
EFFECTS OF CASH FLOW ON CORPORATE SUSTAINABILITY IN NIGERIA AND GHANA

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Abstract

This study evaluates the effect of cash flow on corporate survival of manufacturing firms in Nigeria and Ghana for the period of five years (2016 – 2020). The study was based on Ex-Post Facto research design and used panel data collected from the financial report of the firms used in the study. The data collected was analyzed using the panel regression analysis, however, some preliminary analysis like descriptive statistics and correlation analysis was carried out on the data. The result reveals that about 65.7% of corporate survival in manufacturing companies in Nigeria and Ghana can be attributable to the level of cash flow. The study found that cash flow from investing activities has a negative and insignificant effect on corporate survival of the manufacturing firms in Nigeria and Ghana. The study also revealed that cash flow from operating activities has positive and significant effect on the survival of the manufacturing firms in quoted in Nigeria and Ghana. The study recommends that managers of manufacturing companies in Nigeria and Ghana should increase their funding of operating activities, as the increment will positively drive the Cash flow from operating activities and enhance their chances of the survival of their firm.

Key words: Cash flow, Operating activities, Investing activities and Corporate survival

Introduction

The inability of firms to generate adequate cash flow has pose problem of financial difficulties at one time or another. However, some firms regain financial health while others slide into distress that leads to inability to pay debts as they become due and also to bankruptcy. What distinguishes firms that are in distress and insolvent from those that are solvent or from those that are bankrupt or from those that achieve higher financial performance has always bothered financial analyst. This has made most analysts look for optimum cash flows that can guarantee stability and long run survival of firms.

Deloof (2009), examine the relationship between cash flow management and financial performance when he proposed that changes in a cash flow position might be the driver of changes in the firm's financial performance. The studies assert that effective cash flow management improves a firm's liquidity which previously has been linked to improved financial performance (Gitmul 1979). The performance improvements related to increased liquidity result primarily from an improved cash position, better credit, a reduced risk of bankruptcy and or ability to self-finance new business initiatives (Churchill & Mullins, 2001).

According to Tallou (2014), the current squeeze on cash and credit is threatening the survival of many businesses globally bearing in mind that they are the sources of the company's working assets and liabilities. The fact that organizations could not exist without adequate cash flow is thus undeniable. However, for the management of cash flow to lead to corporate survival the management must develop the technical sound investment policy that guarantees positive return on investment. However, the extent to which the diversification strategy affects the level of the level of survival of firm in Nigeria and Ghana is lacking.

Various studies have be carried out on cash flow, but they focus on the relationship between cash flow and firm liquidity, and firm financial performance, but studies that examine how cash flow impact on survival of firms is lacking. Prior studies generally examine the relationship between snapshots of cash flow and performance measures from a static benchmarking perspective, none has explores the relationship between cash flow and firm survival adopting a longitudinal approach. This approach will allow firms to determine which cash flow measures should be monitored and manipulated to track and improve firm performance. Second, because previous empirical cash flow studies typically use datasets from a single time period (and those few studies that utilize multi-period data do not utilize methodologies that adjust for the longitudinal nature of the samples), this study conducts a longitudinal data panel analysis using Hausman effect test.

The main objective of this study is to evaluate the effect of cash flow on firm corporate survival of quoted firms. The specific objectives include;

1. To determine the effect of operating cash flows on firm corporate survival of quoted firms
2. To ascertain the effect of investing cash flows on firm corporate survival of quoted firms.

Review of Related Literature

Operating Cash Flows reflect the ability of a firm to generate future cash flows. Nevertheless, most of the financial analysts suggest two uses for cash flows generated from operating activities: firstly they feel that these funds from operating activities of firm should be used to purchase new fixed assets so that the firms should be able to maintain the same level of operating activities and earnings in the future,

secondly a proportion of the income from operations can either be bestowed as a dividend used for re-buying of stock in order to delight the shareholders.

Operating cash flow is a measure of the amount of cash generated by a company's normal business operations. Operating cash is very important for the survival of a corporate; it indicates whether a company is able to generate sufficient positive cash flow to maintain and grow its operations or whether it may require external financing. Operating cash flow is normally calculated by adjusting net income for items such as depreciation changes to account receivable and changes in inventory. Cash flow classified as operating usually stem from the main revenue generating activities of the company. Hence, the operating cash flows are usually a result of transactions and events that affect the result of the company. A positive cash flow from operating activities is an indication of a corporate liquidity and financial health. Thus, an organization decision to increase or maintain a given level of activities partly reflects the liquidity position; therefore, the operating cash flow is a key determinant of liquidity change (Adelegan 2003).

In Hashem, Zakieh and Esmail (2012), found no relationship between operating cash flow and corporate survival. The study was conducted using 52 quoted companies in Pakistan. In this line, Zubairi (2010), study found no relationship between return on equity and operating cash flows. Their studies concluded that though there is relationship between operating cash flow and liquidity, the relationship is not directly applicable to profit.

Investing cash flow reports the aggregate change in a company's cash position resulting from any gains/losses from investments in the financial markets and operating subsidiaries and charge resulting from amount spent on investments in capital assets such as plant and equipment. The cash flow from investing activities can be positive or negative. The difference between the cash flow and cash outflow from investing activities. The net cash flow from investment is usually affected by capital investment on plant, equipment and investment in subsidiary – investment cash outflow, while investing cash inflow will result from the sale of fixed assets that a firm bought as a capital expenditure resulting in a cash inflow which increases a company's net investment cash inflow. The difference between the cash outflow and cash inflow will result to net cash flow from the investments, which could be positive or negative.

Investing cash flow is a result from gains or losses from investment in capital assets such as property, plant and equipment (PPE), and investment securities. Hence, the proceeds from the disposal of PPE, cash receipt from disposal of debt, instrument of other entities and receipt from sales of equity instrument constitute cash inflow from investment while cash outflows for investment activities includes; payment for PPE, purchase of debt equity instrument sales/maturities of investments, research and development etc. Unlike most other cash flow metrics, negative cash flows from investment activities are not a bad signal as it means the corporate is purchasing long-term assets for the future health of the company while positive cash flows from investing activities mean the company has sold off investment to generate short-term cash, which may be at loss from the original price paid for the investment. Positive net investing cash flow is therefore a good indicator of liquidity level of corporate. According to Bingilar and Oyadonghan (2014) net positive investing cash flow is a good indicator of future profitability and survival. However, a positive net investing cash flow means, that the corporate sell off more assets than it purchase, this is to indicate the level of liquidity, which is a key factor in short-run survival and corporate survival, thus, a profitable corporate can go bankrupt without liquid asset in respective of the level of profitability of its investment while positive net

investment cash flow provides liquidity for the short-run, it endangers the future survival of the corporate. The study conducted by Chikashi (2013), on cash flow and return on equity found that investment cash flow has a positive direct significant effect on liquidity and profitability, while it has a positive indirect relationship with shareholder's wealth (Return on Equity).

Empirical Review

Chikashi (2013), studies the relationship between cash flow and firm performance, the study of electrical appliances industry of the Tokyo Stock Exchange. The researcher uses the data for the fiscal year of 2009-2011 and employs the panel data regression analyses. The study revealed that cash flow and firm performance have a significant negative relationship. In addition, comprehensive incomes published by the firms were superior to other earnings of cash flow variables in predicting their future stock returns.

Ali (2013), studies the association between various earnings and cash flow measures of firm performance and return on equity in Iran. They used the simple and multiple regressions to analyze the data for a period of nine consecutive years from 2003-2011. The study revealed that company's performance and cash flow have a significant negative relationship. Furthermore, earnings based measures are more related to stock return and depict the company performance better than cash flow measures in some companies with higher accruals. Habib (2011) surveyed 7,229 companies listed on the Australian stock exchange between 1992 and 2005. He studied the current cash flow, stable profitability and growth opportunities on the stock returns, and to test hypotheses he used the multiple regression method. Data analysis was carried out using a multiple regression model and the results of the analysis show that firms with greater growth opportunities and free cash flow will have a higher value price, and additionally free cash flow is positively related to stock return while profitability is short-term.

Mong'O (2010) analyzed the impact of cash flow on profitability among commercial banks in Kenya over a period from 2005-2009. It was specifically conducted to explain the influence that various components of cash flows have on profitability growth. The study was carried out by analyzing the various banks' profit measured by the profit after tax as the dependent variable and the cash flow components (operating, financing and investing) as the independent variables. Multiple regression models were used to analyze the data and to provide a basis for the conclusions drawn. The findings for the study indicated that profits among commercial banks improved tremendously during the last five years. Cash flow from operating activities experienced the same trend which was occasioned by the improved performance which translated to financing and investing cash flow which have shown consistent increase over the five years. Cash flow from the financing and the investing activities were found to have a great influence (positive) on the banks' profit while operating cash flow has a negative effect.

Ahmed and Javid (2009) conducted a descriptive survey on the effect of free cash flow on dividend payout of 320 non-financial firms listed in Karachi Stock Exchange in Pakistan. The study used a five-year trend from 2001 to 2006 and data was analyzed using a multiple regression model. It was concluded that firms with larger free cash flow pay larger dividends.

ZHI Xiaoqiang (2009), a study was conducted in China in relation to internal cash flow and investment expenditure. A descriptive survey was carried out in 55 banks, secondary data was used using an eight-year trend. Data was then analyzed using a regression analysis,

the results of the analysis showed that there was an inverse relationship between internal cash flow and investment expenditure among banks in China.

In another study carried out in London, Gregory (2005) did a cross sectional survey of UK takeovers of listed domestic companies using 8 years trend, 67 firms were selected and trend analysis was conducted to establish the pattern of performance of listed takeovers and free cash flow, the results of the study revealed that there was an inverse relationship between performance of UK takeovers of listed domestic firms and free cash flow.

Opondo, (2004), studies the effect of earnings and free cash flow on corporate performance among commercial banks listed in Kenya, a descriptive survey was conducted and data was analyzed using descriptive statistics, the results of the study revealed that there is no significant difference between free cash flow measure of corporate performance and that of earnings especially when the amount of maintenance capital spending cannot be properly segregated.

A similar study by Lang, Stulz, and Walkling (1991) using listed in USA firms, total of 55 firm's selected using stratified sampling ,between seven fiscal year (1980-1986) and a regression analysis was used for data analysis, the results of the analysis showed that there was a negative relationship between bidder returns and cash flow.

Methodology

The study used panel data and was based on ex-post facto research design. According to Akpa and Angahar, (1999) ex-post facto research design is best used because of its strengths as the most appropriate design to use when it is impossible to manipulate all or any of the variables or when laboratory control is impracticable, costly or ethically questionable.

Population of the Study

The population of this study is all non financial companies quoted in Ghana and Nigeria, Exchange Group. The study select the firms in non financial sector as classified by the Global Sector Classification Index (GICS) developed by Morgan Stanley Capital International (MSCI) and Standard and Poor (S&P) in 1999 in choosing the companies.

Sample Size of the Study

The sample size is all manufacturing companies in Ghana. The manufacturing companies in Nigeria were selected using random sampling. This was done in other to have the same number as that of Ghana for the sake of compares of result. Total of 16 manufacturing companies quoted in Ghana stock exchange were selected while same number were selected from the Nigeria Exchange Group.

Sources of Data

The study used secondary data. The data for our variables was sourced from the annual financial reports of the companies selected for the study and the Stock Exchange fact books of the various stock exchanges. The data covered the period between 2013 and 2017. The study relied on data from such official sources for accuracy and standardization.

Method of Data Analysis

Generally, there are differences in legal and operational policies of those stock exchanges and the individual companies. this however, suggests that the quoted companies differs across the countries selected, also couple with fact that the degrees of operating practices, nature of business, focus and risk profile of those companies differs.

The pool data analysis captures the aforementioned characteristics by including the company's specific effect which may be random or fixed. The study also wishes to conduct some preliminary analysis such as descriptive statistics, correlation and regression analysis using E-view 8 software. The descriptive statistics will be used to evaluate the characteristics of the data: Mean maximum, minimum, and standard deviation and also checks for normality of the data. The correlation analysis was used to evaluate the relationship between the variables and to check for multi-collinearity. The multiple regression analysis was used to evaluate the effect of the independent variables on the dependent variable. It reveals the degree of influence and effect the independent variables has on the dependent variable. Diagnostic test was also carried to ascertain the normality of the data, test for multi-collinearity using variance inflator factor analysis and effect test.

Description of variables

The dependent variable (corporate survival) was proxy in line with the study of Quinn, (2011) which used return on investment. The independent variable (cash flow) was proxy by; Cash Flow from Operating Activity (CFOA), and Cash Flow from Investing Activity (CFIA), measures all cash realized from operations of the company in generating revenues less expenses Operating Cash Flow/ Total Assets

Cash Flow from Investing Activity (CFIA) measures all amount spent on purchasing and selling capital assets and productive assets and also amount spent in purchasing and selling-long term security such as bond and shares: Investing Cash Flow/ Total Assets

Model specification

A panel multiple regression model used was adopted from the works of Bingilar and Oyeghadan (2014), and adapted to suite the objectives of this study:

$$ROI = f(CFOA, CFIA, CFFA, FCF) - - - - - 1$$

This can be econometrically expressed as:

$$ROI_{it} = \beta_0 + \beta_1 CFOA_{it} + \beta_2 CFIA_{it} + \mu - - - - - ii$$

Where:

- ROI = Return of investment
- CFOA = Cash Flow from Operating Activity
- CFIA = Cash Flow from Investing Activity
- i = Cross section of companies
- t = Time series
- β_0 , = Constant
- μ = Error terms
- β_1, β_2 , are the coefficient of the regression

Data Analysis, Interpretation and Discussions

Descriptive Statistics

The descriptive statistics result shows the mean (average) for each of the variables, their maximum values, minimum values, standard deviation and the Jarque-Bera (JB) statistics (normality test). Table 4.1 below, is the descriptive statistics result of the data covering the period of five years (2016– 2020) of the quoted selected companies used for the study.

	R O I	C F I A	C F O A
Mean	0.410631	0.560562	0.023333
Median	0.410043	0.625090	0.000000
Maximum	0.590064	0.785091	0.225000
Minimum	0.210015	0.186038	0.000000
Std. Dev.	0.060906	0.170017	0.062436
Skewness	1.249935	-0.902100	2.514236
Kurtosis	23.27990	2.489480	7.846161
Jarque-Bera	13.00871	32.23180	304.8176
Probability	0.002257	0.000006	0.000000
Sum	90.34306	123.3371	3.500000
Sum Sq. Dev.	0.812584	6.333191	0.580833
Observations	2 2 0	2 2 0	2 2 0

Source: Researcher's (2021).

Table 1 above shows the mean for each of the variables, their maximum values, minimum value, standard deviation and Jarque-Bera (JB) statistics (Normality test). The result provided some insight into the nature of the data collected from the selected companies that were used for the study.

Firstly, the large difference between the maximum and minimum values of return on investment of all the firms used for the study shows that the sampled quoted companies used for the study are not dominated by those with high survival prospect or low survival firms. Secondly, it was observed that on the average, manufacturing firms generate cash flow from operating activities than in other form of cash flow put together. The study also observed that manufacturing firms generate cash flow from financing activities more than from investing activities. Within the period of the study, free cash flow of the firms is higher than the cash flow from investing activities.

Lastly, the Jarque-Bera (JB) which test for normality or the existence of outlier or extreme value among the variables shows that all the variables are normally distributed at 1% level of significance. This indicates there is no outlier even if there are, they are not likely to distort our conclusion and is therefore reliable for drawing generalization. This also implies that the least square estimation can be used to estimate the panel regression models.

Correlation Analysis

In examining the association among the variables, the study employed the Pearson correlation coefficient. The results are presented below in table 2.

Table 2. Pearson Correlation coefficient analysis

	R O I	C F O A	C F I A
R O I	1.000000		
C F O A	0.331505	1.000000	
C F I A	0.024313	0.229431	1.000000

Source: e-view correlation analysis result 2021.

Table 2 above, shows the relationship among the various variables and to check for multicollinearity among the independent variables. The correlation analysis shows that return on investment has positive relationship with cash flow from operating activities, and cash

flow from investing activities. Cash flow from operating activities has positive relationship with cash flow from investing activities. In checking for multi-colinearity, we notice that no two explanatory variables were perfectly correlation. This indicates the absence of multi-colinearity problem in our model.

Regression analysis

Hypotheses testing

H₀₁: Cash flow from investing activities has no significant effect on corporate survival

The analysis result shows a coefficient value of -0.023, a t-statistics value of -0.336 and probability value of 0.7375, cash flow from investing activities appears to have a negative influence on the survival of the sampled quoted companies. The probability value of 0.7375 reveals that the defect of investing cash flow on firm survival is not statistically significant. The result suggests that we reject the alternate hypothesis which stated cash flow from investing activities has significant affect on firm survival and accept the null hypothesis.

H₀₂: Operating cash flow has no significant effect on corporate survival

The analysis result shows a coefficient value of 2.103, a t-statistics value of 4.19 and probability value of 0.000, cash flow from operating activities appears to have a positive influence on the survival of the sampled quoted companies. The t-statistics value of 2.8229 (above 2) shows that cash flow from operating activities has positive effect on the financial survival of the sampled firms. The probability value of 0.000 reveals that the effect of operating cash flow on firm survival is statistically significant at 1% level. The result suggests that we reject the null hypothesis which stated cash flow from operating activities does not significantly affect firm survival and accept the alternate hypothesis.

Comparative Analysis: effect of cash flow on corporate survival in Nigeria and Ghana

In other to ascertain the effect of cash flow on corporate survival across countries, the study carried out country specific analysis. The effect of the selected cash flow variables on corporate survival under the two models in Nigeria and Ghana. The summary of the result (coefficient and probability values) is presented below.

Table 3: Inter Country Analysis

Variables	G h a n a		N i g e r i a	
	Coefficient	Probability	Coefficient	Probability
C F O A	0 . 3 8 3 5	0 . 0 4 3 3	0 . 3 2 2 4	0 . 0 6 2 3
C F I A	1 . 7 9 5 3	0 . 9 1 8 6	2 . 2 6 1 9	0 . 2 8 8 3
R - s q u a r e d	0 . 5 7 9 1		0 . 4 6 3 9	
R - s q (a d j .)	0 . 5 0 7 5		0 . 3 6 7 4	

Source: Summary of Regression Analysis

The analysis result shows that cash flow has more effect on corporate survival among manufacturing firms in Ghana than in Nigeria. The result reveals that cash flow variables jointly drive about 50% of changes in corporate survival among manufacturing firms in Ghana, about 36.7 % changes in the level of corporate survival among manufacturing firms in Nigeria. The result shows that cash flow from operating activities and free cash flow has positive and significant effect on corporate survival among manufacturing firms

in Nigeria and Ghana, however, the result shows that cash flow from operating activities has more effect on corporate survival among manufacturing firms in Ghana than in Nigeria. Cash flow from investing activities and cash flow from financing activities has positive but not significant effect on corporate survival among manufacturing firms in Nigeria and Ghana.

Conclusion and Recommendations

The objective of any organization is to maximize the wealth of its shareholders and ensure long run survival of the firm through making of profit. However, the extent to which the firm can achieve this objective depends on its ability to generate sufficient cash flow to meet its obligations. This has made cash flow management a critical aspect of operational strategies geared toward profit and survival of the firm. Having effective cash flow policy that seeks to manage working capital in the form of receivables, inventory holdings, and payables have been widely linked to improved firm financial performance. Most managers sees effective management of cash flow as a performance improvement mechanism. The inability of firms to generate adequate cash flow has pose problem of financial difficulties at one time or another. However, some firms regain financial health while others slide into distress and bankruptcy. What distinguishes firms that are in distress and insolvent from those that are solvent or from those that are bankrupt or from those that achieve higher financial performance has always bothered financial analyst. This has made most analysts look for optimum cash flows that can guarantee stability and long run survival of firms. This study has gin highlight the nexus between cash flow and corporate survival.

Based on the empirical finding, the study recommends the following.

1. Managers of manufacturing companies in Nigeria and Ghana should reduce investment in project (investing activities) as increase has the potential of negatively affecting the survival of their firm.
2. Cash flow from operating activities has positive and significant effect on survival of the manufacturing firms in quoted in Nigeria and Ghana. The study recommends that managers of manufacturing companies in Nigeria and Ghana should increase their funding of operating activities, as the increment will positively drive the Cash flow from operating activities and the survival of their firm.

References

- Adelegan O. (2003), An empirical analysis of the relationship between cash flow and dividend charges in Nigeria. *Journal of research in development and management* 15, 35-49.
- Ahmed, H. & Javid, A. (2009). The determinants of dividend policy in Pakistan (Evidence from Karachi Stock Exchange, Non financial listed firms). *International Research Journal of Finance and Economics.*, 29(1),54-70
- Ali, M. (2013). Cash flow and investment: evidence from internal capital markets. *Journal of Economics* 52, 83-109.
- Ali S. & Mohammad E.(2010). The role of accruals and cash flows in explaining stock returns: evidence from Iranian Companies. *International Review of Business Research Papers* 6(2) 164-170.
- Bingilar P & Oyedoghan J. (2014). Cash flow and corporate performance: study of selected food and beverages companies in Nigeria. *European journal of accounting & auditing and finance research* 2(7) 77-87.
- Chikashi, N. (2013). The Free cash flow hypothesis for sales growth and firm performance. *Strategic Management Journal*, 2(1) 455-472

- Churchill N. & Mullins, C. (2001). The association of accrual earnings and operating cash flows with stock returns. Mashhad, Azad Islamic University of Mashhad, Iran.
- Deloof, M. (2009). Does Working Capital Management affects Profitability of Belgian Firms. *Journal of Business Finance & Accounting*, 30(3 & 4), 573-587.
- Gregory, A. (2005). The long run abnormal performance of UK acquirers and the Free Cash Flow Hypothesis, *Journal of Business Finance and Accounting* (32) 777814
- Griffith, J. M. & Carroll. C. (2001). Free Cash Flow, Leverage and Investment Opportunities. *Journal of Business and Economics*, 1(2)1-5
- Habib, A. (2011). Growth Opportunities, Earnings Permanence and the Valuation of Free Cash Flow. *Australasian Accounting Business and Finance Journal*, 5(4), 101-122.
- Hashem V, Zakieli, S. & Esmail O. (2012). Relationship between working capital, operating cash flows and operating income: Empirical evidence from listed firm's in Tehran stock exchange. *Asian Economic and Financial Review* 2(1)32-51
- Lang, P., Stulz, M. & Walkling, A. (1991). A test of the free cash flow hypothesis: The case of bidder returns. *Journal of Financial Economics*, 29, 315–335
- Mong'o, G. (2010). The relationship between cash-flows and profitability of commercial banks in Kenya, Unpublished MBA Project, University of Nairobi
- Opondo, M. (2004). Using earnings and free cash flow to evaluate corporate performance. *Unpublished MBA Project, University of Nairobi*
- ZHI Xiaoqiang, P. (2009). Management pay-performance sensitivity, internal cash Flow and Investment Behavior. A test of the free cash flow theory and asymmetric information theory. *Front. Business Research China*.
- Zhou, H. & Zhang, N. (2012). Relationship between free cash flow and financial performance. Evidence from the listed real estate companies in companies in china. *IPC. SIT.36,331-335*.