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**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN GHANA**

**P. C. MUOTOLU**  
Department of Accountancy,  
Faculty of Management Sciences,  
Chukwuemeka Odumegwu Ojukwu University,  
Igbariam Campus

And

**E. O. NWADIALOR PH.D.**  
Vice chancellor,  
Tansian University,  
Umunya

***Abstract***

*The study investigated the relationship between the components of cash flow and the performance of Deposit Money Banks in Ghana. The specific objectives were to determine the relationship between cash flow from operating activities (CFOA), cash flow from investing activities (CFIA), cash flow from financing activities (CFFA), free cash flow (FCFA), and cash flow to debt (CFDT), and the performance (Return on Asset -ROA) of deposit money banks in Ghana. The dependent variable is the ROA while CFOA, CFIA, CFFA, FCFA, and CFDT are the independent variable. Bank Size (BSZE) and Leverage (LEVG) are the control variables. The study adopted an ex-post facto research design and data for the study were secondary, sourced from the annual reports of the selected deposit money banks for a period of eleven years spanning 2009 to 2019. The sample size is eight (8) Deposit Money Banks in Ghana. Multiple regression analysis was used to test the hypotheses. The results showed among others that CFOA and CFDT were found to have a positive and insignificant influence on ROA while CFIA, CFFA, and FCFA were significant in influencing ROA performance in Ghana at a 5% level of significance. Also, BSZE has had a positive and significant influence on the ROA at a 1% level of significance. Finally, LEVG was found to have a negative significant influence (at 5%) on ROA. The study recommended that leverage should be discouraged in Ghana since it influences performance negatively. The study concluded that cash flow components greatly influenced performance in Ghana and therefore, managers should handle cash flow management efficiently to have an enhanced performance. The study contributed to knowledge by extending the scope of the study, including more variables and modifying existing models.*

*Keywords: Cash flow, Performance, Free cash flow, Return on asset and Cash flow to debt ratio.*

## **Introduction**

The economic well-being of any organization, whether in production or services depends on careful monitoring and management of the flow of funds within and outside of that organization from time to time? The introduction of a cash flow statement is an essential part of a firm's annual report to substitute funds flow statements has led to new aspects of information obtainable by the stakeholders particularly investors and analysts who make use of these financial statements. Cash flow statement helps the users of financial statements greatly by providing information on the sources and uses of virtually the entire financial system over a given period. (Amah, Ekwe, and Ihendinihu 2016 states that cash flow enables a company to increase its activities, replace needed assets, take advantage of market opportunities, and pay a dividend to its owners.

No business venture can do without cash management. Abiro, (2013) posits that cash is the life-blood of any business. Cash management ensures that any business is effectively run with a positive cash flow. Efficient cash flow management entails that there must be a balance between liquid cash and fixed assets. This means that there should be proper management of sources of finances where the finances are applied or made use of (Hughes; 2007). Every business that has planned to succeed must take effective cash management very seriously or else face the consequences. Bari, Mohamed, Muturi, and Samantar (2019) is of the view that cash is the utmost imperative current asset in operating any business. Cash is the major input that is needed to keep the business going continuously and additionally, the core output is expected to be generated by selling the services or products manufactured by the firm (Pandy, 2010).

Adetifa (2005) argued that cash management has been specialized because of the significance of handling corporate cash. Additionally, cash management centers on how a firm manages its cash flow cycle or operating cycles as this defines the timing of cash inflows and cash outflows. The pattern of cash and operating cycles varies per industry but in a general term, the pattern involves the provision of cash as capital for the firm's initial outlay, the purchase of raw materials in production companies and finished goods in marketing companies, distribution of the finished goods to get instant cash or generate debtors when credit terms are given during sales of goods. (Akinbuli, 2009).

The major role played by banks in propelling the entire economy of any nation is that of routing excess funds to the deficit units where these funds are needed for the production of goods and services. Deposit money banks are the main pillar of the financial system in Ghana and the world at large, as they offer diverse opportunities and services to their customers. Economic advancement springs from a spike in the growth of the banking system. The part played by a robust banking system in the efficient allocation and utilization of credit is quite enormous (Haque & Tariq, 2012) Ghana, in the 1980s, went through reformation in its banking systems. The reformation of the banking sector in Ghana started in the late 1980s, a part of the ongoing economic recovery program (ERP). In Ghana, the banking sector is made up of a general system of legal financial institutions that are involved in conducting banking business beneath the banking laws of Ghana (Nkegbe and Ustarz, 2015). The bank of Ghana is the central bank and regulates the activities of all the banks. By 2008 in Ghana, the banking sector occupied about 70% of the financial sector (Bawumia et al, 2008).

Bingilar and Oyadonghan (2014), is of the view that a bank should be able to work out diverse ways of choosing the best components of its cash flows required in the company's operation. This would raise its productivity or achieve performance as well as properly structure and efficiently utilize its cash flow. Ibadin and Arowoshegbe (2017) posit that the capability of any business organization to effectively choose an adequate source of funds to finance its operations would distinguish between strong cash flow governance and poorly managed cash flows. Existing literature agrees that cash flow management supports a bank's financial performance. Performance assesses how effectively the banks have managed their assets and investments to improve their financial positions (Abaenewe, Ogbulu, and Ndugbu, 2013). Financial statements aid its users in evaluating the liquidity, leverage, asset activity, and performance of the concerned organization. The cash flow statement has proved to be more appropriate than the income statement and statement of financial position in the evaluation of performance (Amah, Ekwe, and Ihendinihu 2016). The reason is that the income statement and the statement of financial position are prepared on an accrual basis while the statement of cash flow is prepared on a cash basis, which is more realistic. It is against this backdrop that this study examined the relationship between cash flow and the performance of listed banks in Ghana.

The paper is divided into 5 sections: section 1 is the introduction. Section 2 is conceptual/theoretical/empirical reviews. Section 3 is the methodology/ model specification. Section 4 is the Data presentation and discussion of results while section 5 is the Summary of findings, recommendations, conclusion, and contribution to knowledge.

### **Statement of Problem**

Cash flow management is very important in any business organization. There would be stability, which translates to improved performance when there is efficient cash flow management. Performance would be enhanced and there would be an efficient liquidity position with well-managed cash flow. Any business organization without proper cash flow management is bound to fail, as the importance of cash flow management cannot be over-emphasized. Banks have suffered from inadequate cash management in time past, which has also affected the performance of these banks to the extent that some were taken over by the apex bank for restructuring.

The relationship between cash flow management and the performance of business organizations has attracted the interest of researchers in recent times.

Bingilar and Oyadonghan (2014), Okpe, Duru, and Alor (2015), and Ubesie, Chitor, and Ejembi (2016) all investigated the relationship between cash flow and performance of companies in different sectors and discovered that cash flow from operating activities has positive as well as a significant relationship with performance while cash flow from investing activities has a negative and significant relationship with corporate performance. Studies of Muhammad and Aminatu (2018) found the relationship between operating cash flows and financial performance proxied by ROA was positive and insignificant, while the relationship is positive and significant when financial performance was proxied by return on equity (ROE).

On the contrary, Sayari and Mugan (2013) found a negative relationship between cash flow from operations, size of the company, and financial distress score of companies after

**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN.....**

studying Cash Flow Statement as an Evidence for Financial Distress in the manufacturing and service sectors in Turkey for a period of five years spanning from 2005 to 2009.

Because of the mixed results from prior studies, the researcher went on to examine the influence that cash flow management has on the performance of Deposit Money Banks in Ghana. The researcher added free cash flow and cash flow to debt as additional variables, which was not common before now and then, widened the scope of the study hence, the gap the study seeks to fill.

**Objectives of the Study**

The main objective of this study is to examine the relationship between cash flow and the performance of deposit money banks in Ghana. The specific objectives are to:

1. Determine the relationship between cash flow from operating activities and the performance of deposit money banks in Ghana.
2. Examine the relationship between cash flow from investing activities and the performance of deposit money banks in Ghana.
3. Ascertain the influence of cash flow from financing activities on the performance of deposit money banks in Ghana.
4. Investigate the relationship between free cash flow and the performance of deposit money banks in Ghana.
5. Examine the influence of cash flow to debt on the performance of deposit money banks in Ghana.

**Hypotheses**

- H<sub>01</sub>:** Cash flow from operating activities has no significant relationship with the performance of deposit money banks in Ghana.
- H<sub>02</sub>:** Cash flow from investing activities has no significant relationship with the performance of deposit money banks in Ghana
- H<sub>03</sub>:** There is no significant influence of cash flow from financing activities on the performance of deposit money banks in Ghana
- H<sub>04</sub>:** Free cash flow has no significant relationship with the performance of deposit money banks in Ghana
- H<sub>05</sub>:** Cash flow to debt has no significant influence on the performance of deposit money banks in Ghana.

**Significance of the Study**

**Managers:** The knowledge from the study would assist managers in choosing different components of cash flow that would boost their operation and hence, improve performance.

**Investors/Shareholders:** Investors would be better informed and make a wiser investment decision with knowledge gained from the study.

**Suppliers:** It would assist suppliers to know the best time to work with any organization and receive payment for supplies made in due course.

**Policy Maker/Regulators:** This study would assist policymakers/regulators to ensure compliance in the preparation of cash flow statements by banks and other organizations.

**Students/Researchers:** The study would be helpful to future researchers and students interested in furthering the findings as the work would be a reference point

**Scope of the study**

This study covered eleven (11) years from 2009 to 2019 with eight (8) deposit money banks in Ghana, based on data accessibility.

**Review of Related Literature****Conceptual Framework****Performance**

Performance is the ability of a company to come up with new resources from its daily operations over a given period. It shows how efficient the management of an organization uses the assets at its disposal to generate profit. Usually, there diverse proxies for measuring performance by different business organizations. Abaenewe, Ogbulu, and Ndugbu (2013) proxied performance using the return on asset (ROA) and return on equity (ROE). Some of the major financial performance indicators used by banks include Return on assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE), Earnings per Share (EPS), etc. (Bagh, Khan, Azad, Saddique, & Khan, 2017), though the current study made use of Return on Asset (ROA) and the Return on Equity (ROE)

**Return on Assets (ROA):**

Return on assets reflects how well the management of any organization uses the total asset at its disposal to generate profit. To calculate a company's ROA, the net income is divided by its total assets. The ROA is used in deciding a company's efficiencies in creating earnings, using its assets. According to Yao, Haris, and Tariq (2018), ROA is the ratio of the profit after tax and total/average assets, which is commonly used as a cost-effectiveness indicator that defines the efficient consumption and revenue generation proficiency of/from the assets of any business organization. It is calculated as  $ROA = \frac{EBIT}{\text{Total Assets}}$ .

**Cash Flow**

Cash flow is a key financial report that explains the steps and decisions taken by management in its daily operations (Helen (2002)). It is an accounting and financing concept which describes the inflow and outflow of cash within an organization. Inflow represents cash receipts while outflow relates to cash expenditure. Cash flows signify all inputs and outputs liquidities and cash equivalents (Bingilar & Oyadonghan, 2014). Cash flow is increased by additional sale of goods or services, disposing of an asset, decreasing costs, increasing the selling price, faster collection of cash, paying later, additional equity, or borrowing (Periu, 2015).

**Cash flow from operating activities**

Cash Flow from Operations is the cash flow that a business produces from its operating activities. The cash produced from customers are used to cater for expenses which include inventories. Cash inflows from operating activities do not necessarily mean revenue as expenses would be put into consideration before revenue is achieved. It is important to make sure a business organization has adequate cash or access to cash to avoid a cash crunch. Eyisi and Okpe (2014) are of the opinion that cash flows from operating activities arise from the activities the business uses to produce net income. By way of illustration, operating cash flows consist of cash springing from sales and cash mainly for the purchase inventory and the

**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN.....**

payment for operating expenses like salaries, utilities, etc. Operating cash flows are inclusive of cash flows from interest, dividend revenue, interest expense, and income tax.

**Cash Flow from Investing Activities**

Cash flow from investing activities denotes cash flows mainly from the purchase or sale of fixed assets (Nwanyanwu, 2015). The purchase or sale of a fixed asset like property, plant, or equipment normally should be regarded as an investing activity. In the same vein, cash derived from the sale of a part of the business or cash out from a merger or acquisition also categorized as investing activities. Ibadin and Arowoshegbe (2017) argued that cash flows from investing activities are cash business transactions related to a business's investments in long-term assets. Investing activities include the purchase of property plant, and equipment (PP&E) example, capital expenditures, proceeds from the sale of PP&E, acquisitions of other businesses or companies, proceeds from the sale of other businesses (divestitures), purchase of marketable securities (i.e., stocks, bonds, etc.) and cash realizable form of marketable securities.

**Cash Flow from Financing Activities**

Cash flow from financing activities specifies cash flows to and from third-party financiers. It involves cash relating to debt, like proceeds (cash in) and loan payments (cash out). It also encompasses cash flow relating to equity, like share purchases (cash in) and dividends (cash out). Cash flow from financing activities helps in deciding how much cash an organization generates from third parties on a net basis as against cash from on-going operations. According to Eyisi and Okpe (2014), cash flows from financing activities are cash transactions relating to the business of raising money from debt or stock, or repaying that debt. Usually, these can be recognized from changes in long-term liabilities and equity.

**Free Cash flow**

Free cash flow denotes cash generated by a business organization from its operations, minus the cost spent on assets. It can also be seen as cash that is left, after a company has paid for its operating and capital expenditures (CAPEX). It is the cash flow available to all the creditors and investors in a company, which includes common stockholders, preferred shareholders, and lenders. Investors mostly prefer FCF or FCF per share to earnings or earnings per share as a measure of profitability since it does not include non-cash items from the income statement. On the other hand, as FCF explains investments in property, plant, and equipment, it is mostly lumpy and infrequent over time. Working capital being added as a measure of profitability offers an insight not included in the income statement (Ibadin & Arowoshegbe, 2017).

**Cash flow to debt**

This is a coverage ratio that expresses the relationship between cash flow made by a business and its total debt. Cash flow from operations is mostly used, though using unlevered free cash flow is another possible alternative. The cash flow-to-debt ratio is the ratio of a company's cash flow from operating activity to its total debt. This ratio is a type of coverage ratio and is used to know the length of time it would take a company to pay back its debt if it dedicates all of its cash flow to debt repayment (Ibadin & Arowoshegbe, 2017). Cash flow is used more often than earnings since it gives a better estimate of a company's capacity to pay its obligations. The cash flow-to-debt ratio matches a company's generated cash flow from

operating activities to its total debt. The cash flow-to-debt ratio shows how long it takes a company to pay off all of its debt if it uses its entire operating cash flow for debt repayment.

### **Theoretical Framework**

Various scholars on cash flow statements and firm performance have used several theories. This study is anchored on the agency theory.

### **Agency Theory**

The study is anchored on Agency theory which explains that conflicts arise as a result of disparities between shareholders (Business owners) and the managers (agents). Managers are to make returns to shareholders using the assets of the business, which in deed is their major duty (Elliot and Elliot, 2002). Often times, out of their selfish interests, managers take decisions that would usually benefit them and disfavour the shareholders at a cost which is called agency cost. In the views of Gul et al (2012), agency costs can come in the form of investing in assets with zero or even negative NPV, embezzlement, mismanagement in accounting, etc. All these actions result to high cost of running the business and it invariably leads to reduction in performance. The contribution of agency theory is that leveraged firms are better for shareholders since the debt level can be used to monitor the managers (Boodhoo, 2009). As a result, introducing more debt, agency cost is supposed to be reduced as inefficiency is reduced and hence, enhancement of performance (Akintoye, 2008). Agency theory, therefore, examines how management is to adopt a cash flow management strategy that could be directed at shareholders' interest by reducing agency cost to increase performance.

### **Theoretical Exposition**

#### **Cash flow from operating activities and Firm Performance**

Many researchers have studied the relationship between cash flow from operations and financial performance. Mukor, Muturi, and Oluoch (2018) investigated the effect of operating cash flow management on the financial performance of mutual funds in Kenya and found out that operating cash flow management had both significant and positive effect on return on assets while it had an insignificant and positive effect on return on equity. Bingilar and Oyadonghan (2014) findings showed that cash flows from operating activities have a significant as well as a positive relationship with corporate performance in the Food and Beverage Sector of Nigeria. Ogbeide and Akanji (2017) studied the relationship between cash flow and financial performance of insurance companies in a developing economy – Nigeria for the period of six years spanning from 2009-2014 and found cash flow from operating activities was shown to significantly increase the financial performance of insurance companies in the period examined.

#### **Cash flow from investing activities and Firm Performance**

Several researchers have examined the relationship between cash flow from investing activities and firm performance. Amah, Ekwe, and Ihendinihu (2016) in the Nigerian banking industry explored the relationship between cash flow and performance in the Banking sector of Nigeria. Four (4) Banks quoted on the Nigeria Stock Exchange were surveyed between a periods spanning from 2005 to 2013. Data from the secondary sources were gotten from the annual report and accounts of selected Banks. The data were analyzed with the aid of the correlation technique. The operating cash flow was discovered to have a significant and strong positive relationship with performance in the Banking sector in Nigeria. It also revealed that investing in

**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN.....**

cash flow and financing cash flow has negative and weak relationships. Alslehat and Al-Nimer (2017) investigated the impact of cash flow management on the financial performance of Jordanian Insurance companies. The population used was 23 companies for a period covering 2009 to 2013. The result revealed that the net cash flow from investing activities played a significant role in financial performance.

**Cash Flow from Financing Activities and Firm Performance**

The relationship between cash flow from financing activities and firm performance has been investigated by some researchers. Amah, Ekwe, and Ihendinihu (2016) in the Nigerian banking industry explored the relationship between cash flow and performance in the Banking sector of Nigeria. Four (4) Banks quoted on the Nigeria Stock Exchange were surveyed between a periods spanning from 2005 to 2013. Data from the secondary sources were gotten from the annual report and accounts of selected Banks. The data were analyzed with the aid of the correlation technique. The operating cash flow was discovered to have a significant and strong positive relationship with performance in the Banking sector in Nigeria. It also revealed that investing in cash flow and financing cash flow has negative and weak relationships. . Ubesie, Chitor, and Ejembi (2016) investigated the relationship between cash flow and performance in the Food and Beverages sector of Nigeria. The survey comprised of Six (6) Food and Beverages companies listed on the Nigerian Stock Exchange. Data were extracted from the annual report and accounts of the selected companies under study. The data were statistically analyzed using multiple regression techniques. The results of the study showed clearly that operating and financing cash flows have a significant positive relationship with performance in the Food and Beverage Sector of Nigeria.

**Free cash flow and Firm Performance**

Several researchers have studied the relationship that existed between free cash flow and firm performance. Zhou et al (2012) investigated the relationship between free cash flow and financial performance as indicated by the listed Real estate companies in China. The principal component analysis was employed and regression analysis on the data from 2006-2011 of all listed Real estate companies in China was made use of. The findings proved that the free cash flow of a company is negatively linear correlated to its financial performance meaning that excess free cash flow will lead to a decline in the financial performance. Achjen and Slim (2017) examined the effect of free cash flow and agency costs on firm performance. The study indeed aimed at re-examining the free cash flow hypothesis and the agency theory. Data were from the publicly listed companies on the French Stock Exchange for periods covering 2003 to 2007. The result showed that free cash flow has a positive impact on agency costs. This meant that with free cash flows, the inducement of management to invest in destructive value projects could increase thus, bringing about a rise in agency costs. The findings include that there is a positive relationship between free cash flows, operating performance, and firm value. R& D ratio and operating income volatility are statistically significant to firm value amongst the proxy variables of agency

**Cash flow to debt and firm performance**

In a study in South Africa, Jooste (2006) examined Cash flow ratios as a yardstick for evaluating financial performance in African businesses. The cash flow sufficiency ratio proved



that the industries in South Africa had sufficient cash for the payment of basic obligations while the industries in the USA did not. Moreover, the levels of cash made for investments in assets and dividend payouts in the SA were greater than that of US industries. Also, the cash flow created by assets used in South Africa is more than that of the US nevertheless; US industries retire long-term debt in a shorter period than SA industries

### **Empirical Studies**

Ahmed, Hoque, Hasan, and Alam (2018) thought that there are substantial arguments in favor of and against the positive relationship between free cash flow (FCF) and profitability. Here it tried to ascertain whether there was a positive or negative relationship between the retention of FCF for a firm and its profitability. It was done on substantial empirical evidence. Data for Six (6) years were collated from the 28 companies quoted on Bangladesh Stock Exchange, Dhaka. Descriptive and inferential statistical tools were both made use to analyze the data. Two-panel regression models were used. The dependent variables were returned on equity (ROE) and earnings per share (EPS), while FCF together with some other control variables served as the independent variables. A mix of both positive and negative relationships amongst the variables was evidenced by the empirical study. The study showed a positive relationship between the dependent and independent variables. The huge investment nature of the pharmaceutical sector and the greater withholding rate of FCF are somewhat descriptive in explaining the reason for the increase in the return of companies

Muhammad and Aminatu (2018) investigated the impact of Operating Cash flow and corporate financial performance of listed Conglomerate companies in Nigeria for over 10 years (2005 to 2014). Of the six listed Conglomerate companies, five of them were used for the study. Secondary data collected from the Annual Reports and Accounts of the sampled firms were used. Descriptive statistics, correlation analysis as well as regressions techniques were used in analyzing data to finding out the variation in financial performance due to the variation in operating cash flow. Because the data has both time series and cross-sectional characteristics, a panel data regression technique was used. As a result of the above, OLS and random effects regressions were applied to estimate the study models. The findings revealed that the relationship between Cash Flow from Operating Activities (CFO) and financial performance proxied by ROA, is positive and insignificant while the relationship between financial performance which was proxied by ROE of the listed conglomerate companies in Nigeria, is positive and significant.

In the automotive sector in Germany, Ali, Ormal, and Ahmad (2018) examined the effect of free cash flow on the profitability of firms listed in the automotive sector of Germany. A descriptive survey method was adopted in the analysis. The population of the study consisted of prominent and large firms. A simple random sampling method was used and every firm within the automotive industry had an equal chance of being studied, but only 5 firms were selected for the study. Secondary data was used for the study and was sourced from the audited annual reports and financial statements of the firms listed under the automotive industry of Germany for a period of ten years spanning from 2007-2016. Following the regression results, there was a positive relationship between the free cash flows and profitability of listed firms.

Mukor, Muturi, and Oluoch (2018) investigated the effect of operating cash flow management on the financial performance of mutual funds in Kenya. The study employed causal research. The data used was secondary and this was from the audited financial statements of Twenty-Two (22) mutual funds extracted for the period of six years spanning from 2011-2016. The data were evaluated using regression techniques. From the study, it was discovered that cash flow management had a significant and positive effect on return on assets but had an insignificant and positive effect on the return on equity. The study recommends that managers should come up with a compulsory cash flow policy such as investment policy and dividend policy. Mutual funds should come up with clear policies for cash flow management including the investments of surplus funds that need to be established.

Achjen and Slim (2017) examined the effect of free cash flow and agency costs on firm performance. The study indeed aimed at re-examining the free cash flow hypothesis and the agency theory. Data were from the publicly listed companies on the French Stock Exchange for periods covering 2003 to 2007. The result showed that free cash flow has a positive impact on agency costs. This meant that with free cash flows, the inducement of management to invest in destructive value projects could increase thus, bringing about a rise in agency costs. The findings include that there is a positive relationship between free cash flows, operating performance, and firm value. R& D ratio and operating income volatility are statistically significant to firm value amongst the proxy variables of agency cost.

Alslehat and Al-Nimer (2017) examined the relationship between Cash flow management and financial performance of Jordanian Insurance Companies. The population under study was twenty-three companies for a period covering from 2009 to 2013. The study revealed that Net cash flow from Operating activities affected the return on assets. Moreover, the Net cash flow from investing activities was revealed to have significantly affected Financial Performance.

Ogbeide and Akanji (2017) studied the relationship between cash flow and financial performance of insurance companies in a developing economy – Nigeria. Twenty-seven firms involved in the insurance business were used as the sample size for the study with time-series data covering from 2009 -2014 (i.e for 6 years). Both descriptive and inferential statistics using time series data were used to determine the relationship between the variables. The findings disclosed that cash flow determined insurance firms' financial performance and is statistically significant. Cash flow from operating activities was shown to significantly increase the financial performance of insurance companies in the period examined. Cash flow from financing activities was seen to have improved the financial performance of the sampled insurance firms, though it was not statistically significant.

Ibadin and Arowoshegbe (2017) investigated the relationship between cash flow and corporate performance of deposit money banks in Nigeria. A sample size of four banks from the seventeen listed on the Nigerian stock exchange as of 2014 was selected using a purposive sampling method. Data used was from a secondary source, extracted from the annual audited financial statement of the banks for a period of five years spanning from 2010 to 2014. Data analysis was done using the ordinary least square regression model. The result showed that operating, investing, and financing cash flow has a positive and significant effect on the performance of deposit money banks in Nigeria.

Hau (2017) investigated the impact of free cash flows on the firm performance of manufacture, trade, and real estate sector listed firms on the Hochiminh Stock Exchange. Data were obtained from the audited financial statements of listed companies on the Ho Chi Minh City Stock Exchange, and the market price of stocks is derived from websites of VN direct Securities Company (vndirect.com.vn). The sample consists of 90 nonfinancial corporations for the period 2009 - 2015. The findings constantly showed that free cash flows have a positive effect on firm performance for all sectors. On the other hand, the impact of free cash flows on firm performance is different between firms with and without investment opportunities. This explains the significance of Jensen's free-cash flows theory (1986) to the firms quoted on the Vietnam stock exchange, at the sectoral level.

In the food and beverage industry in Nigeria, Ubesie and Ejembi (2016) examined the relationship between cash flow and performance of six (6) companies listed in the Nigerian Stock Exchange, for a covering from 2007 to 2011. Data were taken from the annual report and accounts of the selected companies under study. Multiple regression techniques were used in analyzing the data used for the study. The findings showed that operating and financing cash flows have a significant positive relationship with corporate performance in the Food and Beverage Sector of Nigeria. It was also revealed that investing in cash flow and corporate performance has a significant negative relationship.

Amah, Ekwe, and Ihendinihu (2016) in the Nigerian banking industry explored the relationship between cash flow and performance in the Banking sector of Nigeria. Four (4) Banks quoted on the Nigeria Stock Exchange were surveyed between a period spanning from 2005 to 2013. Data from the secondary sources were gotten from the annual report and accounts of selected Banks. The data were analyzed with the aid of the correlation technique. The operating cash flow was discovered to have a significant and strong positive relationship with performance in the Banking sector in Nigeria. It also revealed that investing in cash flow and financing cash flow has negative and weak relationships.

In Kenyan Construction Company, Ndungu and Oluoch (2016) examined the effect cash flow management has on the market returns of the companies. Secondary bi-annual data was gathered for the 5 listed construction companies at the Nairobi Securities Exchange (NSE) for a period of eight years covering 2008 to 2015. The modified capital asset pricing model (CAPM) was used to regress construction company equal-weighted bi-annual portfolio returns on the market excess returns over risk-free rate of return as the first variable and Cash flow ratio, an indicator of cash flow management as the second variable. The results indicated that cash flows from operations have a positive effect on the market performance of construction companies and while the cash flows from investing; financing and free cash flows all have an adverse effect on the market performance of companies involved in construction.

Okpe, Duru, and Alor (2015) explored the effect of cash flow statements on companies' profitability in Nigeria. Three Banks; Fidelity bank of Nig. Plc, First Bank of Nigeria Plc, and First city Monument Bank Plc were surveyed. Secondary data were extracted from the cash flow statements contained in the Annual reports of these banks for a period of five years spanning from 2009-2013. The hypotheses were tested using multiple regression analytical tools. The results of the study proved that operating and financing cash flows have a significant positive effect on the company's profitability in the Banking sector of Nigeria. It was also revealed that

investing in cash flow has a significant negative effect on the profitability of these companies studied.

In the SME sector in Nigeria, Nwyanwu (2015) studied the relationship between cash flow and organization performance, focusing on the hospitality and print media industrial sectors of the economy. Primary data were collected using a questionnaire prepared in 2015. Descriptive statistics and Pearson's product-moment coefficient of correlation using the statistical package for social sciences (SPSS) were used in the analysis. Using a pilot study, 45 SMEs in those sectors were sampled. It was found that the relationship between cash flow position and net profit is significantly strong and positive. He, therefore, suggested that with advances in technology and quality of service delivery which create competition, hospitality, and print media organizations should develop strategies to enhance their cash inflow.

Moussavi et al (2015) investigated the effect of free cash flow on change in evaluation indicators of the financial performance of listed in the Tehran Stock Exchange firms over 8 years covering from 2008 to 2015. The population consisted of all companies listed on the Stock Exchange in Tehran after the imposition of restrictions, including 406, company. Linear regression analysis was used in testing the hypotheses with correlation software SPSS version 16. The results revealed that there existed a relationship between free cash flow and evaluation indicators of financial performance. There is no relationship between free cash flows with three variables, the rate of return on equity, investment opportunities, and quality profitable but exists a relationship amongst free cash flow earnings before interest and tax together with Market value-added. As free cash flow increases, earnings before interest and taxes and market value-added increases.

Heydari, Mirzaeifa, and Javadghayedi (2014) examined the relationship that existed between free cash flows and the performance of firms listed in the Tehran stock exchange of Iran. 63 firms are selected from listed firms in the Tehran stock exchange for a period of seven years covering from 2006 to 2012. Correlative regression was used in testing the hypotheses. Panel analyses for four factors were used: return on assets, return on equity ratio, Tobin's Q ratio, and stock return. The result showed that there is a significant negative relationship between free cash flows with all evaluative factors of performance. This meant an increase in the conflict of interests between managers and property owners due to free cash flows, which lead to a decrease in the firm's performance.

Bingilar and Oyadaghan (2014) in their Nigerian study examined the relationship between cash flow and corporate performance in the Food and Beverages sector of Nigeria for a period spanning from 2007 to 2011. Six (6) Food and Beverages companies quoted in the Nigerian Stock Exchange were surveyed. Data were extracted from the annual report and accounts of the selected companies under study. The data were analyzed using multiple regression techniques. The results proved that both the operating and financing cash flows have a significant positive relationship with corporate performance, having examined the Food and Beverage Sector of Nigeria. It was equally observed that investing in cash flow

Eyisi and Okpe (2014) examined the uses of cash flow ratio as a better tool for evaluating corporate performance. In the study, liquidity ratio and asset management ratio were used to measure performances and these ratios were calculated based on accrued and cash basis accounting. The findings revealed that liquidity ratios computed on an accrued basis

gave a positive liquidity position while that computed on a cash basis showed negative liquidity position/inefficient asset management which meant that the organization studied is not likely to meet up its financial obligation. Thus, this may result in corporate failure, if management does not take the proper course of action.

In Turkey, Sayari and Muga (2013) explored the effect of cash flow components on financial distress scores for the 124 companies selected from the Istanbul Stock Exchange (ISE). Analysis of whether the components of cash flow have a descriptive effect on bankruptcy risk and the financial health of companies was further carried out. Four unconnected models were established and Linear Regression Model was used to measure the age of the company, the size of the company, cash flow from operations (CFO), cash flow from investing (CFI) as well as cash flow from financing (CFF) activities as a cause of financial misery score of companies. The results proved that there was a negative relationship between CFO, company size, and financial distress score of companies. Conversely, CFF is seen to be positively related to the financial distress score. In the interim, it was equally observed that the standardized coefficient of CFI is statistically insignificant and hence it does not offer any evidence for the financial weakness or bankruptcy risk of companies.

Abioro (2013) reviewed practically the impact of cash management on the performance of production companies in Nigeria, using Cadbury Nigeria Plc as a case study. Both secondary and primary data were collected for the study. Two main variables were focused on and they are performance which is the dependent variable and cash management as the independent variable. Two different hypotheses were formulated and tested using descriptive statistics and correlation coefficients techniques respectively to establish whether there is a significant relationship between cash management, performance, and liquidity. It was observed from the study that the relationship that existed between cash management and the performance of manufacturing companies in Nigeria was significant. It was equally noticed that the sheer availability of cash (liquidity) devoid of adequate management does not necessarily translate into enhanced performance for manufacturing companies. Therefore, the need for adequate cash management for better performance.

Zhou, Yang, and Zhan (2012) China studied the relationship between the free cash flow and the financial performance of all real estate companies listed in the China stock exchange to enhance the finance decision for management and investment. Data were collected from the annual financial statements of the listed real estate companies for a period of five years covering from 2006-2010. The principal component analysis and regression analysis were used to calculate 21 financial performance indicators out of the key financial performance indicators, and these key indicators of the sampled companies were correlated to their free cash flow. The result depicted that the free cash flow of a company is negatively linear-correlated to its financial performance. This meant that excess free cash flow will lead to a decrease in financial performance.

Amuzu (2010) examined 'Cash flow as a measure of performance of listed companies in emerging Economies using the Ghana Example'. Twenty (25) companies listed on the Ghana Stock exchange for the period under study is 2003 -2005 were used for the study. The data collected through the observation method and the paper was a qualitative study. The researcher founds that the efficient —cash flow has been strongly influencing the success or failure of a particular firm. He found out that Cash Flow analysis is a healthier measure of

**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN.....**

performance and effectiveness for firms that are contending in evolving markets. They also found that the magnitude of excess returns observed in large free cash flow firms varies in a manner consistent with the free cash flow hypothesis. Cross-sectional regression analysis shows that higher free cash flow firms with enhancing levels of capital spending in the past are associated with small intensities of excess returns.

**Methodology**

**Research Design:** The ex-post facto research design was adopted for this study.

**Nature and Source of data:** Secondary data, extracted from the annual report and accounts of the selected deposit money banks from 2009 to 2019 were used.

**Population and Sample size:** The population for this study consists of the 24 deposit money banks quoted on the Ghana Stock Exchange. A purposive sampling technique was employed in selecting eight (8) banks in Nigeria as the sample size. The selected banks were those with complete data for the period of study.

**Model Specification**

We adopted our model from prior studies of Bingilar and Oyadonghan (2014), with modification. The linear regression model expressed in its econometric form of the equation given as follows:

$$Y = \beta_0 + \beta_1X + \beta_2X + \beta_3X + \beta_4X + \beta_5X + \beta_6X + \beta_7X + \epsilon \quad \text{--- equ 1}$$

Taking the explicit model as:

$$ROA = f (CFOA + CFIA + CFFA + FCFA + CFDT + LEVG + BSIZE) \dots\dots\dots 1$$

**Where:**

ROA represents the return on Asset, a proxy for banks' performance (the dependent variable).

CFOA = Net cash flow from operating activities measured as net cash flow operations to the asset.

CFIA represents Net cash flow from investing activities measured as net cash flow investing to the asset.

FCFA stands for free cash flow measured as free cash to assets.

BSIZE means Bank size measured as log of revenue

$\beta_0$  = Constant (intercept) while  $\beta_1 - \beta_7$  are the regression coefficients or multipliers of the parameters of estimation (independent variable).

$\epsilon_{it}$  = The stochastic error term Note one control variables was introduced to control for performance. Subscripts i denote the number of banks, t denotes years or time-series dimensions ranging from 2009-2019.

**Data and variables description**

**Operationalization of Variables**

S/N	Variable Code	Variable Name	Variable type	Measurements	Source
1	CFOA	Cash flow from operating activities	Independent	'Net operating cash flows to assets	Amah, Ekwe and Ihendinihu (2016) Bingilar and Oyadonghan (2014)

2	CFIA	Cash flow from investing activities	"	Net investing cash flows to assets	Heydari, Mirzaeifa, and Javadghayedi (2014), Bingilar and Oyadonghan (2014))
3	CFFA	Cash flow from financing activities	"	Net financing cash flows to asset	Amah, Ekwe and Ihendinihu (2016), Bingilar and Oyadonghan (2014)
4	FCFA	Free cash flow activities	"	Operating cash flows minus capital expenses	Vinh and Chi (2013), Yungchih, (2010) and Liao, (2008)
5	CFDT	Cash flow to debt	"	ratio of cash flow from operations to total debt	Hau (2017)
6	ROA	Return on Asset	Dependent	Net Profit after tax divided by Total Asset	Vinh and Chi, (2013) Yungchih
7	BSIZE	Bank Size	Control Variable	Log of banks total revenue	Orjinta & Okoye (2018)
8	LEVG	Leverage	Control Variable		

Source: Researchers idea (2020)

### Results and Discussion of Findings

#### Table 4.1: ROA Panel Random Effect Regression Result

Dependent Variable: ROA

Method: Panel EGLS (Period random effects)

Total panel (balanced) observations: 88

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.011564	0.731643	2.749377	0.0074
CFOA	1.830470	1.842656	0.993387	0.3235
CFIA	3.048154	3.016336	1.010548	0.0153
CFFA	0.747455	0.721312	1.036244	0.0302
FCFA	0.018869	0.010141	1.860661	0.0465
CFDT	0.295876	0.333958	0.885967	0.3783
LEVG	-0.377515	0.168177	-2.244746	0.0275
BSIZE	1.293463	0.474079	2.728371	0.0078
R-squared	0.468247	Mean dependent var	2.077753	
Adjusted R-squared	0.404123	S.D. dependent var	1.770299	
S.E. of regression	1.683675	Sum squared resid	226.7810	
F-statistic	2.311775	Durbin-Watson stat	1.604183	
Prob(F-statistic)	0.033677			

Source: Researcher's summary of random effect analysis result (2020)

### **Interpretation of result**

In the table, 4.1.1, R-squared, and its adjusted R-squared values were (0.47) and (0.40) respectively. This is an indication that all the independent variables jointly explain about 47% of the systematic variations in Return on Assets (ROA) of our sampled banks over the eleven years (2009-2019) in Ghana while 53% of the systematic variations are captured by the error term. The F-statistics 2.311775 and its P-value of (0.03) portrays the fact that the ROA regression model is well specified.

### **Test of Hypothesis One**

Cash Flow from Operating Activities (CFOA) and Performance (ROA), based on the t-value of 0.993387 and P-value of 0.32, in table 4.4.2 above, was found to have a positive influence on our sampled banks ROA but this influence is not statistically significant as the p-value is more than 5% significance level. This result, therefore suggests that we should accept our null hypothesis one (H01) which states that Cash flow from operating activities has no significant relationship with performance, proxy as ROA of deposit money banks in Ghana. This means that in Ghana, huge or lean cash flow from operating activities (CFOA) of deposit money banks does not signify better performance of ROA of such banks and therefore should not be considered by investors when making investment decisions.

### **Test of Hypothesis Two**

Cash Flow From Investing Activities (CFIA) and Performance (ROA), based on the t-value of 1.010548 and P-value of 0.02, was found to have a positive influence on our sampled banks' ROA and the influence is statistically significant at 5% level, as the p-value is within 0.05. This result, therefore suggests that we should reject our null hypothesis two (H02) which states that Cash flow from investing activities has no significant relationship with performance, proxy as ROA of deposit money banks in Ghana, to accept the alternative. In other words, with the coefficient value of CFIA being 3.048154, it then means that for every N1.00 cash investment of such banks will result in an increase of about N3.05 kobo on their ROA performance, all things being equal. However, since this influence is statistically significant, it should be considered by investors when making investment decisions.

### **Test of Hypothesis Three**

Cash Flow from Financing Activities (CFFA) and Performance (ROA), based on the coefficient value of 0.747453, t-value of 1.036244, and P-value of 0.03, was found to have a positive influence on our sampled banks ROA and the influence is also statistically significant at 5% level, as the p-value is within 0.05. This result, therefore suggests that we should reject our null hypothesis three (H03) which states that Cash flow from financing activities has no significant relationship with performance, proxy as ROA of deposit money banks in Ghana, to accept the alternative. In other words, with the coefficient value of CFFA being 0.747453, it then means that for every N1.00 cash for financing activity of such banks, will result to an increase of about 0.75 kobos on their ROA performance, all things being equal and since this influence is statistically significant, it should be considered by investors when making investment decisions as huge cash flow from financing activities of banks in Ghana will result to higher ROA returns to banks, shareholders and investors as well.



**Test of Hypothesis Four**

Free Cash Flow (FCFA) and Performance (ROA), based on the t-value of 1.860661 and P-value of 0.04, was found to have a positive influence on our sampled banks' ROA and this influence is also statistically significant at 5%, as the p-value is within 0.05. This result, therefore suggests that we should reject our null hypothesis four (H04) which states that Free cash flow has no significant relationship with performance, proxy as ROA of deposit money banks in Ghana, to accept the alternative. This means that in Ghana, huge free cash flow (FCFA) of deposit money banks signify better performance of ROA of such banks as more money will be made available for growth and development by plowing back of such funds through investment activities and therefore should be considered by investors when making investment decisions as this was found to be statistically significant.

**Test of Hypothesis Five**

Cash Flow to Debt (CFDT) and Performance (ROA), based on the t-value of 0.885967 and P-value of 0.38, in table 4.4.2 above, was found to have a positive influence on our sampled banks ROA but this influence is not statistically significant as the p-value is more than 5% significance level. This result, therefore suggests that we should accept our null hypothesis five (H05) which states that Cash flow to debt has no significant influence on the performance of deposit money banks in Ghana. This means that in Ghana, huge or lean cash flow to debt (CFDT) of deposit money banks does not signify better performance of ROA of such banks and therefore should not be considered by investors when making investment decisions.

**Test of Control Variables**

Leverage (LEVG) and Performance (ROA), based on the coefficient value of -0.377515, t-value of -2.244746, and P-value of 0.03, was found to have a negative influence on our sampled banks ROA and this influence is statistically significant as the p-value is not more than 5% significance level. In other words, with the coefficient value of LEVG being -0.377515, it then means that for every N1.00 increase in leverage value of deposit money banks in Ghana, it can result in a decline of about 0.38 kobo on their ROA performance, all things being equal. And since this influence is statistically significant, it then means that deposit money banks in Ghana that are considering increasing their ROA to attract many investors should reduce the level of leverage value in their capital structure as this was found to statistically decline ROA performance of banks in Ghana.

Bank Size (BSIZE) and Performance (ROA), based on the coefficient value of 1.293463, t-value of 2.72837, and P-value of 0.01, was found to have a positive influence on our sampled banks ROA and this influence is statistically significant as the p-value is not more than 5% significance level. However, since this influence is statistically significant, it then means that bank size determines ROA performance in Ghana. Meaning that investing in banks with a large size in Ghana leads to higher ROA returns to investors as every N1.00 increase in bank size, can lead to about an N1.29 kobo increase in ROA returns to investors in Ghana. Therefore, banks that want to attract many investors in Ghana should consider expanding their sizes to achieve such.

**Discussion of Findings**

Cash Flow from Operating Activities (CFOA) and Performance (ROA): It was found that CFOA does not influence the performance of deposit money banks in Ghana. This finding is in line with the findings of prior studies such as Mukor, Muturi, and Oluoch (2018), Muhammad and Aminatu (2018) who documented positive and insignificant result between cash flow from operations and banks performance when measured using a return on assets but negates the findings of Khanji and Siam (2008), Mong'a (2010) that found negative and significant results. Based on this result, our first null hypothesis (H1), which states that net cash flow from operating activity has no significant effect on the performance of deposit money banks in Ghana is accepted.

Cash Flow from Investing Activities (CFIA) and Performance: CFIA was found to influence the ROA of deposit money banks in Ghana, meaning that CFIA will benefit bank owners as they will have higher returns on their assets. This result agrees with the findings of prior studies such as Ibadin and Arowoshegbe (2017), Alslehat and Al-Nimer (2017), and Nwanyanwu (2015) who documented a positive and significant result between net cash flow from investing activity and performance of banks but negates the findings of Khanji and Siam (2015) that found negative and significant results. This result, therefore, rejects our second null hypothesis (H02), which states that net cash flow from investing activity has no significant effect on the performance of deposit money banks in Nigeria, and accept the alternate hypothesis and conclude that net cash flow from investing activity has a significant effect on return on asset of banks, which were statistically significant at 5% level of significance.

Cash Flow from Financing Activities (CFFA) and Performance: CFFA was found to influence the ROA of deposit money banks in both Ghana. The result agrees with the findings of Ubesie, Chitor, and Ejembi (2016), Nwanyanwu (2015), Khanji and Siam (2015), Sayari and Mugan (2013) that recorded positive and significant result but negates the findings of Ogbeide and Akanji (2017) who documented positive but insignificant results. As a result of this significant result obtained, we, therefore, reject our third null hypothesis (H03) and conclude that net cash flow from financing activity has a significant effect on both returns on assets and return on equity of deposit money banks in Ghana.

Free Cash Flow (FCFA) and Performance: FCFA was found to influence the ROA. This means Ghana banks will have free idle cash that can be pushed into investment activities in the future, thereby recording higher returns on assets to bank owners. The result also indicates that, for banks with low investment or no good investment opportunities, profits have a positive relationship with the free cash flow present in the banks as they can easily embark on aggressive investment decisions due to the amount of idle cash with them and vice versa. Hau (2017) and Zhou et al (2012) also found that corporate profits are negatively correlated with business free cash flow, especially for firms without good investment opportunities.

Cash Flow to Debt Activities (CFDT) and Performance: it was found that CFDT did not influence the performance of deposit money banks in Ghana. Our finding contradicts the findings of Jooste (2013) that recorded positive and significant results. As a result of this insignificant result obtained, this study, therefore, accepts the fifth null Hypothesis (H05), which states that cash flow to debt has no significant effect on the performance of deposit money banks in Ghana.

Leverage (LEVG) and Performance: LEVG was found to have a negative and significant influence on the ROA of deposit money banks in Ghana. This implies that leverage decreases returns of the owners of the bank as the profits made will be used for debt servicing instead of serving as a return to them. This also implies that a 1% increase in the level of leverage financing is associated with a decrease in the return on assets of banks. It is discovered that the debt to equity ratio which was a measure of leverage has a positive-negative relationship with ROA. The higher the leverage value of banks, the lesser the returns on assets of the owners. This finding is in agreement with the findings of Pierluigi (2015) that documented negative and significant effects between leverage and banks' performance and disagree with the findings of Ndirangu (2017) that documented positive and significant effects.

Bank Size and Performance: It was discovered that bank size has a positive but significant effect on the performance of deposit money banks in Ghana. A study conducted by Tariq, Usman, Mir, and Aman (2014) using bank size as an independent factor found that bank size has a mixed impact on the bank's profitability. Bank size has directly impacted performance by reducing the cost of raising the capital for large banks. The study, therefore, found a considerable and direct association between bank size and profitability in their study. Our study, therefore, supports the findings of Tariq et al.(2014) but negates the findings of Fraker (2006) who documented an indirect association between bank size and profitability.

### **Summary of Findings, Conclusion and Recommendations**

The results showed among others that CFOA and CFDT were found to have a positive and insignificant influence on ROA while CFAA, CFFA, and FCFA were positive and significant in influencing ROA performance in Ghana at 5% respectively. Also, BSZE is positive and significant at 1%. Finally, LEVG was found to have a negative significant influence (at 5%) on ROA. The study recommended that leverage should be discouraged in Ghana since it influences performance negatively. The study concluded that cash flow components greatly influenced performance in Ghana and therefore, managers should handle cash flow managed efficiently if performance would be sustained. The study contributed to knowledge by extending the scope of the study, including more variables and modifying existing models.

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**COMPONENTS OF CASH FLOW AND THE PERFORMANCE OF DEPOSIT MONEY BANKS IN.....**

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