

Accrual Accounting Basis and Cash Flows Future Predictions of Selected Manufacturing Companies in Nigeria

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Abstract

This study investigated the impact of accrual accounting basis on cash flows future predictions of selected manufacturing companies in Nigeria. The study used a sample of 10 quoted manufacturing companies in Nigeria over a period of 11 years from 2007 to 2017. The Panel Least Square Regression Techniques was employed in testing the hypotheses formulated. The results indicate that the accrual components measured when jointly put together is significant in predicting movement in future cash flows whereas Accounts Receivables, Accounts Payables and Inventories individually have an insignificant effect on cash flows future predictions. Deferred tax liability on its own, have significant effect on cash flow future prediction. The results also revealed that at the mean and median level, all the accrual components of accounting measured have a significant effect on cash flows future predictions. This research finding clearly supports the assertion of the FASB (1978) and the IASB (1989) that earnings based on accrual accounting basis generally provides a better predictor of future cash flows.

Key words: *Accrual accounting basis, cash flows future predictions, Accounts Receivables, Accounts Payables, Inventories, Deferred tax liability, Nigeria.*

1. Introduction

A firm's ability to generate cash flow affects the value of its securities. Predicting future cash flows enables the investors to predict share prices. Decisions to invest in a particular firm or not depends on the investor's understanding of the entity's ability to generate cash flows in the future. The accounting information derived from the published financial statement is a crucial source of relevant information used for many purposes. Owners (shareholders) often use the reported financial information to assess the manager's performance in discharging their stewardship responsibilities and for making economic decisions (Godfrey, Hodgson, Holmes & Tarca, 2006).

The International Accounting Standard Board (IASB) emphasized that an assessment of the enterprises ability, timing and certainty to generate future cash flows is essential when making economic decisions. Forecasting future cash flows is an important aspect of the economic decision making process, such as when valuating securities, appraising risk and returns of potential investments, assessing long term versus short term investments, and in the process of capital budgeting (Chong, 2012).

Operating cash flows resulting from the principal activities of the firm has been used as an indicator of a firm' s ability to meet other commitments (IAS 7). This has led many attempts in predicting future operating cash flows using variables such as earnings. Despite these, existing literature on cash flows prediction in developing countries including Nigeria remains inconsistent and inadequate.

Accrual basis accounting and cash basis accounting are the two main approaches used in predicting future cash flows. A firm' s ability to generate cash flow affects the value of its securities. The Financial Accounting Standard Board (FASB) indicates that the primary objective of financial reporting is to provide information to help investors, creditors and others assess the amount and timing of prospective cash flows (FASB 1978; 37-39). The FASB (1978) and the IASB (1989) also agree on the superiority of the accrual-basis accounting over the cash-basis accounting in the prediction of future cash flows.

The literature on future cash flow prediction is vast and focused on three main streams of research. The first stream of study concentrated on the usefulness of accrual earnings and operating cash flows in predicting stock prices or stock returns .The second stream of study concentrated on the usefulness of cash flows information and accrual accounting in predicting business failures .The third stream of research directly questioned FASB' s assertion that accrual basis accounting is superior to cash basis accounting in predicting future cash flows (Mwila & Meena, 2017).

The assertion of the Financial Accounting Standard Board (FASB) and the International Accounting Standard Board (IASB) on the superiority of accrual basis accounting over cash basis accounting in predicting future cash flows has been questioned directly and indirectly by various researchers and has led many attempts in predicting future cash flows using variables such as; earnings, operating cash flows, accrual components of earnings, market capitalization, current working capital and cash flow ratios.

However, the results are still unclear and there is therefore a need for more clarity on whether cash flows or earnings provide a better predictor of future cash flows in a developing country like Nigeria.

The general objective of this study therefore is to investigate the impact of Accrual Accounting basis on Cash flow future predictions of selected quoted manufacturing companies in Nigeria. The remaining part of the work is organised as follows; Section 2 discusses the literature while section 3 lays out the analytical framework and econometric methodology. Section 4 reports the results while section 5 concludes.

2. Review of Related Literature

2.1 Cash Flow and Cash Flow Statement

Cash flow is an index of the money that is received in or paid out by a firm for a particular period of time, which is required to keep the business running on a continuous basis (Ijeoma, 2016). Every business operations require cash as the basic input and without it the firms operations will disrupt and can even lead to insolvency (Akinyomi, 2014). A firm can become insolvent when it is not capable either of generating enough cash from internal sources or obtaining from external sources for sustaining operating, investment and financing activities of the firm (Keige,1991). For this reason, proper monitoring, management and accurate determination of cash movement is needed to enable the business to make important financial decisions (Olowe, 1998).

The cash flow statement is the accounting report that provides information about cash receipts, cash payments and net change in cash balances during a period (Chotkunakitti, 2005). It gives the movement of cash during the period under consideration. Essentially, the cash flow statement is concerned with the flow of cash and cash equivalents in and out of the business. As an analytical tool, the statement of cash flows is useful in determining the company' s ability to pay bills. A cash flow statement is divided into three sections namely; Cash flow from operating activities which involves revenue producing activities of the company and other activities that are not investing and financing activities. Operating cash flows are net of cash inflows and outflows related to the core operations. Secondly, investing activities Which involves the acquisition and disposal of long-term assets and other investments except short-term investments. Thirdly, financing activities Which are activities that results in changes in the size and composition of the equity capacity and borrowings of the enterprise (IASC, 2000). The financing and investing cash flows are a function of operating cash flows since their level will determine the need for financing and future investments.

2.2 Cash Flow Prediction

Prediction is an important part of the decision-making process, because decision making reflects what will happen in the future (Chotkunakitti, 2005). Cash flow future prediction is the future anticipation of the inflow and outflow of cash. Frigo & Graziano (2003) state that, for a firm issuing shares, prediction of future cash flows should be the very first responsibility in measuring the firm' s ability to pay the dividends. In economic decision making, financial prediction is a prime activity (Foster, 1986). Cash flows predictions play a vital role in almost all the various economic decision making by many parties including security analysts, creditors and managers. The decision makers are interested in a firm' s cash flows because they expect that current cash flows may affect their future cash flows (Neill et al., 1991) and they will have an interest in assessing the firm' s future cash flows to the extent that these provide a clearer indication of the firm' s cash flow in the future. With respect to business management, cash flow is viewed as the ' lifeblood' of a business (Schaeffer, 2002) as cash must be available when it is needed.

Therefore a company's ability to manage cash is vital to survival and wealth (Sharma & Jones, 2000). Usually prediction of future cash flows is done using accounting information as input data for the various models (Godfrey et al, 2003). Predicting cash flows of future periods can help a manager identify future financial problems (Kelly & O'Connor, 1997). Cash flow prediction allows the company to know its cash position and to make the necessary expenditures for such items as debt repayment, acquisitions and payment of expenses (Plewa & Friedlob, 1995). Cash flow is one of the early warning signs indicating a financial distress (Zwaig & Pickett, 2001). A decline in cash flow can provide a signal of bankruptcy to creditors and other interested parties (Epstein & Pava, 1992; Zwaig & Pickett 2001).

2.3 Earnings as a Predictor of Future Cash Flows

Earnings are the measurement of the company's performance during the period (Percy, 2012). They form a critical part in financial analysis of the financial statements and are used in computing cash flows from the operations of the company. Collins et al. (1997) point out that earnings and book values could be interchangeably applied in explaining the share prices.

Earnings are considered as a key measure in evaluation of company's performance and an important factor for management of debt and debt contracts (Dechow et al., 1997). It is also used as key variable and plays important role in predicting firm's future cash flows (Ebaid, 2011; Greeberg, Johnson & Ramesh (1986))

Earnings are also used as the driver of the value of the company (Beisland, 2011). In accounting, earnings occupy a key position and considered as an important measure which show the summary of accounting that assist in measuring performance of the firm in debt contracts, management and valuation of company's share (Dechow, Kothari & Watts, 1997). According to Modigliani & Miller (1958), the market value of a company is calculated using its earning power. This indicates future cash flows and a firm's ability to meet other cash commitments. Consequently, Watts & Zimmerman (1986) believe that earnings are good surrogate for a firm's future cash flows. The Financial Accounting Standard Board (1978), equally stated that earnings based on accrual accounting generally provides a better indicator of future cash flows. It is one of the key indicators that fundamental analyst use to evaluate the company.

Consequently, studies in the usefulness of earnings in the capital market are based on the hypothesis that earnings are a good surrogate for a firm's future cash flows (Board & Day 1989; Watts & Zimmerman 1986). A number of researchers have studied the relationship between accounting earnings and stock price and suggested that earnings have an implication for future cash flows of companies (Bamber & Cheon 1995; Lipe 1990).

Accrual earnings are indicators of future cash flow for many reasons. Firstly, because historical cost accounting earnings is the standard reported earnings measure and is the most common variable to be analyzed in the press and accounting literature, it is used to indicate future cash flows (Board & Day 1989).

Secondly, earnings are supported by the assumption that earnings provide information about the future dividend-paying ability of firms (Bierman 1992; Lipe 1990).

Furthermore, accrual earnings are seen as a more relevant basis for assessing cash flow return than cash flow, because dividend payouts are based on accrual earnings (Board & Day 1989).

The IASC in 1995 suggested that under the accrual basis, accounting information including financial position and financial performance of a company is useful for users in their decision making. In particular, with regards to prediction, the IASC claims that this information can be useful in predicting the ability of the enterprise to generate or pay cash and other benefits in the future.

2.4 Cash Basis Accounting

The principle of cash accounting recognizes only cash transactions, such as recording cash receipts as income and cash payments as expenses (Birt et al., 2008). Earnings are recorded in the accounting period only when revenue and expenses are realized into cash during that accounting period, which contrasts with accrual accounting. Cash accounting is more prudent than accrual accounting, as it records only realized cash flows and does not anticipate with reasonable certainty the occurrence of cash flows (Elliott & Elliott, 2007).

Cash flow accounting (CFA) is defined by Lee (1981) as the term used to denote a system of financial reporting which describes performance of an entity in cash terms. It is based on a matching of periodic cash inflows and cash outflows, free of credit transactions and arbitrary accounting allocations. Inflows include cash from trading operations and providers of long-term finance; and outflows include payments for replacement and growth investment, taxation, interest, and distributions (Lee, 1981). Lawson (1992) and Lee (1985) suggested that cash flow accounting may be helpful to investor decision-making. Cash flow accounting can avoid uncertain accounting allocations present in the accrual system, produce more objective financial information and provide users with fundamental and critical financial data (Lee, 1993), because cash flow accounting does not involve allocation and matching problems. Payments and receipts are recorded when the transaction of receipts or payments are made. As a result, it is expected that cash flow is less vulnerable to manipulation than accrual information (Ali 1994; Sharma, 2001). For similar reasons, cash flow is seen as the superior instrument for predictive purposes, particularly for predicting future cash flows (Charitou & Ketz, 1991; Lee 1993).

There are fewer assumptions involved in cash accounting and the reported cash transactions can be checked and confirmed. Only actual cash transactions that occurred are reported under cash accounting and it does not anticipate cash flows, while accrual accounting report transactions that are reasonably certain will occur. Consequently, there are fewer requirements for accounting standards or accounting policies disclosures under cash accounting, such as depreciation methods, compared to accrual accounting (Elliott & Elliott, 2007). Decision makers, policymakers, the media, credit rating agencies, and the public often find it difficult to comprehend all the information reported in the accrual based financial statements (Athukorala & Reid, 2003). Cash-based information is generally more easily comprehensible by unsophisticated users than accrual-based information.

Secondly, the difference between earnings and operating cash flow can be used as a signal to identify fraud in the financial statements that the auditors and other analysts should consider, in

addition to factors such as financial leverage, retained earnings and market value (Lee, Ingram & Howard, 1999).

Thirdly, operating cash flow is often used to define free cash flow. This suggests that the firm can generate free cash flow from business operations after using cash for capital expenditures (Chang, 2002). It is hard for a company to pursue new opportunities, to acquire other businesses or to pay dividends without availability of free cash flow. Free cash flow analysis helps managers determine the available funds for reinvestment, thereby, strengthen the development opportunity. Moreover, the analysis can help classify companies with the different development potentials.

2.5 Accrual Basis Accounting

Accrual accounting is a method of accounting whereby revenue and expenses are identified and reported in the accounting periods when the activity occurred, independent from the timing when cash is received for the income or cash paid for the expense (Elliott & Elliott, 2007; Chong, 2012). Economic transactions under this basis are segmented into the reporting periods when the activity occurred and not necessarily in the same period as the timing of cash flows relating to these transactions. When reporting the firm's financial performance, the accounting standards board in the United States (FASB, 1978) highlighted that the relevance of information reported under accrual accounting on the company's ability to generate continuing cash flows is superior to the limited information content of cash receipts and payments. The financial statements prepared under the accrual convention not only provided information about historical transactions that involved cash receipts and payments but also reported information on future obligations of cash payments or future benefits of cash receipts, which are useful for making economic decisions (Elliott & Elliott, 2007).

The accrual accounting basis is a basic accounting assumption dealing with the accounting process of recognizing the effects of financial transactions in the period in which events occur, rather than focusing only on cash receipts or payments (IASB, 2000). The transactions are recorded and reported in financial statements of the period they occur whether or not cash has been received or paid (Riahi-Belkaoui & Jones, 2002). As a result, accounting information reported in financial statements consists of both the effect of credit and cash transactions. A main reason for the development of accrual accounting system is the mitigation of timing and matching problems inherent in cash flows, in order to measure a firm's performance (Cheng, Liu & Schaefer 1997b; Dechow, 1994). Companies which record only cash transactions would have problems when the transaction involves more than one period of recording. This is because companies usually deal with credit transactions.

Accounting information is seen as input data for financial prediction models (Godfrey, Hodgson & Holmes 2003; Riahi- Belkaoui & Jones 2002). Accounting information is reported under the accrual and cash accounting bases; Income statements and statement of financial position report information on an accrual basis and cash flow statements are on a cash basis.

The accrual based earning information is supported for many reasons. Firstly, it is considered relevant in measuring a firm's performance (Godfrey et al., 2003) because it avoids the distortion

of uncertain variations in cash flows (Kremer & Rizzuto, 2000) in the measurement of performance. Secondly, the concept of matching expenses and revenue in arriving at accrual based earnings for predicting a firm's future cash flows has been widely affirmed by a number of researchers (Board & Day, 1989; Watt & Zimmerman, 1986).

However, Arnedo et al. (2012) reiterated that accruals "are also fraught with measurement error due to the assumptions underlying their determination and the discretion allowed under GAAP". Other critics of the accrual based earnings approach argue that accrual based earnings suffer from "flexible accounting techniques, subjective judgment, and manipulative practices" (Bernard & Stober, 1989; Lee, 1993).

2.6 Theoretical Framework

Modigliani-Miller (M&M) Theory was conceptualized by Franco Modigliani and Merton Miller in the year 1958. It is often called the capital structure irrelevance principle. It states that in the absence of taxes, bankruptcy costs, agency cost, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed. Since the value of the firm depends neither on its dividend policy nor its decision to raise capital by issuing stock or selling debt. The value of the firm is therefore dependent on the firm's earnings which results from investment policy and the lucrativeness of its industry. When a firm's investment policy is known to the public, investors will need only this information to make an investment decision.

This clearly indicates the vital role earnings play in estimating the worth of a company in the market irrespective of its financial structure. Accrual accounting basis is suitable for determining the amount of profit earned in a particular period because it safeguards invested capital and makes dividend distribution decision in the best interest of shareholders. Earnings as an indicator of future cash flows indicate a firm's ability to meet other cash commitments. If investors can predict future cash flows of a company, they can predict the share price of that company hence stating the market value of that company.

2.7 Empirical Review

Previous studies have examined the ability of earnings and cash flows to predict future cash flows. Mary, Donald & Karen (2001) investigated in the United States the role of accruals in predicting future cash flows using various variables like; Earnings, cash flow and accrual components. Data from Standard & Poor's Compustat dataset files of 13 companies from the period 1987-1996 were collected and analyzed using Pearson (Spearman) correlations. Findings from the study show that the cash flow and accrual components of current earnings have substantially more predictive ability for future cash flows than several lags of aggregate earnings. Accrual components such as change in accounts receivable, change in inventory, etc aid in predicting future cash flow beyond current cash flow. Their findings also suggest that knowledge of accounting accruals aids in predicting future cash flows over and above these firm characteristics.

Chotkunakitti (2005) investigates the ability of accrual and cash flows accounting data to predict future cash flows of Thai listed companies for the period 1994-2002 using the following variables; earnings, cash flows, accrual components of earning and cash flow ratios. Cross-

sectional regressing model was used to analyze the data. Results show that past earnings, cash flows and accrual components of earnings can be used to predict future cash flows and cash flows have better predictive power than past earnings.

Iftikhar, Labianca & Nada (2016) examined the prediction of future cash flows using various variables such as current earnings, accrued accounts, operating cash flows etc. Data from 191 companies listed on the Karachi Stock exchange (KSE) for the period 1996-2011 were analyzed using the regression analysis. Their findings suggest that current earnings do not reveal better prediction power as compared to the prediction ability of current operating cash flow for small sized firms in Pakistan. Separate current earnings or current operating cash flow variables are not sufficient to predict the future cash flow. Thus, they recommend that more parts are to be added in order to enhance the ability to predict future cash flows in the context of small firms in Pakistan.

Olfa, Mohamed & Faouzi (2015) examined the ability of accounting earnings versus cash flows to predict future cash flows in the Tunisian context. Data were collected from the financial market council (FMC) Tunisian consisting of 37 listed companies for the period 1998-2012 and analyzed using the coefficient of Pearson and Spearman. The results showed that for simple models whose variables of prediction is one or two years of delay, it is the operating cash flows that have the most interesting predictive capacity. However, when the model incorporates the delay of one and two years (multi-year), the net income has the most interesting predictive capacity. They proposed an improvement in the evaluation process and correct the forecast errors.

Uyen & Thoa (2015) examined whether earnings accrual components and cash flows components can improve predictability of earnings for forecasting future operating cash flows. Data on 220 Vietnamese listed firms from 2008-2012 were collected and analyzed using the Ordinary Least Square (OLS) regression. The research found evidence that cash flow components together with accrual components had superior predictive powers than aggregate earnings, cash flow and total accruals; or cash flow and accrual components in forecasting future operating cash flows in Vietnam.

Joseph, Kwame & Kingsley (2015) examined the comparative predictive ability of earnings and operating cash flow variables on future operating cash flows. Ordinary Least Square (OLS) method was used to develop regression models over the period of 2002-2012. Data from listed companies on the Ghana Stock Exchange (GSE) with published financial statement within the period was used. Results revealed that earnings and operating cash flows are significant in predicting future operating cash flows but have different predictive powers with earnings providing a superior comparative predictive ability on future cash flows. Thus earnings are a better predictor of future operating cash flows than historical operating cash flows itself. It was established that investors who seek to predict future operating cash flows on their investment by relying on three years ago earnings, two years ago earnings, a year ago earnings would make some gains in terms of precision than those using just one year and only past operating cash flows as proxy for predicting their future operating cash flow in a developing economy such as Ghana.

Oba, (2015) sought to test empirically the role of past accrual based earnings derived from accrual accounting basis in comparison to cash flows of quoted non-financial companies in Nigeria. The study used a sample of 40 quoted non- financial companies over a period of 13 years from 2001-2013 and employed the OLS regression technique in the data analyses. The results show that cash flows are a better predictor of future operating cash flows than past earnings.

Ijeoma (2016) examined the relationship between earnings and cash flow in estimating future cash flows of firms in Nigeria. Data from twenty one (21) commercial banks from 2004-2013 were collected and analyzed using the Ordinary Least Square (OLS) technique. The result found a positive and significant relationship among future cash flows, past earnings, traditional measure of cash flows and current working capital. It further recommends that regulatory authorities of accounting and capital market operations in Nigeria should encourage companies to set up a cash flow system that will encourage the investing public to avail themselves of financial risk capable of jeopardizing their investment.

Ebiaghan (2018) examined the comparative abilities of accrual-based and cash-based accounting information to predict future operating cash flows. Secondary data from eighty (80) quoted firms between the years 2005 - 2015 were collected and analyzed using the Ordinary Least Square (OLS) regression method. Results revealed that historical earnings data prepared under the accrual-basis possessed superior predictive ability over operating cash flows data in forecasting future cash flows of quoted non-financial firms in Nigeria.

Adebimpe & Nsima (2018) examined the abilities of past cash flows and past earnings in predicting future operating cash flows of money deposit banks in Nigeria. Data on 13 listed deposit money banks from 2011-2016 were collected and analyzed using Ordinary Least Square (OLS) regression method. Findings revealed that past earnings has ability in predicting future operating cash flows than past cash flows.

3. METHODOLOGY

3.1 Nature and Sources of Data Collection

The study made use of secondary data which consisted of audited published financial statements of selected manufacturing companies quoted on the Nigerian Stock Exchange.

3.2 Population of the Study

The population of this study includes 176 listed companies in the Nigeria Stock Exchange as at March 7th, 2017 with a total market capitalization of about ₦ 8.5 trillion.

3.3 Determination of Sample Size

Out of 39 quoted companies in Nigeria classified within the manufacturing sector, 10 companies were used for this study. The criteria used in selecting the sample size were 12 months annual report ending 31st December or March 31st accounting year ends to ensure consistency of financial period for all sampled firms and at least seven consecutive years to enable sufficient

data for the regression models.

3.4 Method of Data Analysis

The Panel Least Square Regression Techniques was used to test the hypotheses in establishing the relationship between the dependent variables (future cash flows) and the independent variables (Accounts receivables, Accounts payable, Inventory and Deferred tax liability). The mean, minimum, maximum, and the standard deviations for the pooled sample were used to measure each variable.

3.5 Model Specification and Operationalization of Variables

The model for this study was adopted from Francois, Seunghan & Joshua (2008), with some modifications to suit this study thus:

$$\text{CFO} = f(\text{ARB}, \text{APB}, \text{INV}, \text{DEFTAX}, \mu) \dots \dots \dots 1$$

$$\text{CASH}_{it} = \beta_0 + \beta_1 \Delta \text{ARB}_{it} + \beta_2 \Delta \text{APB}_{it} + \beta_3 \Delta \text{INV}_{it} + \beta_4 \text{DEFTAX}_{it} + \mu \dots \dots 11$$

Where,

CFO = Cash Flow

ARB = Accounts Receivable

APB = Accounts Payable

INV = Inventory

DEFTAX = Deferred Tax Liability

CFO is the net cash inflow from operating activities as per the financial statement of the firm during the period,

Δ ARB is the accounts receivable changes as per the financial statement of the firm during the period calculated as; End of year Accounts Receivable less Beginning of year Accounts Receivable

Δ APB is the accounts payable changes as per the financial statement of the firm during the period calculated as; End of year Accounts Payable less beginning of year Accounts Payable

Δ INV is the accounts inventory changes as per the financial statement of the firm during the period calculated as; End of year Inventory less beginning of year Inventory

DEFTAX is the Deferred tax liability as per financial statement of the firm during the period and

The variables used in this study were deflated by total assets

4. Results and Discussion

4.1 Descriptive Statistics

Table 4.1: Descriptive Statistics

VARIABLES	CFO	ARB	APB	INV	DEFTAX
Mean	0.134566	-0.039387	-0.032422	0.013363	0.041706
Median	0.133007	-0.007300	-0.013667	0.007055	0.040353
Maximum	0.619918	0.264764	0.521590	0.885956	0.160487
Minimum	-0.216410	-1.857680	-1.850479	-0.980330	0.000730
Std. Dev.	0.142475	0.274818	0.309219	0.215846	0.030738
Skewness	0.281642	-5.355907	-3.861051	0.101871	0.997410
Kurtosis	3.531007	35.69950	23.33758	12.66251	4.124285
Jarque-Bera	2.746598	5426.667	2169.054	428.1088	24.03191
Probability	0.253270	0.000000	0.000000	0.000000	0.000006
Sum	14.80231	-4.332569	-3.566400	1.469896	4.587709
Sum Sq. Dev.	2.212594	8.232244	10.42221	5.078243	0.102986
Observations	110	110	110	110	110

Source: Researcher summary of descriptive statistics

Table 1 above shows the mean (average) for each variable, their maximum values, minimum values, standard deviation. The sampled companies have positive average cash flow (CFO) of 0.134566, and this means that the selected firms have a positive cash flow future prediction in the period of the study. The table also reveals a positive average value of 0.013363 for INV and 0.041706 for DEFTAX; and negative average value of -0.039387 for ARB and -0.032422 for APB respectively. These values mean that within the period under review, quoted firms meet up to 13.5% of cash flow on the average. The large differences between the maximum and minimum values for the variables show that the firm' s data used for the study are homogeneous.

4.2 Correlation Analysis

Table 4.2: Correlation Analysis

VARIABLE	CFO	ARB	APB	INV	DEFTAX
CFO	1.000000	-0.075376	-0.130715	-0.091481	0.348199
ARB	-0.075376	1.000000	0.322177	-0.098504	0.140610
APB	-0.130715	0.322177	1.000000	-0.276742	0.088442
INV	-0.091481	-0.098504	-0.276742	1.000000	0.005599
DEFTAX	0.348199	0.140610	0.088442	0.005599	1.000000

Source: Researcher summary of correlation analysis

The correlation matrix is to check for multi-collinearity and to explore the association between each explanatory variable and the dependent variable. In checking for multi-collinearity, the study observed that no two explanatory variables were perfectly correlated.

4.3 Model Estimation

Table 4.3: Cash Flow (CFO) Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.058628	0.021737	2.697227	0.0081
ARB	-0.044503	0.048898	-0.910121	0.3648
APB	-0.082146	0.044746	-1.835829	0.0692
INV	-0.099927	0.060929	-1.640051	0.1040
DEFTAX	1.746905	0.415684	4.202486	0.0001
R-squared	0.748155	Mean dependent var		0.134566
Adjusted R-squared	0.743421	S.D. dependent var		0.142475
S.E. of regression	0.131863	Akaike info criterion		-1.169725
Sum squared resid	1.825711	Schwarz criterion		-1.046975
Log likelihood	69.33485	Hannan-Quinn criter.		-1.119937
F-statistic	5.562587	Durbin-Watson stat		1.721751
Prob.(F-statistic)	0.000422			

Source: Researcher summary of Regression Analysis

The R-squared which is the co-efficient of determination or measure of goodness of fit of the model, tests the explanatory power of the independent variables in any regression model. From our result, the R-squared (R^2) is 74% in CFO Model. This showed that our model displayed a good fit because the R^2 is closer to 100%, these explanatory variables can impact up to 74% out of the expected 100%, leaving the remaining 26% which would be accounted for by other variables outside the model as captured by the error term.

The F-statistics measures the overall significance of the explanatory parameters in the model, and it shows the appropriateness of the model used for the analysis while the probability value means that model is statistically significant and valid in explaining the outcome of the dependent variables. The calculated value of the f-statistics is 5.562587 and its probabilities are 0.000422 which is less than 0.05. We therefore accept and state that there is a significant relationship between the variables. This means that the parameter estimates are statistically significant in

explaining the relationship in the dependent variable.

The t-statistics helps in measuring the individual statistical significance of the parameters in the model from the result. It is observed that only DEFTAX was statistically significant at 5% with its value as 4.202486. This implies significant contribution to cash flow future predictions at the 5% level of significance. The remaining variables, ARB, APB and INV (with values as -0.910121, -1.835829 and -1.640051 respectively) are not statistically significant at 5% significant level.

Our model is free from the problem of autocorrelation because the Durbin-Watson value is 1.721751 which is approximately 2 (this means, the absence of autocorrelation in the model used for the analysis).

The a priori criteria are determined by the existing accounting theory and states the signs and magnitude of the variables from the result. ARB has a negative sign and its value is -0.910121; this implies that a decrease in ARB decreases the cash flow future predictions by 91%. APB has a negative sign and its value is -1.835829; this implies that a decrease in APB decreases the cash flow future predictions by 184%. INV also has a negative sign and its value is -1.640051. This implies that a decrease in INV decreases the cash flow future predictions by 164%, and DEFTAX has a positive sign and its value is 4.202486. This implies that an increase in DEFTAX increases the cash flow future predictions by 420%.

Discussion of Result

Accounts receivable is negative and has insignificant effect on Cash flow future predictions. This means that a decrease in the Accounts receivable will have insignificant effect on Cash flow future predictions of quoted manufacturing companies in Nigeria.

Account payable is negative, with no significant effect on Cash flow future predictions of quoted manufacturing companies in Nigeria. This means that a decrease in the Accounts payable will have insignificant effect on Cash flow future predictions of quoted manufacturing companies in Nigeria.

Inventory has negative and non insignificant effect on Cash flow future predictions of quoted manufacturing companies in Nigeria. This means that a decrease in inventory value will have insignificant effect on Cash flow future predictions of quoted manufacturing companies in Nigeria.

Deferred tax liability has positive and significant effect on cash flow future predictions of quoted manufacturing companies in Nigeria. This means that an increase in the deferred tax liability will have a positive effect on cash flow future predictions of quoted manufacturing companies in Nigeria. This finding is consistent with prior studies like Stammerjohan & Nassiripour (2001) on the predictive ability of DEFTAX on future cash flows. The increment content of deferred tax expense in predicting future cash flows was proven also by Cheung, Krishnan & Min (1997).

Above findings are consistent with prior studies like Francois, Seunghan & Joshua (2008) who found no significant improvement in prediction accuracy for future cash flows when

disaggregating accruals into individual components. Grunfeld & Griliches (1960) observed that disaggregating data may fail to produce more accurate forecasts than aggregate data. However, Mary, Donald., & Karen (2001) and Chong (2012) revealed that disaggregating earnings into its accrual components significantly enhances the predictive ability relative to aggregate earnings.

5.1 Conclusion

This study investigated the effect of Accrual Accounting Basis on Cash Flows Future Predictions of manufacturing Companies in Nigeria. Findings from this study have proven that accrual accounting basis is a better predictive measure in cash flow future prediction for manufacturing companies in a developing country like Nigeria. Accrual components of accounts when jointly put together can predict up to 74% of movement in future cash flows as indicated by the R^2 value of 0.748155. The independent variables measured individually were statistically insignificant in predicting future cash flows of selected companies except Deferred Tax Liability (DEFTAX). Although the prediction level of each variable varies, the overall P-value of 0.000422 is still in agreement with the assertion of FASB (1978) and IASB (1989) indicating a significant level of contribution in predicting future cash flows for manufacturing companies in Nigeria. Therefore the findings of this research work clearly supports the assertion of the Financial Accounting Standard Board (FASB, 1978) and the International Accounting Standard Board (IASB, 1989) on the superiority of the accrual-basis accounting information in predicting future performance.

5.2 Recommendation

This study recommends that the Nigerian Securities and Exchange Commission and other regulatory bodies should properly enforce the use and implementation of the International Financial Reporting Standards (IFRS). These standards have the qualitative attributes that would guarantee transparency of accounting information and thus improve the predictive ability of accounting information (earnings and cash flows) for the forecasting of future cash flows.

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