 | .0591690 | .3031970 |
| _cons | 1.830791 | .1672132 | 10.95 | 0.000 | 1.496940 | 2.164643 |

Source: Result output from STATA 15.

### 4.2: Discussion of Findings

The result of the analysis of the study using OLS Model is expressed as follows:

**$H_{01}$:** Operating Activities has no significant effect on Tax Aggressiveness of Quoted Firms in Nigeria

This hypothesis was tested and the result of the regression model as exposited on table 3 indicates that the relationship between operating activities and tax aggressiveness is positive and significant with a P-value (significance) of 0.048 for the model which is less than the 5% level of significance adopted. Likewise the result of the positive coefficient shows that effective operating cash flow management ensures firms' tax aggressiveness by 2.8%. We consequently rejected null hypothesis and accepted alternate hypothesis which contends that operating activities has significant effect on tax aggressiveness of quoted firms in Nigeria.

This agrees with our priori expectations of Soet, Muturi and Oluoch (2018), Appah, Awuji and Anuogwu (2021) who found significant and positive association between operating cash flow management and corporate performance. In disagreement, Ugo and Ugbuhuzor (2022), Liman and Mohammed (2018), Nangih, Ofor and Onuora (2020) who found insignificant relationship between operating cash flow management and corporate performance.

**$H_{02}$:** Financing Activities has no significant effect on Tax Aggressiveness of Quoted Firms in Nigeria

This hypothesis was tested and the result of the regression model as exposited on table 3 indicates that the relationship between financing activities and effective tax rate (ETR) is positive and significant with a P-value (significance) of 0.000 for the model which is less than the 1% level of significance adopted. Likewise the result of the positive coefficient shows that an increase in firms' financing activities as other variable are held constant increases firms effective tax rate (ETR) by 22.6%. We consequently rejected null hypothesis and accepted alternate hypothesis which contends that financing activities has significant effect on tax aggressiveness of quoted firms in Nigeria. This agrees with our priori expectations and the studies of Nangih, Ofor and Onuora (2020),Ugo and Egbuhuzor (2022), Appah, Awuji and Anuogwu (2021) who found that financing cash flow management ensures corporate performance. This disagrees with the status quo of Liman abs Mohammed (2018) who found significant but negative relationship between the variables.

**$H_{03}$:** Investing Activities has no significant effect on Tax Aggressiveness of Quoted Firms in Nigeria

This hypothesis was tested and the result of the regression model as exposited on table 3 indicates that the relationship between investing activities and effective tax rate (ETR) is positive and significant with a P-value (significance) of 0.004 for the model which is less than the 1% level of significance adopted. Likewise the result of the positive coefficient shows that an increase in firms' investing activities as other variable are held constant increases effective tax rate (ETR) by 18.1%. We consequently rejected null hypothesis and accepted alternate hypothesis which contends that investing activities has significant effect on tax aggressiveness of quoted firms in Nigeria. This is not in tandem with the priori expectations of Nangih, Ofor and Onuora (2020), Appah, Awuji and Anuogwu (2021), Ugo and Egbuhuzor (2022), who found insignificant relationship between investing cash flow management and corporate performance.

## 5.1 Conclusion

From the statistical analysis of the study, it was concluded that cash flow management measured by operating activities, financing activities and investing activities have significant and positive relationship with firms' tax aggressiveness. By implication, cash flow management ensures firms effective tax rate.

## 5.2 Recommendation

In the light of the above, the study made the following recommendations;

1. Listed companies in Nigeria should be encouraged to build a reasonable cash flow control strategy that could bring efficiency to the firm, thereby enhancing the firm financial performance.
2. Net cash flow from financing activities should be maintained as it has proven to have a significant effect on the financial performance of the quoted firms in Nigeria.
3. The study recommended the need for corporate organizations to re-evaluate their cash flow management strategies in order to enable them to generate enough cash sufficient to meet their investing activities.

## References

Abughniem, M. S., Al-Aishat, M. D. H. & Hamdam, A. (2020). Free cash flow and firm performance: Empirical evidence from Amman Stock Exchange. *International Journal of Innovation, Creativity and Change, 10*(12), 668-681.

Adeyemi, S. B., Omobude, S. I. & Udofia, I. E. (2019). Impairment testing of intangible assets and quality of financial reporting of Nigerian manufacturing companies. *Global Journal of Accounting, 5*(1), 1-15.

Albrecht, W. S. (2003). *Fraud examination manson*, Ohio, Thomson and South-Western

Amah, K. O., Michael, C. E. & Ihendinihu, J. U. (2016). Relationship of cash flow and financial performance of listed Banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research 4(*4), 89 – 97.

Appah, E., Awuji, C., & Anuogwu, K. (2021). Cash flow activities and corporate performance of listed consumer goods companies in Nigeria. *Journal of Business and Management, 27*(3), 18-29

Bingilar, P. F., & Oyadonghan, K.J. (2014). Cash flow and corporate performance: A study of selected food and beverages companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 2*(7), 77-87

Cunha, I. (2013). Easy come easy go: Cheap cash and bad corporate decisions, Working paper.

Desai, M., & Dharmapala, D. (2018). Tax and corporate governance: An economic approach', *MPI Studies on Intellectual Property, Competition and Tax Law, 3*, 13-30.

Efobi, R. U. (2008). *The Impact of Capital structure on corporate profitability in Nigeria*. Ogun State: Department of Accountancy, CBS, CU, OTA

Egwu, E. M., Orugun, F., & Adelakun, A. (2021). Exploration of cash flow management for enterprise's business performance. *Asian Journal of Economics, Business and Accounting, 21*(10), 97-105.

Elliot, B. & Elliont, J. (2002). Financial Accounting and Reporting. 12th edition, Prentice Hall/financial Times.

Fama, E.F. and Jensen, M.C. (1983) Separation of Ownership and Control. *Journal of Law and Economics, 26*, 301-325.

Ghanbari, M., Haidari, F., Nazarzadeh, S. & Abasi, B. (2015). The relationship between cash flow and financial performance of accepted companies in the Tehran Stock Exchange, MAGNT Research Report,3 (2), 1829-1841.

Gheshlaghi, F. D. R., Ahmadzadeh, Y. & Faal, F. (2014). The cash flow statement's component effect on management performance in firms enlisted in Tehran Stock Exchange. UCT, *Journal of Management and Accounting Studies, 2*(1), 14 – 21

Guda, D. O. (2013). *The relationship between cash flow and profitability of small and medium enterprises in Nairobi*. A Research Project Submitted for the Award of Degree of Masters of Business Administration, University of Nairobi.

Harford, J., Sattar, A, M., & William, F, Ml. (2008). Corporate governance and firm cash holdings in the U.S. *Journal of Financial Economics, 87*, 535–555.

Hoffman, W. H. (1961). The theory of tax planning. *The Accounting Review, 36*(2), 274-281.

Izedonmi, P.F. (2016). *A quick guide to project writing, for social and management sciences students*, Zion Praise Publishers & Anointed Publishers.

Jensen, M & Meckling, W (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. Journal of Financial Economics, 3: 305-360.

Jensen, M. & Murphy, K.. (1990). Performance pay and top-management incentives. *Journal of Political Economy, 2*, 225-264.

Kiabel, B. D., & Nwikpas, N. N. (2001). *Selected aspects of Nigerian taxes*, Owerri: Springfield Publication ltd

Kroes, J., Subramanian, R & Subramanyam, R. (2012). Operational compliance levers, environmental performance, and firm performance under cap and trade regulation. *Journal of Manufacturing & Service Operations Management, 14*(2), 186-201.

Lanis, R., & Richardson, G. (2012). Corporate social responsibility and tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy, 31*(1), 86-108

Lanis, R., Richardson, G., & Taylor, G. (2015). Board of director gender and corporate tax aggressiveness: an empirical analysis. *Journal of Business Ethics,* 1-20

Liman, M. & Mohammed, A.S. (2018). Operating cash flow and corporate financial performance of listed conglomerate companies in Nigeria. *IOSR Journal of Humanities and Social Sciences, 23*(2), 01-11.

Musah, M. & Kong, Y. (2019). The affiliation between cash flow flows and the financial performance of non-financial firms: An empirical evidence from the Ghana Stock Exchange. *EPRA International Journal of Research and Development, 4*(4), 84 – 92

Nangih, E. Ofor, T.N. & Onuorah, J. K .J. (2020). Cash flow management and financial performance of quoted oil and gas companies in Nigeria. *Journal of Accounting and Financial Management, 6*(4), 1-11.

Nwanyanwu, L. A. (2015). Cash flow and organizational performance in Nigeria: Hospitality and print media industries perspectives. *European Journal of Business, Economics and Accountancy. 3*(3), 66-72.

Nwaobia, A, Kwarbai, J, & Ogundajo, G. (2016). Tax planning and firm value: empirical evidence from Nigerian consumer goods industrial sector. *Research Journal of Finance and Accounting, 7*(2), 172-184

Olugbenga, O. M., Olusola, A. J., Zacchaeus, S. A. & Oluwagbemiga, O. E. (2014). Financial reporting and compliance of impairment of non-current assets on Nigerian banks. European Journal of Accounting, Auditing and Finance Research, 2(2), 18 – 35.

Pniowsky, J. (2010). Aggressive tax planning-How aggressive is too aggressive? *Thompson Dorfman Sweatman LLP, 3*, 1-3.

Soet, A., Muturi, W., & Oluoch, O. (2018). Effect of operating cash flow management on financial performance of mutual funds in Kenya. *European Journal of Business, Economics and Accountancy, 6(*5), 37-46

Steijvers, T., & Niskanen, M. (2015). Tax aggressive behaviour in private family firms - the effect of the CEO and board of directors. *Proceedings of the European Conference on Management, Leadership & Governance*

Tariverdi, Y., Amanolahi, G. F. & Faal, F. (2014). The effect of components of a 4 part model of cash flow statement on operational performance of firms enlisted in the Tehran Stock Exchange. *Indian Journal of Science Research, 7*(1), 240 – 250.

Turcas, M. (2011). The cash flow: Instrument for the company's analysis and forecast. Bucharest, *Academy of Economic Studies*, 461 – 466.

Ugo, C., & Egbuhuzor, A. (2022). Effect of cash flow management on financial performance; Evidence from the pharmaceutical industry in Nigeria. *African Journal of Accounting and Financial Research, 5*(1), 1-13

Uniamkogbo, E., Bennee, E., & Adeusi, S. (2019). Corporate governance and tax aggressiveness in Nigeria. *AE-Funai Journal of Accounting, 4*(1), 20-33

Uwonda, G., & Okello, N. (2013). Cash flow management utilization by Small Medium Enterprises (SMEs) in Northern Uganda. *Merit Research Journal of Accounting, Auditing, Economics and Finance, 1*(5), 67-80.

Velnampy, T. & Kajananthan, R. (2013). Cash position and profitability of telecommunication sector in Sri Lanka. *Greener Journal of Social Sciences, 3*(6), 324 – 333.

## Appendix 1
### The List of Companies Quoted under 3 Sectors of NSE

| S/N | SECTORS | QUOTED FIRMS IN NIGERIA | TOTAL COYS USED | % SAMPLE OF POPULATION (31) | TOTAL COYS EXCLUDED | % SAMPLE OF POPULATION EXCLUDED (5) | EFFECTIVE TAX RATE | REMARK |
|---|---|---|---|---|---|---|---|---|
| | **HEALTH CARE** | | | | | | | |
| 1 | | Fidson Plc | 1 | | | | **29** | **ETR ≤ 30%** |
| 2 | | Morrison Plc | 1 | | | | **25** | **ETR ≤ 30%** |
| 3 | | Neimeth Plc | 1 | | | | **14** | **ETR ≤ 30%** |
| 4 | | Pharma Deko Plc | 1 | | | | **15** | **ETR ≤ 30%** |
| 5 | | Union Diagnostic Plc | 1 | | | | **22** | **ETR ≤ 30%** |
| 6 | | Ekocorp Plc | 1 | | | | **19** | **ETR < 30%** |
| 7 | | Glaxosmithline Plc | | | 1 | | **177** | **ETR > 30%** |
| 8 | | May & Baker Plc | | | 1 | | **142** | **ETR > 30%** |
| 9 | | Evans Plc | | | 1 | | | **NO INFO** |
| 10 | | Nig German Chem Plc | | | 1 | | | **NO INFO** |
| | | **TOTAL NO OF COYS UNDER HEALTH CARE** | **6** | **19.4%** | **4** | **12.9%** | | |
| | **ICT SECTOR** | | | | | | | |
| 1 | | Triple Gee & Company Plc | 1 | | | | **29** | **ETR ≤ 30%** |
| 2 | | Chams Plc | 1 | | | | **11** | **ETR ≤ 30%** |
| 3 | | NCr Nig Plc | 1 | | | | **30** | **ETR ≤ 30%** |
| 4 | | Etransact Intl Plc | 1 | | | | **30** | **ETR ≤ 30%** |
| 5 | | Courteville Plc | | | 1 | | **47** | **ETR > 30%** |
| 6 | | CWG Plc | | | 1 | | **32** | **ETR > 30%** |
| 7 | | MTN Nigeria Comm Plc | | | 1 | | | **NO INFO** |
| 8 | | Airtel Africa Plc | | | 1 | | | **NO INFO** |
| 9 | | Omatek Ventures Plc | | | 1 | | | **NO INFO** |
| | | **TOTAL NO OF COYS UNDER ICT SECTOR** | **4** | **12.9%** | **5** | **16.1%** | | |
| | **OIL AND GAS** | | | | | | | |
| 1 | | Ardova Plc | 1 | | | | **26** | **ETR ≤ 30%** |
| 2 | | Capital Oil Plc | 1 | | | | **5** | **ETR ≤ 30%** |
| 3 | | 11 Plc | 1 | | | | **30** | **ETR ≤ 30%** |
| 4 | | Japaul Oil Plc | 1 | | | | **8** | **ETR ≤ 30%** |
| 5 | | Conoil Plc | | | 1 | | **34** | **ETR > 30%** |
| 6 | | Oando Plc | | | 1 | | **64** | **ETR > 30%** |
| 7 | | Seplat Oil Plc | | | 1 | | **88** | **ETR > 30%** |
| 8 | | Mrs Oil | | | 1 | | **66** | **ETR > 30%** |
| 9 | | Total Nig Plc | | | 1 | | **33** | **ETR > 30%** |
| 10 | | Amino International Plc | | | 1 | | **52** | **ETR > 30%** |
| 11 | | Rak Unity Pet Plc | | | 1 | | **38** | **ETR > 30%** |
| 12 | | Eternal Plc | | | 1 | | **43** | **ETR > 30%** |
| **31** | | **TOTAL NO OF COYS UNDER OIL & GAS SECTOR** | **4** | **12.9%** | **8** | **25.8%** | | |
| | | **GRAND TOTAL** | **14** | **45.2%** | **17** | **54.8%** | | |

Source: Compiled from NSE Factbook & Author's Conception (2022).

**Note:** *Firms with **ETR > 30%** are considered as Tax Conservative Firms while firms with **ETR ≤ 30%** are considered as Tax Aggressive Firms which the present study concentrated on. Hence Tax Conservative Firms were excluded from the study.*