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FIRM SURVIVAL AND ROLE OF CASH FLOW PLANNING IN OIL AND GAS FIRMS IN NIGERIA

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Abstract: The survival of any firm is predicated on how effectively management plans and controls its cash flow. While unhealthy cash flow will not only interrupt a company's smooth operation, it can lead to total collapse. Thus, cash flows and their management assume prominence over the management of other current assets because cash is the most important asset that fertilizes a firm's survival. This work examined firm survival and the role of cash flow planning in the oil and gas sector in Nigeria. Net cash flow from operating activities (NCFOA), Net cash flow from investing activities (NCFIA), and Net cash flow from financing activities (NCFFA) were the independent variables, while profit for the year (PFTY) was the dependent variable and proxy for firm survival. Six (6) firms were selected from the eleven (11) oil and gas firms listed on the Nigerian Exchange Group (NGX) using a simple random sampling technique. The ex-Post facto research design was adopted. Data were extracted from the annual reports of the selected firms. Three hypotheses were formulated and analyzed using regression models. The results revealed that net NCFOA has a positive and significant effect on PFTY ($r = 0.56585$, $p = 0.000001 < 0.05$). NCFIA has a negative and non-significant effect on PFTY ($r = -0.221256$, $p = 0.7032 > 0.05$), while NCFFA has a negative and significant effect on PFTY ($r = -0.536447$, $p = 0.0000 < 0.05$). The implications of the findings include that an increase in NCFOA will enhance firm survival, while survival is negatively and significantly affected by financing activities. The study recommends that Managers of oil and gas firms in Nigeria should explore more value chains, get new channels for marketing, and reduce production costs in other to generate more NCFOA. Financing cash flow activities should be properly planned and a cheaper source of funding should be sorted to reduce the cost of servicing debt.

Keywords: Cash flow, Cash flow activities, Firms, Firm survival. Oil and gas. Cash flow, planning, Operating activities, Investing activities, Financing activities, Oil. Gas.

1.1 INTRODUCTION

Survival of any firm is predicated on how effectively management plans and controls its cash flow. Unhealthy cash flow activities will not only disrupt a company's smooth operation, it can also lead to insolvency and total collapse of a business. Neither over-trading nor under-trading arising from poor cash flow management is good for the survival of any organization. Thus, cash flow activities and their management assume prominence over

the management of other current assets because cash is the most important asset that fertilizes a firm's survival. The question remains, how can firms survive without a sustainable economy?

The Nigeria oil and gas sector (the petroleum industry) has been the major source of government revenues for over 3 decades to date. Foreign exchanges heavily rely on this sector. Several companies were attracted and they invested hugely in the sector. However, the development in the ecosystem has sparked a global search for a more environmentally friendly sources of energy to protect the environment from harmful emissions. No thanks to the rising crises in global politics with concentrated attention in the Middle East. This and the worsening security situation in Nigeria have forced the performance of the oil sector to dwindle, while many have left to country after liquidation or outright sale (NBS, January 22, 2022). This is evidence of the direct impact that poor cash flow activities exert on the survival of organizations whose key operations are within the sector. It is worthy of note that organizational performance comprises the actual output or results of an organization as measured against its intended outputs (goals and objectives). However, Ekechukwu, Ugwu, and Mbah, (2017); Aghaei and Shakiri (2019), and Ezeh, Inyiama, and Ugwu (2022) in their separate studies opine that challenges arise when an organization is unable to generate positive cash flows enable it to sustain operations effectively. Indications of cash flow problems include the organization's inability to pay or settle creditors and other suppliers, pay salaries, and meet other future obligations. This can be likened to a mathematical solution equated to current assets minus current liabilities that ended up with a negative result.

Importantly, the studies of Ugwu, Ugwu, and Uzoma, (2021) and Ezeh, et al (2022) alluded to the strategic role of current assets to whose family cash belongs, as a life wire of any operating business; explaining that analyzing the cash flow from time to time gives the stakeholders a better idea of how the company is performing. Emphasis is placed on the statement of cash flow in terms of following through a cash flow plan which provides a guide to constant comparison of the actual and the projected. It is through this measure that managers and business owners alike assess the profitability, survival, and sustainability of their business in terms of its ability to continue to meet its short-term and long-term obligations as they fall due. It also provides users with information on the changes in the net assets of an entity. This is the financial performance aspect which involves cash flow analysis. It is one of the key determinants of firm survival.

Firm survival as the name implies could be referred to as the ability of a firm to live into an unforeseeable operational future which is only possible for firms that maintain liquidity through an effective cash flow management cycle. To achieve long-term success, a business must pay close attention to its cash flow and relate it to the business's profitability. Ekechukwu, Ugwu, and Mbah, (2018) opine that a firm may make a profit at year-end but it does not mean that it is also solvent. The solvency, flexibility, and financial performance of the firm are set on the firm's ability to generate positive cash flows from the operating, investing, and financing activities. A healthy cash flow position results in a company having cash which helps to sustain its operations and will result in the generation of higher profits. Prudent re-investment of this profit will enhance further growth of the firm, hence its survival. Consequently, the researcher considered the need to understand the role of cash flow planning in the survival of oil and gas firms in Nigeria.

Statement of the Problem

Cash flow planning is essential to the daily operation of a business. Working capital is a product of liquidity that allows firms to settle their liabilities to suppliers, and staff and take care of other obligations to stakeholders. This explains why firms should maintain healthy cash flow activities to be in a position to make dividend payments to shareholders, expand business through prudent re-investment of profit, and explore prospective opportunities that

will enhance further growth of the firm, hence its survival. This should be the case with the oil and gas industry in Nigeria. However, the global search for more environmentally friendly sources of energy to protect the environment from harmful emissions and the worsening security situation in Nigeria has forced the performance of the oil sector to dwindle. While many have left to country after liquidation or outright sale, the sector is experiencing draught of investors, and the existing players are facing survival challenges which range from some firms not being able to meet production quota, to low sales, and increasing attacks on both personals and facilities oil companies. Consequently, obligations are not met. A reason for which many stakeholders are agitating and the situation impacts negatively on production. Accordingly, the question of the source of inflow and its optimization became increasingly imperative to the survival of oil and gas firms. In response to the above challenges, the researcher evaluated the effect of the various sources of cash flow on the survival of oil and gas firms in Nigeria. The focus was to find out how best the firms could generate cash inflow to meet their daily operational obligations, pay such bills as royalties, salaries, and wages, effective corporate social responsibilities to the host communities; and still provide additional values to shareholders in particular and other stakeholders at large, while sustaining the business against extinction. Hence the topic is firm survival and the role of cash flow planning in the oil and gas sector in Nigeria.

Objectives of the Study

The general objective of the study was to evaluate firm survival and the role of cash flow planning of oil and gas firms in Nigeria. Whereas the specific objectives were to:

1. examine the effect of net cash flow generated from operating activities on profit for the year of oil and gas firms in Nigeria;
2. ascertain the effect of net cash flow from investing activities on profit for the year of oil and gas firms in Nigeria;
3. investigate the effect of net cash flow from financing activities on profit for the year of oil and gas firms in Nigeria.

Statement of Hypotheses

The following null hypotheses were formulated for the study:

1. Net cash flow from operating activities does not have a positive and significant effect on the profit of oil and gas firms in Nigeria
2. Net cash flow from investing activities does not have a positive and significant effect on profit for the year of oil and gas firms in Nigeria.
3. Net cash flow from financing activities does not have a positive and significant effect on profit for the year of oil and gas firms in Nigeria.

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

Cash Flow Planning

Cash flow planning is the procedure of forecasting and management of cash inflow and cash outflow within an entity. It can be achieved through the analysis of the historic cash flow pattern or trend, to be able to project into the future while making decisions that will enhance the ability of the entity to meet its obligations as they fall due. Rahman and Nasr (2007) and Akinyomi, (2014) are unanimous on the view that a healthy cash flow management strategy is key to guaranteeing smooth and continued running of any business. Adequate cash management provides liquidity which enhances the performance of businesses. Cash flow planning refers to the

various strategies put in place to see that cash inflow and cash outflow are effectively controlled by the management of organizations to ensure that the organizations can meet business-related short-term and long-term obligations without resorting to external sources. Efobi (2018) and Odo and Ohazuluike (2021) in their separate studies expressed the views that the importance of cash flow planning includes its ability to enhance cash flow projections for expected in-flow and out-flow of resources with time precision. It is a smart way of business management because it encourages pragmatism.

Cash flow planning provides a guide against which actual cash flows are constantly compared with the projected cash flow to estimate performance. It is usually a very important document that investors, lenders, and other stakeholders consider before making economic decisions. This is essential because it does not just project on the inflow and outflow of cash but also looks at the sources and appraises the ability of the sources to meet the forecast objectives.

Cash Flow from Operating Activities

Cash from operating activities remains a strategic measure of the financial health and survival of a company. It shows the amount of cash generated and utilized by a business entity to fund its core operations within an accounting period. International Accounting Standards (IAS, 7) states that the amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the entity have generated sufficient cash flows to repay loans, maintain the operating capability of the entity, pay dividends and make new investments without recourse to external sources of financing. The review of the work of Akoto, Awunyo, and Angmor (2015); Ali, Alireza, and Jalal (2016); and Epstein and Eva (2017) show an agreement on the opinion that information about the specific components of historical operating cash flows is useful, in conjunction with other information, in forecasting future operating cash flows.

Cash flows from operating activities are primarily derived from the principal revenue-producing activities of the entity. Therefore, they generally result from the transactions and other events that enter into the determination of profit or loss. Efobi (2018) and Odo and Ohazuluike (2021) stated that operating cash flow adjusts for receivables, depreciation, and liabilities, operating cash flow may be seen as a more accurate measure of how much a company has generated, in comparison with the conventional profitability measures like net income.

It is commonly calculated using the indirect method among other methods. It starts with the net income during the period under review. Depreciation is added back as a non-cash transaction. Likewise, other non-cash items such as impairment charges are added back. It is also increased or decreased by changes in working capital.

Cash Flow from Investing Activities

Investing cash flow activities is the cash flow related to an entity's investments such as investment in property, plant and equipment, (PPE) land and building, securities and other financial instruments, etc. Cash flows arising from investing activities are important because the cash flows represent the extent to which expenditures have been made for resources intended to generate future income and cash flows (IAS 7).

Only expenditures that result in a recognized asset in the statement of financial position are eligible for classification as investing activities. It is usually determined by charging investing cash flow with the purchase of PPE, investment in securities, stock, and bonds. Proceeds from the disposal of long-term assets are normally credited to the account. Akoto, Awunyo, and Angmor (2015opine 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. Ugwu and Inyiama, (2021) further add 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 toward augmenting the financial position of a given company.

Financing Cash Flow

As the name suggests, financing activities relate to the raising of long-term funds or capital for an enterprise, repaying of debts incurred, and distribution of dividends to investors or shareholders. Ugwu and Inyiama, (2021) see financing cash flow activities as activities involving the issuance of equity viz: cash proceeds from the issue of equity shares, debentures, raising long-term bank loans, repayment of bank loans, and so on. As posited by International Accounting Standards (IAS 3), financing activities are activities that result in changes in the size and composition of the owners' capital (including preference share capital in the case of a company) and borrowings of the enterprise. The studies of Ekechukwu, Ugwu, and Mbah (2019) and Aghaei and Shakiri (2019) corroborated each other on the position that separate disclosure of cash flows arising from financing activities is important because it is useful in predicting claims on future cash flows by providers of funds (both capital and borrowings) to the enterprise.

While operating cash flows have to do with cash generated from or used for the day-to-day operating activities in the core areas of the business of oil and gas firms in Nigeria, investing cash flows has to do with cash generated or used for investing activities such as the purchase of pieces of machinery and other operating long-term assets, and proceeds from the sale of assets in a state of discontinued operation. Financing cash flows involves the sourcing of funds, servicing of debt obligations dividend payout, etc.

Firm Survival

Firm survival is the ability of a firm to continue and remain in operations over an unforeseeable future or time. It helps to check or measure the entity's long-term success as well as its sustainability in a competitive business environment. Firm survival could be affected by some factors such as strategic decision-making, choices, effective management, financial stability, innovation, market positioning, and the dynamism of a changing market. One of the surest ways of checking firm survival is to look at its performance trend. In the view of Bingilar and Oyadongham, (2014); Ojode (2014); Akoto, Awunyo, and Angmor (2015), the most common measure of a firm's performance is profitability. Generally, accounting profits are the difference between revenues and costs. It is used to assess the ability of the business to generate earnings in comparison with its all expenses and other relevant costs during a specific time.

Ekechukwu, Ugwu, and Mbah, (2018) opine that a firm may make a profit at year-end but it does not mean that it is also solvent. The solvency, flexibility, and survival of a firm are set on its cash flow planning. Therefore, it suffices to say that a healthy cash flow, generation of higher profits, and prudent re-investment of profit are key to enhanced growth of business entities, hence its survival.

The studies of Amah, and Athanase (2015) and Ekwe and Ihendinihu, (2016) concluded that profitability indicates a firm's financial performance after taking into account all expenses and income taxes, the efficiency of operations, firm pricing policies, profitability on assets and shareholders of the firm. Performance measurement tools can help businesses evaluate their resource allocation processes to determine how resources can be better managed and distributed to the appropriate channels Ali, Alireza, and Jalal (2016); Epstein and Eva (2017).

The studies by Nweze (2016), Amidu (2017), and Ugwu and Inyiama (2021) emphasized the importance of profitability alluding to the view that the growth and success of any business depends on its ability to continually earn profits. Profitability limits the risk related to acquiring and relying on external resources for financing and also displays a satisfactory level of market demand. Profit provides the funds for growth and it is the most common measure of a firm's performance is profitability. There are several measures of profitability such as Return on Capital Employed, Assets Turnover, Gross Profit Margin, Net Profit Margin, Earnings per share, Earnings yield, and Profit for the year. Profit for the year is determined by the formula, profit before tax less tax expenses. It can broadly be determined as:

Revenue		XXX
Less:		
Cost of sale	XX	
Distribution expenses	XX	
Administrative expenses	XX	
Finance cost	XX	
Tax expenses	XX	XX
Profit For the Year		X

2.2 Theoretical Review

To provide a structured framework that guided this work, the researcher reviewed the following theories which facilitated the work in numerous ways.

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 enables managers to avoid market control. In this situation, they do not need shareholders' agreement and they are free to decide about investment on their will. Jensen, Clifford & Smith (1985), 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 the free cash flow available to pursue their personal opportunist consumption and suboptimal investments. Ugwu and Inyiama (2021) argue that managers of firms with free cash flows (cash flows above profitable investment opportunities) tend to waste cash by taking excessive perquisites or by making unprofitable investments. Managers are more likely to use the free cash flows to make investments that will be incremental to the size of the firm (or to pay themselves excessive perks) than to pay dividends to the shareholders or repurchase outstanding shares. A testable implication of the agency theory is that firms that have free cash flows are probably going to develop beyond the expected shareholder value optimization. Shareholders of such firms will benefit from any administrative decision that keeps these inefficiencies, and share repurchases anticipate such waste by using up cash flows.

The Agency Theory

The agency theory propounded by Jensen and Meckling (1976) has to do with the relationship between the principal (shareholders) and the agent (company management). They defined the agency as a cost that arises between the principals (stakeholders) and the agents (management). Where the principals hire and delegate the agents with a certain power to maximize the wealth of the principals. They further assert that only stocks and bonds can be used as claims towards the company. Consequently, only shareholders and other creditors can be seen as principals. In their contribution, Ugwu and Inyiama (2021) posit that an agency relationship exists when one or more individuals called principals hire one or more individuals known as agents to perform some services and then delegate decision-making authority to the agents. They contend that ownership and controls are more isolated to continuous interference by equity ownership of organizations. This condition gives managers a chance to seek after their interest over shareholders' interest. Directors particularly must run the organization in a way that ensures more value to shareholders and along these lines boosts the organization's cash flow and chances of survival.

According to the agency theory, agency conflicts arise from the possible divergence of interest between shareholders (principals) and managers (agents) of firms. The fundamental duty of managers is to manage the firm in such a manner that increases shareholders' value. This is achievable by increasing cash flow and profit. Ugwu, Ugwu, and Uzoma (2021) posit that one of the contributions of agency cost theory is that leverage helps to lower agency costs, reduce inefficiency, and ultimately result in firm survival.

This study is anchored on the theoretical framework that cash flow activities affect firm's survival and that the extent of such effect depends on cash flow policies adopted by the organization. Free cash flow theory and Agency theory propounded by Jensen (1986) and (1976), respectively, both emerged and presented a clear direction, and firm response to cash flow. While free cash flow theory posits that firm managers tend to engage in unprofitable investment, agency theory posits that firm managers act in a manner that conflicts with the primary purpose of their engagement (profit maximization). The researcher therefore chose the above two theories for the purpose of this work.

2.3 Empirical Review

Sharifi and Asadi (2016) analyzed the relationship between the cash flow and stock value of 102 companies listed on the Tehran Stock Exchange, 2003 - 2014. The data were analyzed using regression technique. The results of the study showed an inverse relationship between cash flow and stock prices.

Haitham, and Jaya, (2017) conducted a study on the impact of free cash flow, equity concentration and agency costs on firm's profitability. A two-steps robust generalized method of moments (GMM) system estimation as applied to dynamic panel data was employed. The study examined how free cash flow and equity concentration is associated with agency costs, and how they influence the profitability of insurance firms listed on the Saudi Stock Market. The results indicated that equity concentration has no significant impact on agency costs, free cash flow has no significant impact on agency costs and agency costs have no significant impact on firm's profitability. The findings of this study do not show any evidence to support the agency theory among insurance firms listed on the Saudi Stock Market.

Milagros, Ruben and Luis (2019). This paper analyses business survival in 11,558 micro, small, and medium-sized firms (MSMEs) between 2007 and 2015 in the Spanish hotel sector. Using hazard models, the aim is to identify the differences in survival determinants among firm sizes, quantifying the importance of the environment during the recent economic crisis. The results highlight the existence of differences. The environment is the main factor influencing the survival of MSMEs, especially in micro hotels. Regarding the hotel characteristics, the evidence shows that performance has a greater effect on survival in the medium hotels than in the micro and small hotels.

The findings of Liman and Sani (2019) who studied operating cash flow and corporate financial performance of listed conglomerate companies in Nigeria, showed a positive and significant impact between Cash Flow from Operating activities (CFO) and financial performance proxied by ROA while the impact is positive and significant when financial performance was proxied by ROE of the listed conglomerate companies in Nigeria

Bingilar and Oyadongham (2014) did a study on cash flow and corporate performance. In a study of selected food; and beverage companies in Nigeria, the data for the study involved 6 food and beverage companies. The data were subjected to multiple regression techniques. The result of the study revealed that operating and financing cash flow has a significant positive relationship with corporate performance in the food and beverage sector of Nigeria.

Khalil, Abu, and Emad (2020) investigated whether cash flow has an impact on profit quality from 2014 to 2018. The study was based on panel data as the data collected were one-time and cross-sectional data for a while; extracted from the annual reports of 9 Jordanian hotels. The results of the hypothesis test indicated a strong inverse relationship between the index of operational activity and index of return on assets, from operating cash flow, respectively, and profit quality. At the same time, the study found an inverse relationship that is not statistically significant between the index of operating cash flow and profit quality.

Soboleva, Matveev, Ilminskaya, Efimenko, Rezvyakova, and Mazur, (2020) evaluated the monitoring of business operations with cash flow analysis. The objectives were to: study the essence of cash flows; evaluate the theoretical and practical methods of estimating cash flows in companies that are applied in financial management; and develop recommendations for optimizing financial decisions based on cash flow management. The population and sample of the study were Russian-registered small and medium-sized businesses. The scope of the study is the elements of their cash flows. The following research methods were used: retrospective analysis, statistical observation method, factor analysis, principles and methods of system analysis; computational procedures involving the apparatus of financial mathematics and financial management; and optimization methods and models (Excel nonlinear optimization technology). The scientific novelty of the study includes the development of a factor model for monitoring the activities of business entities which involved evaluating the various elements of their cash flows. The study found that a cash flow element enables the assessment of the sufficiency of the cash flow and to adjustment of its value depending on the influence of factor indicators

Ugwu and Inyiama (2021) evaluate the relevance of cash flow activities to the profitability of manufacturing firms in Nigeria. The study adopted ex-post facto research design. The objectives of the study were to examine the relationship between net cash flow from operating activities, net cash flow from investing activities, and profit for the year of manufacturing firms in Nigeria. The researcher made use of secondary data. The population was the thirty-seven listed manufacturing firms on the Nigeria Stock Exchange. The study made use of a systematic sampling technique and the sample size was 18 manufacturing firms listed on the Nigerian Stock Exchange. The

correlation model was employed for data analysis using E-views 9.0 Software. The result 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. It was concluded that net cash flow from investing activities negatively and significantly relates to profit for the year of manufacturing firms.

The studies of Emeka, Kelvin, and Ngozi (2023) empirically investigated the moderating effect of the corporate governance mechanism on the relationship between cash flow management and the performance of listed manufacturing firms in the era of disruption in Nigeria. Operating, financing, and investing activities were used as proxies for cash flow management. Net assets per share (NAPS) was used to measure firm performance while board independence was used as a proxy for the corporate governance mechanism (moderating variable). Panel least squares regression model operated with E-View 12 was utilized to perform the statistical test of parameter estimates, and six hypotheses were formulated to direct the investigation. Ex Post Facto design was used to study consumer goods companies listed on the Nigerian Exchange Group (NGX). The results of the study show that operating activities (OA) significantly affect firm performance (NAPS) at a 5% significant level. Furthermore, it was discovered that, at a 1% significant level, financing activities (FA) have a positive and significant effect on firm performance, whereas investing activities (FA) have the same effect on firm performance in Nigeria.

In another interesting investigation, Nwakaego, Ikechukwu, and Ifunanya, (2015) observationally determined the effect of cash flow on a firm's performance of a Nigerian nourishment and refreshment organization. The outcome uncovered investing cash flow had a critical negative relationship with corporate performance. Further, the nexus existing between firm size and performance has additionally gotten significant consideration in both theoretical and observational research.

Yazan (2017) studied the effect of cash flows on the share price of the Amman stock exchange. The specific objective of the study was to investigate the effects of cash flows on the share prices of Jordanian companies. The study employed multiple regression technic for analysis. It was found that cash flows have a statistically-significant effect on the share prices of the Jordanian companies listed on the ASE. It specifically observed that operating cash flows (OCFs), financing cash flows (FCFs), and investment cash flows (ICFs) collectively explain 13.27% of the variations in share prices.

Jaradat (2017) analyzed the impact of the cash flow changes of Jordanian commercial banks listed on the Amman Stock Exchange 2009-2015 on the stock returns. By the result of the study, it was determined that the change in cash flows had a positive effect on stock returns.

Nwarogu, and Iormbagah, (2017) led an examination on Cash Management and Performance of Listed Firms in Nigeria. The investigation utilized ex-post factor research design, the auxiliary information gathered were broke down using graphic measurements, relationship framework, and Pool Ordinary Least Square Regression. In the arrival on assets model, the outcome demonstrated a huge positive connection between cash change cycle, Cash holding and profit for assets of firms while, cash flow and firm size has a negative association with the arrival on assets. In the model of Return on Equity, the factors of firm size, firm development and cash flow indicated a negative association with the variable of firm performance. Notwithstanding, just the variable of firm size demonstrated a huge negative relationship at 5% level with the needy variable. While, there exist a positive connection between the variable of the Cash Conversion Cycle and Return on Equity. The examination suggested that administration firms ought to embrace approaches that empower them offer inventories and gather receivables rapidly for enhanced proficiency and corporate dissolvability.

Ugwu, Ugwu, and Uzoma (2021) examined the effective management of cash flow activities on the profitability of manufacturing firms in Nigeria. Ex-Post facto research design was adopted. Net cash flow from investing and financing activities were the independent variables while profit for the year was the dependent variable. Eighteen (18) firms were selected from the thirty-seven (37) manufacturing firms listed on the Nigerian Stock Exchange (NSE) using a systematic sampling technique. Secondary data were obtained from the annual reports of the selected firms for the period. Data were analyzed using a correlation model. The findings revealed that negative and significant relationships exist between net cash flow from financing activities and profit for the year.

To the extent of the reviews and analysis above, a geographical gap was observed as it was established that none of the reviewed studies was carried out in the oil and gas sector in Nigeria. More so, the works of Bingilar and Oyadongham (2014); Nwakaego, Ikechukwu, and Ifunanya, (2015); Jaradat (2017); Yazan (2017); Liman and Sani (2019) and Ugwu and Inyiama (2021) found a positive effect of cash flow on corporate performance and survival in contradiction to the findings of Sharifi and Asadi (2016); Haitham, and Jaya, (2017); Nwarogu, and Iormbagah, (2017); Khalil, Abu, and Emad (2020); Ugwu, Ugwu, and Uzoma (2021) and Emeka, Kelvin, and Ngozi (2023) which revealed significant negative correlation and negative and significant effect of cash flow on performance and firm survival. It could be seen from the reviews that there are contradictory reports from the respective groups of scholars which the researcher sought to review in this current work. This further underscores the need for this work. Consequently, this study focused on firm survival and the role of cash flow planning of oil and gas firms in Nigeria, to close the knowledge gap established above.

3 METHODOLOGY

This research adopted the ex-post facto (after the facts) research design to establish the effect of cash flow indices on firm survival. The area of the study is the Nigerian oil and gas sector. This study made use of secondary data that covered 12 years were collected from the annual report and accounts of companies under study. Other documents used were sourced from libraries, the internet, and memos. The population of the study comprised the 11 oil and gas firms listed on the Nigeria Exchange group. The sample size for the study was determined with the aid of a simple random sampling technique. Six companies were selected. They included MRS Oil Nigeria Plc, Oando Nigeria Plc, Forte Oil Nigeria Plc, Mobil Oil Nigeria Plc, Eterna Oil Plc and Total Nigeria Plc. The model of the study is specified in line with previous related literature in the area of the study and specified as:

$PFTY_t = \beta_o + \beta_1 NCFOA_t + \varepsilon_t$ - - - - [Equation (1)]

$PFTY_t = \beta_o + \beta_1 NCFIA_t + \varepsilon_t$ - - - - [Equation (2)]

$PFTY_t = \beta_o + \beta_1 NCFFA_t + \varepsilon_t$ - - - - [Equation (3)]

The composite multiple regression (prediction) models are statistically formulated as;

$PFTY_{ti} = \beta_o + \beta_1 NCFOA_t + \beta_2 NCFIA_t + \beta_3 NCFFA_t + \varepsilon_t$ - - - - - [Equation (4)]

Where;

PFTY	=	Profit for the year
NCFOA	=	Net Cash Flow from Operating Activities
NCFIA	=	Net Cash Flow from Investing Activities
NCFFA	=	Net Cash Flow from Financing Activities
ε	=	Error Term
β_o	=	Coefficient (constant) to be estimated
$\beta_i - \beta_6$	=	Parameters of the independent variables to be estimated
t	=	Current period

The research variables are structured into dependent and independent variables for the analysis. The dependent variable of the study is profit for the year. This is the difference between all cash inflows and cash outflows of a firm. The independent variables are net cash flow from operating activities, net cash flow from investing activities, and net cash flow from financing activities. Operating cash flow is the cash in and out flow from a firm's core business operation. Investing cash flow is the cash in and out flow from a firm's investing activities. This involves assets procurement and sale of assets, return on investment. Financing cash flow is the cash in and out flow resulting from the financing activities of a firm. It has to do with the sale of shares and dividend activities. The analytical procedure adopted helped the accomplishment of the objective's graphical representation of the dependent and independent variables to show the trend of movement within the study period, relevant for predictions. A regression equation was estimated to evaluate the effect of cash flow on profit for the year of firms in the oil and gas sector in Nigeria. The decision rule was to**,** Accept H_O if the t-statistics is < 2.0 and the P-value is > 0.05, otherwise, reject H_O and accept H_1.

4 DATA PRESENTATION AND ANALYSIS

Data Presentation

Table 1: Data for the five oil and gas firms under review

YRS	PFTY₦'000	NCFOA₦'000	NCFIA₦'000	NCFFA₦'000
Data for Forte Oil Nigeria (Ardova) Plc				
2011	654,461.00	2,586,262.00	-3,663,511.00	-1,908,637.00
2012	654,461.00	2,586,262.00	-3,663,511.00	-1,908,637.00
2013	4,583,232.00	395,030.00	-3,729,232.00	9,823,778.00
2014	2,638,913.00	543,464.00	-1,235,664.00	-2,420,978.00
2015	4,794,578.00	8,811,092.00	2,623,486.00	-8,798,956.00
2016	3,235,829.00	4,722,967.00	290,752.00	9,419,360.00
2017	1,262,058.00	-350,615.00	381,704.00	-14,051,373.00
2018	631,471.00	4,166,290.00	747,611.00	13,544,002.00
2019	3,915,140.00	5,683,077.00	12,651,233.00	-8,127,840.00
2020	2,063,434.00	1,283,335.00	79,118.00	-3,772,607.00
2021	1,539,906.00	5,430,960.00	-28,213,612.00	21,096,347.00
2022	-269,962.00	9,227,901.00	-8,644,323.00	-4,164,494.00
Data for MRS Oil Nigeria Plc				
2011	746,404.00	3,053,150.00	404,322.00	-5,558,391.00
2012	935,625.00	2,464,533.00	1,635,402.00	5,595,819.00
2013	1,465,905.00	410,273.00	-166,298.00	8,744,901.00
2014	746,404.00	3,053,150.00	404,322.00	-5,558,391.00
2015	935,625.00	2,464,533.00	1,635,402.00	5,959,819.00
2016	1,465,905.00	410,273.00	-166,298.00	-8,744,901.00
2017	1,385,056.00	5,260,431.00	-270,375.00	-10,072,888.00
2018	-1,264,941.00	-1,401,249.00	-819,351.00	3,637,537.00
2019	-1,613,082.00	9,547,751.00	-415,879.00	-9,492,398.00
2020	-2,264,145.00	4,040,680.00	-338,196.00	-103,901.00
2021	339,873.00	-506,312.00	-946,914.00	0.00

2022	1,316,102.00	2,018,539.00	-1,334,572.00	-55,465.00
Data for OANDO Nigeria Plc				
2011	4,379,446.00	-60,211,503.00	3,564,684.00	47,095,071.00
2012	4,379,446.00	-60,211,503.00	3,564,684.00	47,095,071.00
2013	2,350,574.00	-37,276,684.00	-13,540,130.00	-22,132,965.00
2014	-102,400,353.00	-103,964,789.00	-1,929,273.00	106,967,151.00
2015	-56,567,172.00	-16,904,163.00	3,207,564.00	-19,744,112.00
2016	-33,875,832.00	-24,514,575.00	14,767,263.00	43,366,985.00
2017	-30,615,433.00	-9,962,174.00	1,358,846.00	915,653.00
2018	-18,321,877.00	-2,444,006.00	-453,330.00	1,341,437.00
2019	7,168,642.00	-9,167,698.00	12,014,721.00	-2,060,529.00
2020	7,168,642.00	-9,167,698.00	12,014,721.00	-2,060,529.00
2021	-28,124,396.00	-14,418,846.00	25,824,640.00	-11,334,289.00
2022	-41,669,941.00	-2,659,351.00	4,055,960.00	-1,983,415.00
Data for Mobil Nigeria (11) Plc				
2011	47,681.00	56,170.00	-25,601.00	-33,868.00
2012	47,681.00	56,170.00	-25,601.00	-33,868.00
2013	33,448.00	44,914.00	-34,201.00	-15,476.00
2014	33,615.00	45,116.00	-26,975.00	-17,888.00
2015	16,551.00	30,344.00	-23,824.00	-7,037.00
2016	8,375.00	22,082.00	-12,403.00	-9,293.00
2017	19,848.00	30,066.00	-15,730.00	-15,130.00
2018	21,421.00	36,014.00	-16,446.00	-19,446.00
2019	14,774.00	29,716.00	-23,084.00	-6,618.00
2020	-22,440.00	14,668.00	-18,459.00	5,285.00
2021	7,238,785.00	6,556,129.00	5,249,898.00	5,096,774.00
2022	18,015,382.00	16,240,903.00	2,004,087.00	8,721,770.00
Data for Eterna Oil Nigeria Plc				
2011	-438,076.00	567,551.00	-6,104,351.00	5,733,332.00
2012	-1,527,528.00	-507,828.00	-249,239.00	190,729.00
2013	593.669.00	4,667,141.00	-153,720.00	-3,845,502.00
2014	1,258,798.00	4,152,573.00	-357,804.00	-2,099,126.00
2015	1,263,884.00	-2,215,505.00	-416,907.00	2,219,274.00
2016	1,523,153.00	7,691,656.00	-604,197.00	-1,697,544.00
2017	2,069,846.00	283,478.00	-1,984,163.00	-931,933.00
2018	1,139,517.00	-2,141,907.00	-1,767,101.00	3,465,761.00
2019	-48,603.00	8,188,972.00	-3,298,794.00	-8,808,736.00
2020	1,017,516.00	1,218,151.00	-2,439,577.00	1,926,301.00
2021	-1,078,545.00	-73,390.00	-2,148,835.00	6,824,694.00
2022	1,157,705.00	1,609,805.00	-805,395.00	4,721,824.00
Data for Total Nigeria Plc				

2011	3,813,202.00	12,766,941.00	-3,327,494.00	-3,568,535.00
2012	3,971,917.00	6,112,619.00	-1,895,541.00	-3,970,274.00
2013	5,334,091.00	12,599,986.00	-3,267,588.00	-5,476,988.00
2014	4,423,733.00	15,604,793.00	-3,607,591.00	-6,189,617.00
2015	4,047,051.00	10,649,288.00	-3,849,805.00	-2,217,115.00
2016	14,797,095.00	16,956,719.00	-5,057,257.00	-875,528.00
2017	8,019,298.00	9,584,854.00	-8,663,471.00	-12,463,959.00
2018	7,960,893.00	-3,457,458.00	-8,322,204.00	1,053,567.00
2019	2,278,979.00	14,999,069.00	-3,962,287.00	-13,813,730.00
2020	2,063,385.00	44,596,040.00	-8,280.952.00	8,924,530.00
2021	16,862,130.00	60,999,778.00	-9,388,980.00	-17,822,662.00
2022	16,118,376.00	1,661,732.00	-8,649,337.00	26,918,752.00

Source: Author's Compilation from Company's Annual Reports and Accounts, 2024

4.2 Data Analysis

Table 2: Descriptive Statistics for the industry level data

	PFTY	NCFAO	NCFIA	NCFFA
Mean	-3732288.	-5234525.	479802.7	3608842.
Median	746404.0	56170.00	-25601.00	-17888.00
Maximum	7168642.	9547751.	14767263	1.07E+08
Minimum	-1.02E+08	-1.04E+08	-13540130	-22132965
Std. Dev.	18078111	20287034	4562009.	20090362
Skewness	-4.093620	-3.311778	0.995467	3.327136
Kurtosis	20.71435	14.40743	6.927775	16.29261
Jarque-Bera	777.5260	355.2521	39.59045	451.1531
Probability	0.000000	0.000000	0.000000	0.000000
Sum	-1.83E+08	-2.56E+08	23510330	1.77E+08
Sum Sq. Dev.	1.57E+16	1.98E+16	9.99E+14	1.94E+16
Observations	72	72	72	72

The descriptive statistics in table 2 present the statistical characteristics of all the observations. These include measures of central tendency, the mean, and the median. Dispersions in the series are also indicated using the standard deviation. The results show the mean to stand at -₦373228, -₦5234525, ₦479802, and ₦3608842 with a standard deviation of ₦18078111, ₦20287034, ₦4562009, and ₦20090362 for Profit for the year, net cash flow from operating activities, net cash flow from investing activities and net cash flow from financing activities respectively.

In addition to the statistical description of the panel above, the descriptive statistics also test or check for the normality of the observed variables. In other words, the test helps us to ascertain if the variables are normally distributed. To reject the null hypothesis that the data are not normally distributed, the JB (Jarque-Bera) statistics must be significant at a critical value of 0.05 (Gujarati and Porter, 2009).

The normality test results reveal that there is strong evidence that the panel variables and dataset are normally distributed as the probability of JB-statistic for each of the variables is > the critical value of 0.05. Hence, the null hypothesis (H_0) is rejected in favor of the alternative (H_1) that the residuals of the distribution of the model are normally distributed.

4.3 Test of Hypotheses

The Least Squares were used in the test of hypotheses. One of the major benefits of using panel data as compared to cross-section data on individuals is that it enables us to control individual heterogeneity. Not controlling these unobserved individual-specific effects leads to bias in the resulting estimates.

In arriving at a decision, the following steps were taken:

i. The hypotheses were restated in null and alternate forms,
ii. The decision criterion or criteria were stated,
iii. The presentation of the E-view result
iv. The null hypothesis is rejected or accepted based on the decision criterion or criteria.

4.3.1 Test of Hypothesis One

Ho: Net cash flow from operating activities does not have a positive and significant effect on profit for the year of oil and gas firms in Nigeria

Accept H_0 if the t-statistics < 2, and the probability of t-statistics > 0.05; otherwise, reject H_0 and accept H_1.

Table 3: Panel Regression Results

Dependent Variable: PFTY
Method: Panel Least Squares
Date: 08/03/24 Time: 10:20
Sample: 2011 2022
Periods included: 12
Cross-sections included: 6
Total panel (unbalanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NCFAO	0.565856	0.100414	5.635258	0.0000
C	-770300.0	2083586.	-0.369699	0.7133

R-squared	0.403221	Mean dependent var	-3732288.
Adjusted R-squared	0.390524	S.D. dependent var	18078111
S.E. of regression	14113394	Akaike info criterion	35.80311
Sum squared resid	9.36E+15	Schwarz criterion	35.88032
Log likelihood	-875.1761	Hannan-Quinn criter.	35.83240
F-statistic	31.75613	Durbin-Watson stat	0.793173
Prob(F-statistic)	0.000001		

Source: Author's Eviews 9.0 Output, 2024

From the model above, R^2 of 0.784226 shows that a 39% variation in profit for the year was explained by changes in net cash flow from operating activities. The adjusted R^2 of 0.390524 which considers more number of repressors explains that 20% variations in the dependent variable (PFTY) are caused by net cash flow from operating activities and lagged values of profit for the year. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 31.75613 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin-Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

Table 3 shows that the coefficient of 0.56585 is positive, the t-statistics of 5.635258 > 2, and the probability value of 0.0000 < 0.05 and significant at a 5% critical value. Thus, the study rejects the null hypothesis and accepts the alternative that net cash flow from operating activities has a positive and significant effect on the profit of oil and gas firms in Nigeria

4.3.2 Test of Hypothesis Two

Ho: Net cash flow from investing activities does not have a positive and significant effect on profit for the year of oil and gas firms in Nigeria

Accept H_0 if the t-statistics < 2, the probability of t-statistics > 0.05; otherwise, reject H_0 and accept H_1.

Table 4: Panel Regression Results

Dependent Variable: PFTY
Method: Panel Least Squares
Date: 08/03/24 Time: 10:22
Sample: 2011 2022
Periods included: 12
Cross-sections included: 6
Total panel (unbalanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NCFIA	-0.221256	0.577125	-0.383376	0.7032
C	-3626129.	2620517.	-1.383746	0.1730

R-squared	0.003117	Mean dependent var	-3732288.
Adjusted R-squared	-0.018093	S.D. dependent var	18078111
S.E. of regression	18240920	Akaike info criterion	36.31619
Sum squared resid	1.56E+16	Schwarz criterion	36.39341
Log likelihood	-887.7467	Hannan-Quinn criter.	36.34549
F-statistic	0.146977	Durbin-Watson stat	1.022829
Prob(F-statistic)	0.703170		

Source: Author's Eviews 9.0 Output, 2024

From the model above, R^2 of 0.003117 shows that a 31% variation in profit for the year was explained by changes in net cash flow from investing activities. The adjusted R^2 of 0.018093 which considers more number of repressors explains that 20% variations in the dependent variable (PFTY) are caused by net cash flow from operating activities and lagged values of profit for the year. The results further indicate that the overall regression

is significant as explained by the prob(F-statistics) of 0.146977 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

Table 4 shows that the coefficient of -0.221256 is negative, the t-statistics of -0.383376<2 and the probability value of 0.7032 >0.05 and significant at 5% critical value. Thus, the study rejects the alternative hypothesis and accepts the null that net cash flow from investing activities has negative and insignificant effect on profit of oil and gas firms in Nigeria.

4.3.3 Test of Hypothesis Three

Ho: Net cash flow from financing activities does not have positive and significant effect on profit for the year of oil and gas firms in Nigeria.

Accept H_0 if the t-statistics < 2, probability of t-statistics > 0.05; otherwise, reject H_0 and accept H_1.

Table 5: Panel Regression Results

Dependent Variable: PFTY
Method: Panel Least Squares
Date: 08/03/24 Time: 10:23
Sample: 2011 2022
Periods included: 12
Cross-sections included: 6
Total panel (unbalanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NCFFA	-0.536447	0.105380	-5.090569	0.0000
C	-1796337.	2129648.	-0.843490	0.4032

R-squared	0.355404	Mean dependent var	-3732288.
Adjusted R-squared	0.341689	S.D. dependent var	18078111
S.E. of regression	14667920	Akaike info criterion	35.88018
Sum squared resid	1.01E+16	Schwarz criterion	35.95740
Log likelihood	-877.0645	Hannan-Quinn criter.	35.90948
F-statistic	25.91389	Durbin-Watson stat	0.963445
Prob(F-statistic)	0.000006		

Source: Author's Eviews 9.0 Output, 2024

From the model above, R^2 of 0.355404 shows that 36% variation on profit for the year was explained by changes in net cash flow from financing activities. The adjusted $R^2$of 0.341689 which considers more number of repressors explains that 34% variations in the dependent variable (PFTY) are caused by net cash flow from financing activities and lagged values of profit for the year. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 25.91389 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

Table 5 shows that the coefficient of -0.536447 is negative, the t-statistics of -5.090569 > 2 and the probability value of 0.0000 < 0.05 and significant at 5% critical value. Thus, the study rejects the null hypothesis and accepts the alternate that net cash flow from financing activities has negative and significant effect on profit of oil and gas firms in Nigeria.

Discussion of Result

Result of hypothesis one shows that net cash flow from operating activities has positive and significant effect on survival of oil and gas firms in Nigeria. This is in line with the finding of Liman and Sani (2019) who found that cash flow has positive and significant effect on firm performance. However, the finding disagrees with the findings of Sharifi and Asadi (2016) and Haitham, and Jaya, (2017) who found that cash flow has inverse and no non-significant effect on firm performance. The observed variance could be as a result of industry peculiarities, economic depression, successive government policy summersault and insecurity within the period under review. Hypothesis two revealed that net cash flow from investing activities has negative and non-significant effect on survival of oil and gas firms in Nigeria. Firm's profitability would drop if investing decisions are not carefully appraised before it is embarked upon. The above finding validates both the free cash flow theory by Jensen (1986) and the Agency theory by Jensen (1976). While free cash flow theory posits that firm managers tend to engage in unprofitable investment, provided it suites their private interests, agency theory posits that firm managers act in a manner that conflicts with the primary purpose of their engagement which is to maximize profit. Managers instead, use increased cash inflow to pursue objectives that have little to do with increasing value, they rather pursue goals that make managers live better. The finding agrees with the studies of Nwakaego, Ikechukwu and Ifunanya, (2015); Khalil, Abu and Emad (2020) and Ugwu and Inyiama (2021) who found that cash flow from investing activities has Significant negative correlation, inverse relationship and non-significant effect on firm profitability and performance of Jordanian Hotels and manufacturing firms Nigeria. However, the finding disagrees with the report of Bingilar and Oyadongham (2014) and Emeka, Kelvin, and Ngozi (2023) who found that cash flow positively affects corporate performance of Beverages Companies and manufacturing firms. The disagreement could be attributed to difference in data sources and quality, industry peculiarities, and time period, etc.

The result of hypothesis three shows that net cash flow from financing activities has a negative and significant effect on the profit of oil and gas firms in Nigeria. This finding aligns with one of the contributions of agency theory propounded by Jensen and Meckling (1976) which posits that leverage helps to lower agency costs and reduce inefficiency. When there are obligations to be settled, there will be no free funds for frivolities, and managers are forced to be strategic in actions. The finding is in line with the studies of Nwarogu, and Iormbagah, (2017) and Ugwu, Ugwu, and Uzoma (2021) who found that cash flow has a negative association with performance and a negative and significant effect on the performance of refreshment companies and manufacturing firms respectively. The result is at variance with the results of the studies by Yazan (2017) and Jaradat (2017) whose studies revealed that cash flow has a positive effect on the share price of jodanian companies and the performance of Jordanian commercial banks. The observed variance could be a result of economic conditions, government policy summersault, and differences in analytical technique.

5 Summary

From the data analyzed and findings, findings were summarized as shown below:

1. Net cash flow generated from operating activities has a positive and significant effect on profit for the year of oil and gas firms in Nigeria from 2011 to 2022 ($r = 0.56585$, $p = 0.000001 < 0.05$).

2. Net cash flow from investing activities has a negative and insignificant effect on profit for the year of oil and gas firms in Nigeria from 2011 to 2022 ($r = -0.221256$, $p = 0.7032 > 0.05$).
3. Net cash flow from financing activities has a negative and significant effect on profit for the year of firms in the oil and gas sector in Nigeria from 2011 to 2022 ($r = -0.536447$, $p = 0.0000 < 0.05$).

Conclusion

Flowing from the findings and discussions of the results, the researcher concluded that Net cash flow from operating activities has a positive and significant effect on the survival of oil and gas firms. The finding implies that an increase in operating cash flow will result in to increase in the survival chances of oil and gas firms in Nigeria and vice versa. This is one of the most critical determinants of firm survival. This is in line with the findings of Liman and Sani (2019) but at variance with the findings of Sharifi and Asadi (2016), and Haitham, and Jaya, (2017).

Net cash flow from investing activities has a negative and non-significant effect on the survival of oil and gas firms in Nigeria. The finding implies that the more oil and gas firms engage in investing activities the more their profit diminishes. This could threaten the firm survival. The finding aligns with the studies of Nwakaego, Ikechukwu, and Ifunanya, (2015); Khalil, Abu, and Emad (2020), and Ugwu and Inyiama (2021). However, the finding disagrees with the report of Bingilar and Oyadongham (2014) and Emeka, Kelvin, and Ngozi (2023).

Net cash flow from financing activities has a negative and significant effect on profit for the year of oil and gas firms in Nigeria. This implies that the firms are involved more in financing activities. This would lead to a drop in the firm's profitability if financing choices are not carefully considered. The finding gives credence to the outcome of the studies by Nwarogu, and Iormbagah, (2017) and Ugwu, Ugwu, and Uzoma (2021), it did not validate the findings of Yazan (2017) and Jaradat (2017).

Recommendations

In line with the findings made and the conclusion drawn, the study recommends that managers of oil and gas firms in Nigeria should take part in all appropriate activities that will generate more net cash inflow from operating activities. This is to increase the chances of survival of oil and gas firms. This could be achieved through the exploration of other value chains, improved marketing and promotions, and more sales channels hence, improving the survival strategies. It is further recommended that the management of the firms should carefully evaluate investment choices to guarantee optimal value creation and increased survival. This is very critical because, with a poor evaluation of investment choices, the risk of failure will be higher than the management's risk appetite which may affect the firms' survival. Lastly, it also recommends that financing cash flow activities should be properly planned to reduce its impact on firm survival by seeking cheaper sources of funding to reduce the risk of bankruptcy associated with debt. This will certainly enhance the survival strategies of oil and gas firms in Nigeria.

This study contributed to the existing knowledge. To the extent of the reviews and analysis carried out by the researcher, a geographical gap was observed as it was established that none of the reviewed studies was carried out in the oil and gas sector in Nigeria. More so, there were contradictory reports from the respective groups of scholars whose works were reviewed. Consequently, the findings of this study closed the knowledge gaps established above. It has enriched the literature base on firm survival and cash flow planning of oil and gas firms in Nigeria.

It is suggested that this study can be advanced. Notably, many survival measures have been based on financial indices, leaving out the non-financial aspects. Further studies could be carried out in this area but consider the non-financial measure of performance as proxies for firm survival.

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