Relevance of Cash Flow Activities to Profitability of Manufacturing Firms in Nigeria

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ABSTRACT

This study evaluates the relevance of cash flow activities to profitability of manufacturing firms in Nigeria. Whereas the specific objectives were to: Examine the relationship between net cash flow from operating activities and profit for the year of manufacturing firms in Nigeria and Ascertain the relationship between net cash flow from investing activities and profit for the year of manufacturing firms in Nigeria. An ex-post facto was adopted for the study. The adoption of the ex-post facto research design was informed by the fact that the work relied on historical data. The researcher made use of secondary data. The data is Panel data ranging from (2008 – 2017), there were extracted from the annual reports and accounts of the selected listed manufacturing firms on Nigeria Stock Exchange. E-views 9.0 Software was used to analyzed the data. The result revealed that, net cash flow from operating activities have positive and significant relationship with profit for the year of manufacturing firms in Nigeria between 2008 and 2017. The sign of the correlation coefficient of 0.784528 is positive, and the probability of 0.0000 < 0.05. we conclude that net cash flow from operating activities positively and significantly relate with profit for the year of manufacturing firms. While net cash flow from investing activities has a significant and negative correlation with profit for the year of firms in the manufacturing sector in Nigeria. This implies that increase in net cash flow from investing activities would influence a decrease in profit for the year. The sign of the correlation coefficient of -0.542910 is positive, and the probability of 0.0000 < 0.05. we conclude that net cash flow from investing activities negatively and significantly relate with profit for the year of manufacturing firms. we recommended that Managers of manufacturing firms in Nigeria should engage optimally, all activities that will generate more net cash inflow from operating activities and thoroughly evaluate investment activities to ensure optimal return so as to increase profit for the year of manufacturing firms in Nigeria.

Keywords: Cash Flow Activities; Profitability; Manufacturing Firms

1. Introduction

Cash has been identified by many scholars as an important element of decision making of every functional entity. It is one of one of the most important factors that interact with profitability and survival of an organization (Bingilar and Oyadonghan, 2014). Cash is current assets comprising currency or currency equivalents that can be accessed immediately or near-immediately (Wikipedia, 2018). Bingilar and Oyadonghan (2014) posit that cash flow is a crucial factor that enhances the operations of a company.

Uremadu (2004) opine that, cash flow is a collection of monies that a corporation adds to its non-current assets, inventory, account receivables, and marketable securities to generate profit. Uremadu goes on to say that in order for cash flows to be well structured and effectively used, a business firm must be able to devise various methods for selecting the best components of its cash flows to be used in the company's operations in order to increase productivity and achieve financial performance. This method should be based on criteria that the finance manager has carefully crafted after meticulous financial planning and control for the organization.

Financial management process is a very important course to performance of any firm and cash flow remains an indispensable element of the process. Efobi (2008) submits that corporate organizations need to develop a suitable cash flow mix and apply it due to its relevance to maximizing shareholders values.

Cash flow is the result of business activities related to operations, investments and financing. Cash flow permits a company to expand its operations, replace needed assets, take advantage of market opportunities and pay dividend to its owners, (Libby, R., Libby, P.A. & Short, D.G., 2014). For business managers and business analysts, it is very important that they appreciate the various sources and application of cash from business activities. Underpinning this opinion, Uremadu (2004) stated that, cash flow information assists its financial statement users in obtaining the relevant information concerning the uses and sources of virtually the entire financial resources over stated period of time. The extent to which an organization is able to finance its operation is largely dependent on the cash flow position of that organization. Nwachukwu (2002) maintain that the biggest problem of any project (property) development organization of any size is finance which is one of the elements or factors of production. In order to achieve long-term success; a business must pay close attention to its cash flow and relate it to the business's profitability.

Statement of the Problem

Cash flow activities are crucial in the daily operation of a business. Liquidity in any business facilitates provision of working capital, allowing the firm to source for inputs and settle its liabilities to suppliers, staff and meet its tax obligations. It is ideal for a firm to maintain healthy cash flow activities. These would put the firm in a position to expand its business, invest in new projects, and make dividend payments to shareholders; hence growing cash from operating activities of a business is a good indication of the firm's long-term viability. This should be the case with the manufacturing firms in Nigeria. Manufacturing firms should have a sound level of liquidity, though not in excess of the daily requirements (working capital), to enable it catch up with the daily business and investment opportunities.

However, what obtains presently is that there is cash squeeze which results in some firms not being able to make enough cash sales and debtors are not willing to keep to credit policy agreements. The situation impacts negatively on production which results in ineffective supply of manufactured products as well as stock out, in some extreme cases. This work evaluated the relationship between net cash flow from operating activities and investing activities on profitability of Manufacturing firms in Nigeria.

Objectives of the Study

The primary objective of the study was to evaluate the relevance of cash flow activities to profitability of manufacturing firms in Nigeria. Whereas the specific objectives were to:

1. Examine the relationship between net cash flow from operating activities and profit for the year of manufacturing firms in Nigeria.

2. Ascertain the relationship between net cash flow from investing activities and profit for the year of manufacturing firms in Nigeria.

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Research Hypotheses

In order to achieve the stated objectives and answer the research questions, the following null hypotheses were formulated for the study:

1. Net cash flow from operating activities do not positively and significantly relate with profit for the year of manufacturing firms.

2. Net cash flow from investing activities do not positively and significantly relate with profit for the year of manufacturing firms.

2.0 Review of Related Literature

Conceptual Review

Cash Flow Activities

Cash flows are inflows and outflows of cash and cash equivalents. Cash flow is the result of business activities related to operations, investments and financing. It shows the sources of an entity's cash for a fiscal year and how it utilized the cash. In their view, Amah, Ekwe, & Ihendinihu (2016) identified cash flow activities to include revenue generation activities like purchases of raw materials, material handling cost, production expenses, selling and distribution expenses, payment of salaries, wages and taxes. It could also involve purchase and sale of assets, borrowing of fund for financing of business operations. Other activities are servicing of debt and payment of dividends.

Cash flow statement avails users the information needed to assess the ability of firm managers to predict cash timing and expected amount involved to enable it adjust with the change in circumstances and meet requirements of unanticipated investment opportunities (IAS 7). These cash flow activities are categorized into;

i. operating cash flow activities

ii. investing cash flow activities

Cash flow activities are very crucial; hence it provides information that enables users of financial information and investors to appraise changes in net assets and financial structures of entities, as well as the liquidity and solvency of entities. Cash flow permits a company to expand its operations, replace and provided needed assets, maximize market opportunities and also pay dividend to its equity holders, (Libby, R., Libby, P.A. & Short, D.G, 2014).

Operating Cash Flows

The quantity of cash flows generated by operating activities is a vital indicator of whether the entity's operations have generated enough cash flows to repay loans, maintain the entity's operating capability, pay dividends, and make new investments without relying on external funding. (IAS, 7). Information Knowledge about the specific components of historical operating cash flows is important in estimating future operating cash flows when combined with other data. Cash flows from operating operations are primarily sourced from the entity's primary revenue-producing activities, according to the rules. As a result, they are typically the result of the transactions and other events that go into determining profit or loss.

Fabozzi and Markowitz (2006) Because operating cash flow accounts for receivables, depreciation, and liabilities, it can be considered a more accurate indicator of a company's profitability than traditional profitability measurements like net income.

Operating cash flows refer to cash inflows and outflows which arise from revenues and expenditures. Largely, cash payments for inventories, operational expenses, taxes and interests are measured as cash outflows. Furthermore, operating cash flow is seen as crucial for organizations because it underscores their achievements in operations and working capital management (McLaney & Atrill, 2014; Berry, 2011).

Cash flows from operating activities represent cash generated from an organization's normal, routine and recurring activities; they are Important because, in order to stay afloat, most businesses must be able to generate positive cash flow from operations over time (Amah, Ekwe, & Ihendinihu, 2016).

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Investing Cash Flows

The cash flows generated by investing activities are significant because they represent the amount of money spent on resources that will provide future revenue and cash flows (IAS 7). Only expenditures that result in a recognized asset on the balance sheet are qualified to be classified as investing activities. Bodie (2004) opines that investment cash flows should be regarded as vital elements of an organization's statement of cash flow, considering that this component may be a deciding factor in terms of the financial future of a given organization. On the other hand, investment cash flows, following an acquisition may tend to differ slightly as it encompasses both the solid assets of that investment which has been acquired, along with the existing cash flow of the acquisition investment statement of financial position. Bodie further adds that an investment cash flow could also encompass liabilities. An ideal acquisition situation is one in which positive cash flows are reflected, as these go a long way into augmenting the financial position of a given company.

Keown and Martin (2011) opine that, the procurement as well as sale of long-term assets forms cash flows from investing activities. Cash inflows are linked with the sale of long-term assets such as buildings, machineries etc. On the contrary, cash outflows arise from long term asset acquisitions (Berry, 2011). Universally, there could be a cash inflow and outflow resulting from investing activities. Chances of survival and growth are determined by future investments (Orhan & Basar, 2015). These are cash flows associated with the purchase and disposal of productive facilities used by the company and investments in the security of other companies, examples of which are payments for the acquisition of property, plant, and equipment, loans by the reporting business, and payments for the acquisition of debt instruments from other entities, excluding payments for the acquisition or disposal of liquid assets (Nwanyanwu, A. L. 2015: Libby, R., Bloomfield, R. & Mark, W. N. 2002). Change in technology, age and other form of impairments could result in removal an entity's asset. Though, it is important to underscore the fact that disposal of assets may also arise at critical point of liquidity problem. Therefore, this may be regarded as a serious issue for companies (Jeter, 2005).

Theoretical Review

The theoretical reviews were carried out in line with the objectives of the study.

Free Cash Flow Theory

Jensen (1986) posits that in the free cash flow theory, managers do not behave in a manner consistent with profit maximization. Managers instead, use increased cash inflow to pursue objectives that have little to do with increasing profits and a great deal to do with making the managers live better (such as increasing the size of their company), or easier. The free cash flow theory of Jensen further suggested that more internal cash enable managers to avoid market controlling. In this situation, they do not need shareholders' agreement and they are free to decide about investment on their will. Jensen, Clifford & Smith (1995) opine that monitoring difficulty creates the potential for management to spend internally generated cash flow on projects that are beneficial from a management perspective but costly from a shareholder perspective.

It holds that investments reduce free cash flow available to pursue their personal opportunist consumption and suboptimal investments. Donaldson (1997) Managers of organizations with free cash flows (cash flows in excess of viable investment opportunities) are more likely to waste money by taking excessive perquisites or making wasteful investments, according to this theory. Managers are more likely to use free cash flows to undertake investments that will increase the firm's growth (or to pay themselves excessive bonuses) rather than pay dividends or repurchase outstanding shares.

The agency hypothesis has the testable conclusion that enterprises with free cash flows are more likely to grow beyond the optimal point of shareholder wealth maximization. Any managerial decision that prevents these needless spending will benefit the shareholders of such companies. By utilizing extra cash flows, share repurchases prevent such waste (Jensen & Smith, 1995).

Empirical Review

Numerous other empirical studies had been carried out by many researchers on cash flow. For the purpose of the study, empirical reviews were carried out in line with the specific objectives of the study and presented thus;

Operating Cash Flow and Profitability

Okpe, Duru and Alor (2015) examined the Effect of Cash Flow Statement on Companies Profitability (A Study of Some Selected Banks in Nigeria). The general objective of this study was to ascertain the effect of cash flow statement on companies' profitability in Nigeria. The study involved a survey of three Banks; Fidelity bank of Nig Plc, First bank of Nig Plc and First city monument Bank Plc, Enugu State. Information was derived from the cash flow figures provided in these institutions' annual reports from 2009 to 2013. The Hypotheses were tested using multiple regression as an analytical tool. The study found that operating and financing cash flows had a considerable favorable impact on a company's profitability in Nigeria's banking sector.

Aliakbari, Banimahd, Talebnia, and Roodposhti (2015) conducted a study on the Effect of Abnormal Operating Cash Flows on Unconditional Conservatism. The study attempted to determine whether there is a link between unconditional accounting conservatism and irregular operating cash flows in Iranian businesses Givoly and Hayen (2002) examined unconditional conservatism, and the Dechew and Tang model measured anomalous operational cash flows (2008). The statistical population analyzed in this study includes enterprises listed on the Tehran Stock Exchange, and the study took place between 2006 and 2011. Descriptive Statistics was used to analyze the data. In order to accomplish the sample, the systematic omission approach was utilized in this study, and 858 observations were chosen as the study's sample. The findings revealed that unconditional accounting conservatism and abnormal operating cash flows have a negative connection. According to the findings, companies with higher levels of unconditional accounting conservatism have lower anomalous operational cash flows.

Guda, (2015) examined the relationship between cash flow and profitability of small and medium enterprises in Nairobi. County Firms' cash flow and profitability are organizational objectives of interest that are intertwined. A good cash flow position results in a company's liquidity, which allows it to continue operating, resulting in increased earnings and smart re-investment of profits, resulting in the firm's growth. Higher profit levels and, as a result, surplus capital for investment will be facilitated by a consistent positive cash flow situation.

These The company's strategic direction, the type of its business, the length of its existence, and the effect of the environment surrounding it, such as competitors, government policies, consumers, and employees, are all factors that influence the company's aims. The goal of this study was to determine the relationship between profitability and cash flow in Nairobi County's small and medium businesses.

This study used a descriptive study with primary data acquired from individual small and medium-sized business firms that were drawn to form a sample for the purpose of this study.

To acquire coefficients of the variables, data was organized into a panel and analyzed using a fixed effect regression model. According to the study's findings, small and medium businesses in Nairobi County have a considerable association between profitability and cash flow. Other major determinants influencing the profitability of SMEs were discovered, although they were not the focus of this study. The study suggests adopting a holistic approach to profitability and focusing on identifying the major factors that drive profitability in small and medium-sized businesses. It is evident that cash flow has significant relationship with profitability for this segment of firms sampled.

Adelegan (2013) carried out an empirical analysis of the relationship between cash flow and dividend changes in Nigeria. Over a longer testing period, from 1997 to 2010, the researcher used the ordinary least square quoted enterprises in Nigeria. The empirical findings show that there is a favorable association between cash flow and firm success. Furthermore, the relationship between cash flows and dividend changes is highly dependent on the amount of growth, capital structure, and size of each organization, as well as changes in economic policy.

Investing Cash Flow and Profitability

Thanh and Nguyen (2011) carried out an investigation of comprehensive income and firm performance in Vietnam. They analyzed the data using multiple regressions, with a sample of 465 companies listed in Vietnam from 2007 to

2010. According to the findings, as the number of bank relationships grows, business performance declines. Additionally, the study also indicate that cash flow has negative relationship with firms, return on equity, while assets have negative association with return on assets.

Wanja (2011) conducted a study on the relationship between the determinants of working capital management i.e. inventory, debtors, creditors, and the cash level of Kenyan SMEs. A survey study was used to perform this research. The sampled 205 SMEs were the study's target population. The data was analyzed using a regression model, and the findings revealed that companies with higher cash flow volatility maintain more capital to offer a safe cushion for smooth operations.

Zhou, (2012), examined the relationship between free cash flow and financial performance evidence from the listed Real Estate Companies in China. On data from all listed real estate companies in China from 2006 to 2011, they utilized principal component analysis and regression analysis. The study found that a company's free cash flow is adversely connected with its financial success, with too much free cash flow resulting in a fall in financial performance.

Prowal and Tainis (2013) provided empirical evidence on cash flow ratios in predicting investments soundness. They felt that a company's success hinged on its ability to create enough cash to cover everyday operations, taxes, and dividends. The study examines the importance of cash flow ratios in analyzing a company's performance and uses them to distinguish sound from hazardous companies for investment.

3.0 Methodology

This research adopted the ex-post facto (after the facts) research design in order to establish the relationship between these cash flow indices and firm profitability. The adoption of ex-post facto research design was informed by the fact that the work relied on historical data. The researcher made use of secondary data. The data is Panel data ranging from (2008 – 2017), there were extracted from the annual reports and accounts of the selected listed manufacturing firms on Nigeria Stock Exchange. The study consulted thirty-seven (37) firms from the industrial goods and consumer goods, manufacturing sectors while 7 industrial good manufacturing firms and 11 consumer goods manufacturing firms listed on the Nigerian Stock Exchange. The firms include: Berger Paints Nigeria Plc., Beta Glass Plc., Nigerian Enamelware Plc. and Cement Company of North Nigeria Plc.; Cutix Plc., Dangote Cement Plc., and Lafarge Africa Plc. Others include Cadbury Nigeria Plc., Guinness Nigeria Plc., PZ Cussons Nigeria Plc., Unilever Nigeria Plc., Nestle Foods Nigeria Plc., NASCON Allied Industries Plc., Vita Foam Nigeria Plc., Flour Mills of Nigeria Plc., Honeywell Flour Mills Plc., NBL and 7UP Bottling Company Nigeria Plc. The study made use of systematic sampling technique. Systematic sampling is one in which every Kth value on a list is selected for inclusion in the sample, (Inyiama, 2016). The study critically chose "K" value of 2 as the sampling interval. The two sectors (Industrial goods and Consumer goods) in the Nigerian Manufacturing industry had 37 firms listed on the Nigerian Stock Exchange Commission as at 31st December, 2017. The sample size was determined by dividing the population size by the K-value (37/2= 18.5, approximately 19). However, eighteen (18) of the listed firms were selected. This was because it was found that one of the firms in consumer goods sector had been closed down (Champion Breweries Plc). E-views 9.0 Software was used to analyzed the data.

Model Specification

Koutsoyiannis (2003) as cited in Inyiama (2016), states that model specification involves the determination of the dependent and explanatory variables, which will be included in the model, the theoretical expectations about the sign and the size of the parameters of the function.

The Model was specified as, and in line with the hypotheses, as shown below:

For hypothesis one which states that net cash flow from operating activities do not positively and significantly relate with profit for the year of manufacturing firms. The hypothesis is modelled as:

$$r = [1/(n-1)] \, x \sum [((\overline{OCF} - OCF)/\overline{S_{OCF}}) \, X((PFTY - PFTY)/SPFTY)] \ldots\ldots\ldots\ldots (1)$$

For hypothesis two which states that net cash flow from investing activities do not positively and significantly relate with profit for the year of manufacturing firms. The hypothesis is modelled as:

$$r = [1/(n-1)] \; x \sum[((\overline{ICF} - ICF)/\overline{S_{ICF}})X((PFTY - PFTY)/S_{PFTY})] \; .... (2)$$

Where

n	=	number of observations in the sample
∑	=	summation symbol
PFTY	=	the value of profit after tax
(PFTY)⁻	=	the sample mean of profit after tax
SPFTY	=	the sample standard deviation of the profit after tax
OCF	=	the value of operating cash flow
(OCF)⁻	=	the sample mean of the operating
SOCF	=	the sample standard deviation of operating cash flow
ICF	=	the value of investing cash flow
(ICF)⁻	=	the sample mean of investing cash flow
SICF	=	the sample standard deviation of investing cash flow

Decision Rule

Accept H0 if the sign of the coefficient is positive, and p-value > 0.05. Otherwise, do not accept.

4.0 Analysis of Data and Interpretation

Data for profit for the year (PFTY), being the dependent variable and data for net cash generated from operating activities (OCF), net cash used for investing activities (ICF), proxies for firm cash flows, being the independent variables.

Table 4.1: Correlation Analysis result
Covariance Analysis: Spearman rank-order
Date: 10/11/18   Time: 17:32
Sample: 2008 2017
Included observations: 180

Covariance Correlation t-Statistic Probability Observations	PFTY	OCF	ICF	FCF
PFTY	2699.917			
	1.000000			

	180			
OCF	2118.161	2699.917		
Correlation	0.784528	1.000000		
t-Statistic	16.87959	-----		
Probability	0.0000	-----		
Observations	180	180		
ICF	-1465.811	-1363.239	2699.914	
Correlation	-0.542910	-0.504919	1.000000	
t-Statistic	-8.625151	-7.804358	-----	
Probability	0.0000	0.0000	-----	
Observations	180	180	180	

Source: Author's Eviews 9.0 Software, 2018

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Table 4.1 is an outcome of correlation analysis using the collected secondary data. It revealed that a positive, strong and significant association exists between PFTY and OCF at 78%. The result also suggests that profit for the year increases with increase in level of operating activities. It is the highest value obtained from this analysis. This implies that OCF is stronger in association with PFTY than the other explanatory variables under study, because a negative and significant relationship at 54% exists between PFTY and ICF of firms within the manufacturing sector. It is possible that the investing activities are for long term activities and that may be the reason we have negative association. This implies that these firms involve to a reasonable extent, in their financing activities such dividend payments and debt servicing.

Table 4.2: Regression Analysis Result

Dependent Variable: PFTY
Method: Panel Least Squares
Date: 10/11/18   Time: 16:31
Sample: 2008 2017
Periods included: 10
Cross-sections included: 18
Total panel (balanced) observations: 180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OCF	0.920427	0.028841	31.91329	0.0000
ICF	0.152106	0.037297	4.078272	0.0001
C	-1067140.	997229.4	-1.070105	0.2860

R-squared	0.918277	Mean dependent var	14664348
Adjusted R-squared	0.916884	S.D. dependent var	42168456
S.E. of regression	12157118	Akaike info criterion	35.48670
Sum squared resid	2.60E+16	Schwarz criterion	35.55765
Log likelihood	-3189.803	Hannan-Quinn criter.	35.51547
F-statistic	659.2035	Durbin-Watson stat	2.463899
Prob(F-statistic)	0.000000		

Source: Author's Eviews 9.0 Software, 2018

Table 4.2 is a regression analysis done to ascertain the effect of the relationship of the independent variables on the dependent variable. It indicates that OCF has a strong positive and significant effect on PFTY, while ICF have weak positive effect on PFTY in varied magnitude. While the result of PFTY and OCF test carried out with this tool aligned completely the result obtained in correlation, ICF results aligned slightly with correlation result. Though the relationship may be negative in the short term, it could turn out positive in the long run depending on the quality of decisions by the management of the individual firms. Meanwhile, the adjusted R^2 reveals that about 91% of the changes in PFTY could be explained by OCF, ICF while about 9% could be explained by other factors capable of influencing PFTY in the manufacturing sector in Nigeria; such as government influence through price regulation, as well as the error term. The Durbin-Watson statistic indicates the presence of serial autocorrelation in the time series data as could be seen by the 2.463899 value. Durbin-Watson suggested a value of 0 to 4 for an autocorrelation but maintained that, with a value of 0 to 2, there is an absence of autocorrelation; while values towards 4 suggests a negative correlation, values less than 0 suggests positive correlation.

Test of Hypotheses

The hypotheses of the study were tested applying the result of Spearman Rank Order correlation analysis carried out. The tests were aided with Eviews 9.0 Version. The hypotheses were tested in the following order:

- Re-statement of the hypothesis in both null and alternate.

- Decision rule for rejection of the null hypothesis

- Presentation of the test result.

- Decision.

Test of Hypothesis One

Hypothesis one sought to examine the relationship between net cash flow from operating activities and profit for the year of manufacturing firms in Nigeria.

Statement of Hypothesis

H_0: Net cash flow from operating activities do not positively and significantly relate with profit for the year of manufacturing firms.

H_1: Net cash flow from operating activities positively and significantly relate with profit for the year of manufacturing firms.

Decision Rule: Accept H_0 if the sign of the coefficient is positive, and p-value > 0.05. Otherwise, reject H_0 and accept H_1 accordingly.

Presentation of Test Results

Table Covariance Analysis: Spearman rank-order
Date: 10/11/18   Time: 12:13
Sample: 2008 2017
Included observations: 180

	PFTY	OCF
Covariance		
Correlation		
t-Statistic		
Probability		
Observations		
PFTY_N_000	2699.917	
	1.000000	

	180	
OCFN_000	2118.161	2699.917
Correlation	0.784528	1.000000
t-Statistic	16.87959	-----
Probability	0.0000	-----
Observations	180	180

Source: Author's Eviews 9.0 Output, 2018

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Decision

The sign of the correlation coefficient of 0.784528 is positive, and the probability of 0.0000 < 0.05. Thus, we reject the null hypothesis and conclude that net cash flow from operating activities positively and significantly relate with profit for the year of manufacturing firms.

Test of Hypothesis Two

Hypothesis two sought to examine the relationship between net cash flow from investing cash flow activities and profit for the year of manufacturing firms in Nigeria.

Statement of Hypothesis

H_0: Net cash flow from investing activities do not positively and significantly relate with profit for the year of manufacturing firms.

H_1: Net cash flow from investing activities positively and significantly relate with profit for the year of manufacturing firms.

Decision Rule: Accept H0 if the sign of the coefficient positive, and p-value > 0.05. Otherwise, reject H_0 and accept H_1 accordingly.

Presentation of Test Results

Covariance Analysis: Spearman rank-order
Date: 10/11/18   Time: 12:15
Sample: 2008 2017
Included observations: 180

Covariance Correlation t-Statistic Probability Observations	PFTY	ICF
PFTY_N_000	2699.917	
	1.000000	

	180	
ICF_N_000	-1465.811	2699.914
Correlation	-0.542910	1.000000
t-Statistic	-8.625151	-----
Probability	0.0000	-----
Observations	180	180

Source: Author's Eviews 9.0 Output, 2018.

Decision

The sign of the correlation coefficient of -0.542910 is positive, and the probability of 0.0000 < 0.05. Thus, we accept the null hypothesis and conclude that net cash flow from investing activities negatively and significantly relate with profit for the year of manufacturing firms.

Discussion of Findings

Hypotheses One: The hypothesis states that net cash flow from operating activities do not positively and significantly relates with profit for the year of firms in the manufacturing sector in Nigeria. From the correlation analysis in table 4.2.2, net cash flow from operating activities was shown to have positive and significant relationship with profit for the year of manufacturing firms in Nigeria between 2008 and 2017. The implication of the finding is that increase in net cash flow generated from operating activities would influence increase in profit for the year and vice versa, hence it speaks volume about the profitability of the firms.

The above agrees with the findings of some empirical studies which include the findings by Bingilar and Oyadongham (2014), Amah, Ekwe, &Ihendinihu (2016), Okpe, Duru and Alor (2015) and Sulayman (2014); they found positive relationship between cash flow and firm's performance.

Hypotheses Two: The hypothesis states that net cash flow from investing activities do not positively and significantly relates with profit for the year of manufacturing firms in Nigeria. The result of the analysis revealed that net cash flow from investing activities has a significant and negative correlation with profit for the year of firms in the manufacturing sector in Nigeria. This implies that increase in net cash flow from investing activities would influence a decrease in profit for the year. Firm's profitability would drop if investing decisions are not carefully appraised before it is embarked upon. However, it could also be that firms were yet to record returns from their investments, because some of the investments may be long term in nature.

The above finding is in line with the free cash flow theory of Jensen (1986) which posits that managers do not behave in a manner consistent with profit maximization. Managers instead, use increased cash inflow to pursue objectives that have little to do with increasing profits and a great deal to do with making the managers live better. This, they do by investing in projects that rather benefits them instead of maximizing shareholders interest. This results in apparent negative effect on profitability as was seen after the test of hypotheses two.

Conclusion

From the point of view of the findings and discussions of the results, we concluded that:

1. Net cash flow from operating activities has positive and significant relationship with profit for the year of manufacturing firms in Nigeria from 2008 to 2017. The implication of the finding is that increase in net cash flow generated from operating activities would influence increase in profit for the year and vice versa, hence it speaks volume about the profitability of the firms. It conforms to the studies of Amah, et al (2016), Okpe, et al (2015) and Sulayman (2014).

2. Net cash flow from investing activities has negative and significant relationship with profit for the year of manufacturing firms in Nigeria from 2008 to 2017. This implies that increase in net cash flow from investing activities would influence a decrease in profit after tax of manufacturing firms in Nigeria. It is in conformity with the studies and findings of Nwakaego, et al (2015) Ali, et al (2013) and Zhou et al (2012.

Recommendations

Based on the findings made, discussions held and the conclusion arrived at, the following recommendations were made:

1. Managers of manufacturing firms in Nigeria should engage optimally, all activities that will generate more net cash inflow from operating activities so as to increase profit for the year of manufacturing firms in Nigeria. This is because, profit for the year increases with increase in level of operating cash flow activities, hence net cash flow from operating activities relate positively and significantly with profit for the year. This could be achieved through aggressive marketing and promotion as well as increased sales outlets.
2. Management of the firms should thoroughly evaluate investment activities to ensure optimal return and increased profit for the year. To achieve the recommendation, firms should use cash flow ratios for investment appraisal. Through more effective governance for better strategic choices, the recommendation will be further enhanced.

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