

Cash Management and Financial Performance of Listed Agricultural Firms in Nigeria

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ABSTRACT

The financial performance of agricultural has been declining to recent time where most of the agricultural firms reported deficits in their income statement, following the dwindling revenues, firms are in a deep financial crisis that can possibly lead some of them to a halt. Proper cash management is essential for any organizational survival. This is because an institutions' inability to identify relevant cash management practices can be its source of inability to perform. The general objective of this study was to determine the effect of cash management on financial performance of listed agricultural firms in Nigeria. The study employed an ex-post facto research design. The study population was five (5) listed agricultural firms on the Nigerian Exchange Group (NGX). A sample size of five (5) agricultural firms was used using a census sampling technique covering ten financial years (2012 to 2021). The data used in this study were secondary sourced from annual reports and statement of accounts of the selected firms between 2012 and 2021. The method of data analysis is descriptive statistic, unit root test, diagnostics test and panel ordinary least square (OLS) with the help of E-view v12. The findings showed that there is a significant effect of cash and cash equivalent on return on assets, there is no significant effect of cash turnover on return on assets, there is no significant effect of cash and cash equivalent on return on equity and there is no significant effect of cash turnover on return on equity of listed agricultural firms in Nigeria. It was suggested amongst others that given that cash and cash equivalent were found to enhance return on assets as a measure of financial performance of agricultural firms, this study therefore recommends for continuous embracement of these cash and cash equivalent by agricultural firms in Nigeria.

Introduction

Cash management is imperative in every business, given that cash drives other activities. It refers to full exploitation of the liquid cash available, deriving maximum interest from the extra funds as well as reducing any holdups in transmission of funds (Wanjuki et al., 2021). Effective cash management allows the company to control its cash and manage its business economically efficiently and effectively. In this way the company can reduce business disruptions operate in a smooth and efficient manner and provide for its ongoing growth and financial performance.

Cash is the money which a firm can disburse immediately without any restriction. The term cash includes coins currency and cheques held by the firm and balances in its bank accounts. Sometimes near- cash items such as marketable securities or bank time deposits are also included in cash. The basic characteristic of near-cash assets is that they can readily be converted into cash.

Cash Management is a broad term referring to cash collection, concentration and disbursement of cash for the purpose of running business operations. Cash management involves cash planning, managing the cash flows, setting the optimum cash level from time to time and investing surplus cash. Attom (2014) referred to cash as the basic input that keeps the business operational for the foreseeable future as well as the output realizable after the sell of products and services. Wesonga (2017) therefore defines cash management as the series of processes employed by a firm to obtain maximum benefits from the firms' flow of funds. Abioro (2013) defines cash management as the ability of the firm having the right amount of money in the right place and time for purposes of meeting its financial obligations in the most effective of ways and ensuring positive cash flow for smooth operations. Attom (2014) therefore defined cash management practices as the techniques implemented by business enterprises/firms concerning cash flows and cash balances held at a time. Muthama (2016) on her part defined cash management practices as the process of ensuring good cash balances for businesses/firms to enable them remain going concerns. Businesses are required to maintain a balance between liquidity and profitability while conducting day to day operations. Liquidity is a precondition to ensure that firms are able to meet their short-term obligations as they fall due and at the same time ensuring that profitability is maintained (Marus et al., 2019). The ultimate goal of cash management to is manage cash surplus or balances of an enterprise to maximize availability of cash not invested in property plant and equipment or stock to avoid risk of insolvency (Tarus & Juma, 2017). Cash management assumes more significance and is considered as most important asset an organization holds in comparative to other current assets.

In other hand, financial performance is regarded as indicators that show the overall health of an entity. It indicates the extent to which strategies and policies of managers have been accomplished (Alslehat & Al-Nimer, 2017). It is a measure of assessment of a company's ability to utilize its assets in the generation of profits as well as wealth maximization. Improvement in financial performance usually guarantee growth in terms of size of assets and other accounting parameters. In achieving growth in financial performance, greater efforts are usually devoted by managers in determining what to be done, how it should be done and when it should be done (Etim et al., 2022). Cash management practices are one of these strategies managers often formulated. Assessing the effect of cash management on financial performances of listed agricultural firms in Nigeria is very fundamental. Despite the importance of cash management practices, the outcome seems not to be reflected on financial performance of entities, particularly for Nigeria agricultural firms.

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The empirical evidence within the Nigeria context had been rather scanty. Some of the studies carried out in Nigeria such as Major and Azali (2022) investigated the relationship between cash management practices and financial performance of listed deposit money banks in Nigeria between 2014 and 2020 and result showed that there is a positive and significant relationship between cash management practices and financial performance of listed deposit money banks in Nigeria. Some others such as Uremadu (2012); Ogbonnaya et al. (2016); Amah et al. (2016); Peter et al. (2020); Nangih et al. (2020) Etim et al. (2022); use series data with aggregate macro-economic Variables of the banking system which implies that the data were not drawn from the actual financial statements of agricultural firms in Nigeria. Furthermore, review of empirical studies on cash management and financial performance reveals that none of the authors from Nigeria utilized data from the agricultural sector. See for instance, Attayi et al (2022); Kithinji et al. (2022); Mrefu and Gichure (2022); Chibuike and Celestine (2022); Odo and Udodi (2022). All focused on firms outside the agricultural sector. Review of empirical studies also revealed that some authors combined firms across sectors/industries without taking into account industry effect. This study addresses these knowledge gaps by investigating how cash management affects the financial performance of listed agricultural firms in Nigeria using the period 2012-2021.

Statement of the Problem

Today, the problem of managing Cash has got the recognition of separate entity, so its study and management is of major importance to both internal and external analyst to judge the current position of the business concerns. The need for cash to run the day-to-day business cannot be overemphasis. Preventing unnecessary expenditure from interest, late payment and

debt cost is considered as major need. The level of regular business income without relying outside investment of cash borrowing is ensured. The timely investment and cash available for investment opportunities to maintain the cash flow for exports and imports have been ensured.

Problems in cash management activities emerge, according to Gilbert et al. (2013), where the management takes the value of handling cash for granted. This arises because there is no emphasis on cash management by the entrepreneur. This will directly impact the activity of business. According to Abanis et al. (2013) as cited Naidu and Sri (2020) noted that, most owners do not have a bank account to monitor their sales. This question emerged because they had no expertise with the administration of an organisation. If there is some loss of capital, this can cause the owner to be unable to handle their currency. Furthermore, book account unavailability will reduce the owner's ability to monitor their cash balance and control the use of their cash.

Due to these problems there are review of empirical studies on cash management and financial performance such as Amah et al. (2016); Joseph (2016); Oladejo et al (2017); Peter et al. (2018); Dhruva (2019); Ando et al., (2019); Sulaiman et al., (2019) ; Peter et al. (2020); Nangih et al. (2020); Wanjuki et al. (2021); Appah et al. (2021); Etim et al. (2022); Major and Azali (2022); Attayi et al (2022); Kithinji et al. (2022); Mrefu and Gichure (2022); Chibuike and Celestine (2022); Odo and Udodi (2022). For instance, Major and Azali (2022) result showed that there is a positive and significant relationship between cash management practices and financial performance of listed deposit money banks in Nigeria. Attayi et al (2022) findings indicated that cash management strategies affects sustainable growth of SMEs in Nigeria. The study also concludes that cash budgeting as a cash management strategy is a strong determinate to the productivity of SMEs in FCT-Abuja. Abdullahi et al (2020) study result shows that account receivables management has significant negative effect on the financial performance and account payables management has significant and positive effect on the financial performance proxied by return on equity (ROE). Globally, nearly all of the studies have generally focused on different sectors. Kithinji et al. (2022) study found that cash management affects financial performance of public universities in Kenya. The study revealed that student enrolment moderates the relationship between cash management and financial performance of public universities in Kenya. Chibuike and Celestine (2022) study revealed a positive and insignificant effect of operating activities on liquidity. Also, it revealed a positive and insignificant effect of investing activities on liquidity. Odo and Udodi (2022) study revealed a significant negative effect of cash management on returns on assets and Tobin's Q. Returns on equity was negative and non-significant. Based on the above problems and findings there is a missing gap in the literature. Therefore, this study is hereby filling the gap by using a period of 2012 to 2021 to determine the effect of cash management on financial performance of listed agricultural firms in Nigeria.

Conceptual Framework

The conceptual framework of cash management on financial performance is shown in figure 1 below:

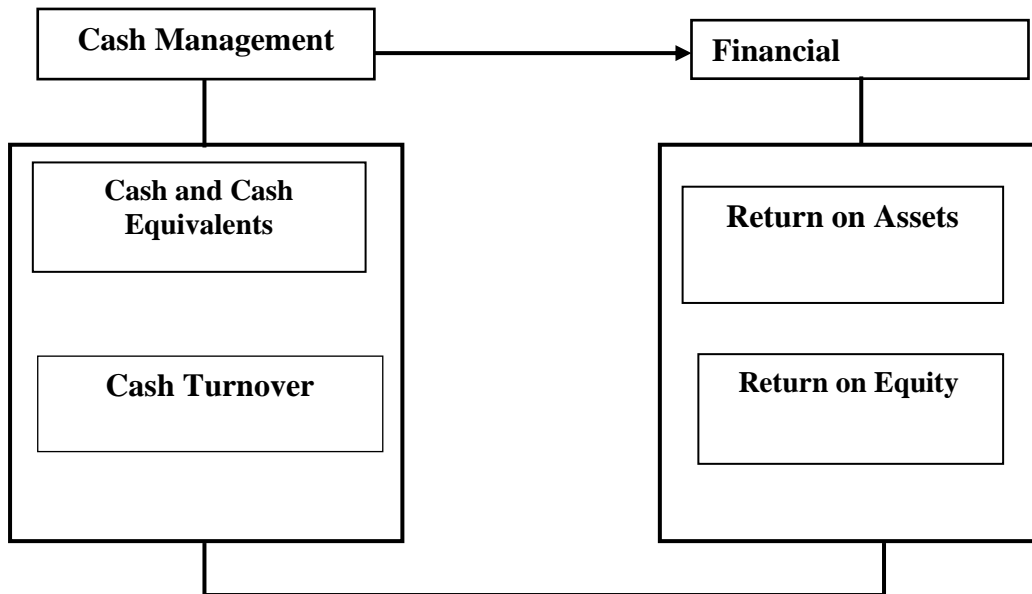


Figure 1.1: Conceptual framework on the effect of cash management on financial performance

Sources: Major and Azali (2022); Mrefu and Gichure (2022); Odo and Udodi (2022) and Wanjuki et al. (2021)

Aim and Objectives of the study

The main aim of the study was to determine the effect of cash management on financial performance of listed agricultural firms in Nigeria between 2012-2021, however the specific objectives are to;

- i. determine the effect of cash and cash equivalent on return on assets of listed agricultural firms in Nigeria.
- ii. determine the effect of cash turnover on return on assets of listed agricultural firms in Nigeria.
- iii. determine the effect of cash conversion cycle on return on assets of listed agricultural firms in Nigeria.
- iv. determine the effect of cash and cash equivalent on return on equity of listed agricultural firms in Nigeria.

Research Question

The following research questions were stated for the study:

- i. What is the effect of cash and cash equivalent on return on assets of listed agricultural firms in Nigeria?
- ii. What is the effect of cash turnover on return on assets of listed agricultural firms in Nigeria?

- iii. What is the effect of cash conversion cycle on return on assets of listed agricultural firms in Nigeria?
- iv. What is the effect of cash and cash equivalent on return on equity of listed agricultural firms in Nigeria?

Research Hypotheses

Based on the research questions above, the following hypotheses are formulated.

- H₀₁: There is no significant effect of cash and cash equivalent on return on assets of listed agricultural firms in Nigeria.
- H₀₂: There is no significant effect of cash turnover on return on assets of listed agricultural firms in Nigeria.
- H₀₃: There is no significant effect of cash conversion cycle on return on assets of listed agricultural firms in Nigeria.
- H₀₄: There is no significant effect of cash and cash equivalent on return on equity of listed agricultural firms in Nigeria.

Review of Related Literature

Concept of Cash Management Practices

The firm uses cash to make purchases and payments. Business companies need cash to acquire both tangible and intangible assets used for production. However, success is not counted according to how much money it has in its bank account. The management over the cash is what all matters. In real cases, if the cash is well managed, the business leaders can decide the purchased inventories decision under the amount of cash owned (Amini et al., 2021) For example, if a business analyzes its report and conclude that they do not have much money, they will tend to purchase cheaper goods or purchase products in lesser amount. According to Deb et al. (2015), cash management refers to the managing of cash balances held by a firm at a specific time, cash flow within the firm, and cash flow into and out of the firm. Meanwhile, Amini et al. (2021) emphasize that cash management is focused on revenues and expenditures to avoid three potential problems: liquidity crisis, bad debt expenses, and abundant idle cash balances. Deb et al. (2015) described cash management as handling I cash flows into and out of the business, (ii) cash flows within the company, and (iii) cash balances being retained at a point in time by the company. In order to meet the targeted goals and objectives, each organisation needs to provide adequate financial management by improving its allocation and cash preparation. Strong cash management would also ensure that the corporation will be able to accomplish its core goals in the long run and prepare for a good strategy.

Njeru et al. (2015) defined Cash management as a financial discipline that adopts the same principles, regardless of the type of business, size or age of an enterprise. Cash management would focus on building a sustainable cash flow by forecasting receipts and payments in order to establish the lines to funding with banks and thus managing day- to-day operations of business to minimize the amount of cash required to achieve sustainable business growth. Cash management is necessary to avoid mismatches between the timing of payments and availability of cash. Many business firms have maintained large cash reserves and liquidity positions within their investment portfolios in an effort to partially accommodate unforeseen expenditures. Drexler et al. (2014) observed that both individuals and business owners are usually confronted with difficult financial decisions in many aspects of life, be it in their personal finances or as business owners.

Cash management practices refers to the management of an entity's cash to ensure that sufficient cash are sustained for entity's daily operations, finance opportunities and payments of unexpected services (Samuel & Peter, 2016). Cash management practices involve the collection, handling, and usage of cash in effective and efficient manner. It involves assessing market liquidity, cash flow, and investments. Njeru (2015) defined Cash management practices as a financial discipline that adopts some principles, regardless of the type of business, size or age of an enterprise. Major and Major (2020) defined it as the efficient collection, disbursement and investment of the organization's cash while meeting the firm's liquidity requirements. Cash management is concerned with the managing of cash flows into and out of the firm; cash flows within the firm; and cash balances held by the firm at a point of time by financing deficit or investing surplus cash (Yahaya, 2017). Jean et al. (2007) cash management refers to the step by step procedure of managing liquidity and cash flow of a firm as well as managing risks and processes related to capital optimization and cash flow. Management of cash covers many activities and has its major purpose as controlling the company's cash flow and efficiently managing its funds. Efficient management of cash flow is vital for all companies. Soet et al (2018) points out that the aim of managing cash is to find optimal cash level for creating the highest level of performance for an entity. The major components of cash management lie in the two aspects; financial reporting and financial management (Kinyajui, 2016). Kaketo et al., (2017) observed that management and finance team need to enforce adherence to cash policy put in place to guide and control cash management. Murkor et al, (2018) observed that finance managers should come up with a compulsory cash flow policies to enable the organization come up with clear policies for cash flow management including the investment of surplus funds if need arise. Liman and Aminatu (2018) noted that firms should set a policy to keep bankruptcy cost at a lower level and also management efficiency is required in managing costs, increasing efficiency and financial performance.

Dimensions of Cash Management Practices

Cash and Cash Equivalents

The term cash refers to the legal tender which includes; bills, coins, cheques received but not deposited, and checking and savings accounts. Mrefu and Gichure (2022) defined cash equivalents as any short-term investment securities maturing within 90 days which include bank certificates of deposit, banker's acceptances, treasury bills, commercial papers, and other money market instruments. Cash equivalents are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes. For an investment to qualify as a cash equivalent, it must be readily convertible to a known amount of cash and be subject to an insignificant risk of changes in value (Odo & Udodi, 2022). Therefore, an investment normally qualifies as a cash equivalent only when it has a short maturity of, say, three months or less from the date of acquisition. Investments in shares are excluded from cash equivalents unless they are, in substance, cash equivalents; for example, preference shares of a company acquired shortly before their specified redemption date (provided there is only an insignificant risk of failure of the company to repay the amount at maturity). Cash flows exclude movements between items that constitute cash or cash equivalents because these components are part of the cash management of an enterprise rather than part of its operating, investing and financing activities. Cash management includes the investment of excess cash in cash equivalents.

Haavig (2019) averred that cash and cash equivalents are part of the current assets section of the statement of financial position and contribute to an organizations' net working capital, however based on their nature, they differ from other current assets like marketable securities

and accounts receivable. Prasad (2017) posited that organizations ought to ensure that adequate cash is available in order to meet maturing obligations and investing of excess cash to maximize investment returns. This can be achieved by processing proper cash management practices by the listed manufacturing firms. According to Jamil et al., (2015), problems stemming from poor cash management practices manifest themselves in different forms including; risk of experiencing liquidity and performance problems such as bankruptcy, attracting and maintaining skilled employees, fall or lack of margin of safety to take care of depression times and depleted cash reserves. Survival of listed firms relies heavily on liquidity. Finance managers and accountants of the firm are required to know the cash position before disbursing any payment since the cash position is one of the most important and dependable to an organization (Oyando, 2018). Cash and Cash Equivalent is one of important elements in cash management (Soaga, 2012). Cash is the amount of money that is ready to be used (Attom, 2014). Cash Equivalents are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes (IFRS Interpretations Committee, 2013). Cash movement in an organization can be tracked using a cash budget. Cash budget is a financial plan that shows the projected cash receipt and cash payments. It shows the cash position of the business during the budget period (Kiprotich, 2017). According to Weston and Copeland (2008), a cash budget shows the expected cash inflows and outflows over a budget period and highlight anticipated cash surpluses and deficits. Their preparation assists managers in the planning of borrowing and investment and facilitates the control of expenditure (Geteri, 2018).

Cash Turnover

The cash turnover is used to determine the proportion of cash required to generate sales. The ratio is typically compared to the same result for other businesses in the same industry to estimate the efficiency with which an organization uses its available cash to conduct operations and generate sales (Adebayo et al, 2011). Cash turnover is a comparison between sales and the average cash amount. Cash turnover rate is a measure of the efficiency of cash use carried out by the company. The efficient use of cash means companies have the opportunity to make greater investment in fixed investment that can be made in income. If the amount of cash is relatively small, it means high cash turnover so that the company is bankrupt (Mauchi et al, 2011; Ndungu & Oluoch, 2016). Martono and Harjito (2002) state that cash turnover is a cash turnover to be cash back. Cash turnover is a measure of the efficiency of cash used by companies because the cash turnover rate describes the speed of return of cash invested in working capital (Mauchi et al, 2011; Ndungu & Oluoch, 2016).

Financial Performance

The concept of financial performance has over the decade been discussed in accounting and finance literature alike. Authors have expressed their views on this concept. Chibuikwe and Celestine (2022), asserts that financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications for an organization's health and ultimately its survival. In the view of Verma (2021), financial performance is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure a firm's overall financial health over a given period of time and used to compare similar firms across the same industry.

Financial performance according to Odalo and Achoki (2016) is the results derived from invested funds of shareholders and debt holders usually express in monetary terms. Akenga

(2017) and Efuntade and Akimola (2020) says financial performance is usually understood to be indicators that define the entire health of a company in monetary terms. Financial performance is also perceived to be growth or decline in accounting attributes (Dogarawa & Maude, 2020). The concept is often used to explain the level of progress attained from the strategies and policies formulated by top management of companies; decline in financial performance proxies, could mean that the strategies formulated by management may not have accomplished the purposes targeted (Hossain & Ali, 2012; Enekwe et al., 2014), while, improvement in financial performance indicators is a pointer to the fact strategies and policies of management of companies may be yielding meaningful outcomes positively (Ndubuisi et al., 2019).

Measures of Financial Performance

Return on Assets

Return on Asset (ROA) is an important financial performance ratio because it measures the efficiency with which the firm is managing its investment in assets and using them to generate profit. According Prastowo (2002), Return on Assets (ROA) is used to measure the effectiveness of the company in generating profits by exploit in its assets. This ratio may give an indication of good or bad neighbor management in implementing cost control or management of his property. Brigham (2001), Return on Assets (ROA) is often used as a tool to measure the rate of return on total assets after interest expense and taxes.

Murekefu and Ouma (2012), stated that return on assets is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. It is commonly defined as net income divided by total assets. Net income is derived from the income statement of the company and is the profit after taxes. Return on Assets (ROA) is a financial performance metric that measures the profitability of a business in relation to its total assets. It is about the ability of a company to earn profit by utilizing its assets. It is an important profitability ratio which is used to interpret effectively the management of assets, both current and non-current assets. ROA takes account of managerial decisions about the management of assets. The assets are read from the statement of financial position and include cash and cash-equivalent items such as receivables, inventories, land, capital equipment as depreciated, and the value of intellectual property such as patents. Companies that have been acquired may also have a category called good will representing the extra money paid for the company over and above its actual book value at the time of acquisition. Because assets will tend to have swings over time, an average of assets over the period measured should be used. This ratio indicates how well a company is performing by comparing the profit (net income) generated to the capital invested. The higher the return, the more productive and efficient management is in utilizing economic resources (Hassan et al., 2014).

Return on Equity (ROE)

Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested (Sulaiman et al., 2019). The denominator for ROE is equity, or more specifically, shareholders' equity. The return on equity can be used internally by a company or can be used by an investor to evaluate how well the company is turning a profit relative to its stockholder's equity. ROE is more than a measure of profit; it's a measure of efficiency. A rising ROE suggests that a company is increasing its ability to generate profit without needing as much capital. It also indicates how well a company's management is deploying the shareholders' capital.

Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. ROE is considered a measure of how effectively management is using a company's assets to create profits. ROE is especially used for comparing the performance of companies in the same industry (Brammer & Millington, 2008). Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on Equity is a ratio that provides investors with the insight into how efficiently a company (or more specifically, its management team) is managing the equity that shareholders have contributed to the company (Fuhrmann, 2017). It is about the earning capacity by using shareholder's funds. It is the responsibility of managers to effectively manage the equity. ROE explains net earnings by using the equity given by the shareholders. It also indicates the portion of total assets provided by shareholder equity. ROE considered as an important measure profitability of the company. The higher values generally mean that the company is effective in the generation of income on the new investments. Investors should be compared to the return on the rights of shareholders of different companies, as well as the verification of the trend in the rules of engagement with the passage of time. However, only relying on the return the rights of shareholders and make investment decisions are not safe. The management can be affected in unclear way, for example, when the use of debt financing to reduce capital, there will be an increase in the return on equity even if remain fixed income (Grande, 2011). ROE is calculated as: $\text{Return on Equity} = \frac{\text{profit after taxes}}{\text{Shareholder's Equity}}$. ROA is a measure of a company's profitability that takes into consideration the conventional financial indicators and accounting ratios that are used by firms. Among these measures and ratios is something called the return on assets. One example of one of these indicators and ratios is the return on assets.

Theoretical Review

The free cash flow theory was developed by Jensen (1986), He stated that companies generating excess cash required to finance projects with positive returns face greater agency problems as the free cash flow exacerbates discrepancy of benefit amongst stakeholders and managers. Huseyin (2011) asserted that managers have an incentive to hoard cash to increase the amount of assets under their control and to gain discretionary power over the firm investment decision. Having cash available to invest, the manager does not need to raise external funds and to provide capital markets detailed information about the firm's investment projects (Huseyin, 2011). The implication of free cash flow theory by Jensen is that companies with high levels of free cash flow are additionally expected to commence investments and takeovers that are value declining. Hence, managers could undertake investments that have a negative impact on shareholders wealth. Managers of firms with poor investment opportunities are expected to hold more cash to ensure the availability of funds to invest in growth projects, even if the NPV of these projects is negative (Huseyin, 2011). This would lead to destruction of shareholder value and, even if the firm has a large investment programme and a low market-to-book ratio.

Thus, using the market-to-book ratio as a proxy, it is likely that the relation between investment opportunity set and cash holdings will be negative. This is critical in management of liquidity in the firm and ensuring there is a balance between meeting the current obligation to mitigate liquidity short fall and investing in the interest of shareholders wealth maximization (Huseyin, 2011).

Empirical Review

Major and Azali (2022) investigated the relationship between cash management practices and financial performance of listed deposit money banks in Nigeria between 2014 and 2020. Four hypotheses guided the study. The study was an ex-post facto research design. The population of the study was twenty-three listed deposit money banks in the Nigeria Exchange Group. Five of the banks were selected using purposive sampling technique. The data used in this study were sourced from annual reports and statement of accounts of the selected deposit money banks. Descriptive statistics and ordinary least Square regression were employed in analyzing the data. The study found that, there is a positive and significant relationship between cash and banks balances and return on equity; there is a negative but significant relationship between cash conversion cycle and return on equity; there is a positive and significant relationship between cash turnover and return on equity and finally, firm size had positive and significant moderating influence on the relationship between cash management practices and financial performance. The study recommended among others, that deposit money bank should avoid cash and banks balances lose rather than maintaining brought-forward cash balances for equity distribution. Furthermore, firms should monitor cash conversion cycle moment for shareholders wealth creation.

Attayi et al (2022) determined cash management strategies and SMES sustainable growth in Nigeria. The study adopted a descriptive survey design and a data set of two hundred and ninety-seven (297) questionnaires that were conveniently collected. The data was analysed using regression with the aid of SPSS. The findings indicated that cash management strategies affects the sustainable growth of SMEs in Nigeria. The study also concludes that cash budgeting as a cash management strategy is a strong determinate to the productivity of SMEs in FCT-Abuja. Also, the study concludes that cash control plays a major role in the sustainable growth of SMEs in the FCT. Lastly, the study concludes that the market share of SMEs has been largely impacted by the financial planning of SMEs. The study recommends that the need for SMEs to engage in cash budgeting as a sustainable medium of driving increased growth while also developing a cash control system that builds a sustainable structure would guarantee growth for the business and plan financially and build a system that is enduring and sustaining.

Etim et al. (2022) aimed at examining the influence of cash flow management on financial performance of selected listed companies in Nigeria. Ex-post facto research design was adopted for the study using secondary data of sixty-three (63) selected listed companies in the Nigerian Stock Exchange (NSE) for the period 2013 to 2019. The nature of data was panel data. The dependent variable for financial performance is Return on Asset (ROA), while independent variables was cash flow management decomposed into Operating Cash Flow Margin (OCFM), Operating Cash Flow Ratio (OCFR), Investing Cash Flow Ratio (ICFR), Financing Cash Flow Ratio (FCFR) and Net Cash Flow Ratio (NCFR). The descriptive and inferential statistics were used for data analyses. Results showed that OCFM, OCFR, ICFR and NCFR had positive and significant influence on Financial Performance (ROA) and FCFR had a negative and insignificant influence on financial performance (ROA) of selected listed companies in Nigeria. It was recommended that managers of entities and policy makers, financial consultants and regulatory agencies avail themselves of the core variables of cash flow management used in this study to understand their nexus and to improve in their statutory functions to enhance long-term sustainability of entities.

Kithinji et al. (2022) examined cash management and financial performance of public universities in Kenya. The study was anchored on operating cycle theory, liquidity theory and

Baumol's Cash Management Model. The scope of the study was based on public universities in Kenya for period between years 2016 to 2019. Quantitative research design was used in the study. The study population was 31 accredited public universities in Kenya. Secondary data was collected from the auditor general's office. The study found that cash management affects financial performance of public universities in Kenya. The study revealed that student enrolment moderates the relationship between cash management and financial performance of public universities in Kenya. The study concluded that cash management plays a significant role in financial performance of public universities in Kenya. The study therefore recommended that all public universities embrace prudent cash management in order to have sound financial performance.

Mmaduka et al. (2022) ascertained the effect of cash conversion cycle on capital structure of quoted manufacturing firms in Nigeria from 2008-2020. Specifically, this study determined the effect of inventory turnover period, average collection period and average payment period on debt-to-equity ratio. Panel data were used in this study, which were obtained from the annual reports and accounts of fifteen (15) manufacturing firms for a thirteen year period spanning from 2008-2020. Ex-Post Facto research design was employed. Inferential statistics using Pearson correlation coefficient, Heteroskedasticity test and Panel least square regression analysis were applied to test the hypotheses of the study. The results showed that inventory turnover period, average collection period and average payment period have a significant but negative effect on debt-to-equity ratio at 5% level of significance respectively. The study recommended inter alia that firms should maintain average payable days as low as possible as this can keep suppliers happy and might also allow the firm to take advantage of any trade discounts, thereby reducing the debt ratio and making the company to have more money which is good for working capital and available cash flows.

Amini et al. (2021) examined the impact of cash management practices toward financial performance of small and medium enterprises in Indonesia. The research uses a quantitative approach from 90 SMEs in Java and Bali islands from April until July 2018. The data were analyzed descriptively using a 4-point scale questionnaire. A regression analysis was added to find out significant relationships between the variables. The research found that SMEs owners/managers often do forecasting and rarely do cash mobilization practices. The regression analysis shows a significant relationship between cash management practices and ROA but a non-significant relationship between cash management practices and Gross Profit Margin (GPM).

Wanjuki et al. (2021) investigated the relationship between cash management and financial performance of private hospitals in Nairobi County, Kenya. The study adopted a descriptive design. The target population for this study was 25 private hospitals in Nairobi County. The study collected primary data from the respondents. The data collected was quantitative and was analyzed through Statistical Package for Social Sciences (SPSSV18.0). Both descriptive and inferential analysis were conducted by the study. The findings indicated that cash conversion cycle and cash budgeting had a positive and significant effect on financial performance of private hospitals. However, cash banking and cash flow forecasting didn't significantly improve financial performance. Given that cash management practices were found to enhance the financial performance of private hospitals, this study therefore recommends for continuous embracement of these practices (cash budgeting, cash banking, cash conversion cycle and cash flow forecasting) by private hospitals. It was suggested that to ensure efficient management of

cash, clear guidelines and policies should be developed based on the hospital needs to guide the employees in doing the same. To monitor cash flows, private hospitals should adopt automated cash management technology to aid in maintaining healthy cash flow position.

Methodology

The study adopted ex-post facto research design based on the fact that the study relies on historical accounting data obtained from annual reports and accounts of the selected firms. This design seeks to identify antecedents of a present situation. The targeted population of this study consists of all the listed five (5) agricultural firms in the Nigerian Exchange Group (NGX) and the time frame considered for this study was 2012-2021 for the purpose of secondary data collection. This study use census method since the target population of five (5) Agricultural Firms was such a small sample size that was used as a whole for analysis purposes. This study adopted descriptive statistics, and Multiple Regression method of data analysis. Descriptive statistics was used to ascertain the central tendency of each of the variables of the study. Unit root test were to check the stationarity of the variables.

Empirical Results and Discussion

Analysis of Descriptive Statistics

Descriptive Statistics of Independent and Dependent Measures

	CCE	CTUR	ROA	ROE
Mean	5.484445	51.26406	0.123677	-0.219846
Median	5.511631	12.88488	0.067792	0.129332
Maximum	7.658673	579.1206	2.418379	1.882129
Minimum	1.886491	0.000000	-0.198605	-15.72240
Std. Dev.	1.306915	94.02661	0.413712	2.355282
Skewness	-0.583038	3.897243	3.961363	-6.124693
Kurtosis	2.849567	21.27620	20.98648	40.81598
Jarque-Bera Probability	2.879924 0.236937	822.4445 0.056432	804.7561 0.655406	3160.192 0.307665
Sum	274.2222	2563.203	6.183829	-10.55261
Sum Sq. Dev.	83.69335	433209.2	8.386719	260.7256
Observations	50	50	50	50

Source: E-View Output 2023

The table presents the descriptive outcomes of the variables that were put to use in this study. According to the presented data, the typical value of Cash Turnover (CTUR) is 5.484, the typical value of Cash Turnover (CTUR) is 51.264, the typical value of Return on Assets (ROA) is 0.123 and the typical value of Return on Equity (ROE) is -0.219. The investigation led to the discovery that the median value for CCE is 5.511, the median value for CTUR is 12.884, the median value for ROA is 0.067 and the median value for ROE is 0.129. On the other hand, the skewness statistics indicate that variables such as CTUR and ROA are positively skewed, with respective values of 3.897 and 3.961 while CCE and ROE are negatively skewed, with

respective values of -0.583 and -6.124. According to the information provided by kurtosis, CRUR, ROA and ROE has a platykurtic value, which means that it is less than 3, but CCE have leptokurtic values, which suggest that they are higher than 3. Also, for Jarque-Bera statistics, the P-values for the three study dimensions and two measures (JB (P—Value > 0.05) = Accept Ho (Normal Distribution) and JB (P Value 0.05) = Reject Ho (Non-Normal Distribution)]. As a result, the statistical probability for Jarque-philanthropic Beta's for Cash and Cash Equivalent (CCE), Cash Turnover (CTUR), Return on Assets (ROA) and Return on Equity (ROE) is 0.236, 0.056, 0.655 and 0.307 respectively. The finding improves the normality test of normally distributed variable.

Multicollinearity Test of Data

Multicollinearity refers to high correlation between the independent variables. Multicollinearity is explained as a condition whereby two or more variables in a model are related or affected by one another. This affects the ability of the model to accurately explain the relationship between the predictive variables and expected outcomes (Krishna, 1975). The tolerance value and its reciprocal, Variance Inflation Factor (VIF) will be adopted to estimate the degree of multicollinearity in the specified model **given** that this study is based on regression analysis. This test was based on variance inflation factor and tolerance values. Variance inflation factor <10 and tolerance>0.1 implies that the variables are not highly correlated.

Multicollinearity Test of ROA

Variance Inflation Factors

Date: 07/27/23 Time: 11:07

Sample: 1 50

Included observations: 50

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CCE	0.002385	24.51598	1.292365
CTUR	4.39E-07	1.602852	1.229824
C	0.080148	25.94413	NA

Source: E-View Output 2023

Multicollinearity Test of ROE

Variance Inflation Factors

Date: 07/27/23 Time: 11:11

Sample: 1 50

Included observations: 50

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CTUR	1.49E-05	1.602852	1.229824
CCE	0.081130	24.51598	1.292365
C	2.726193	25.94413	NA

Source: E-View Output 2023

From Tables above, it was discovered that there was no multi-collinearity in each of the independent variables as the tolerance for each was greater than 1 benchmark and the VIF was not greater than ten (10) as well. This indicated that the relationship between one independent variable and the other in the linear regression model was insignificant.

Regression Analysis

The two hypotheses show the effect of cash and cash equivalent (CCE), cash turnover (CTUR) on return on assets (ROA).

$$ROA_{it} = \alpha_0 + \alpha_1 CCE_{it} + \alpha_2 CTUR_{it} + e_{it} \quad \text{Equity1}$$

Dependent Variable: ROA

Method: Least Squares

Date: 07/27/23 Time: 11:13

Sample: 1 50

Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCE	0.127082	0.048838	2.602113	0.0124
CTUR	0.000169	0.000662	0.255223	0.7997
C	-0.505437	0.283104	-1.785336	0.0808

R-squared	0.652792	Mean dependent var	5.123676
Adjusted R-squared	0.597539	S.D. dependent var	14.413711
S.E. of regression	0.393018	Akaike info criterion	-7.046694
Sum squared resid	7.105297	Schwarz criterion	-7.199656
Log likelihood	-22.16736	Hannan-Quinn criter.	-7.104943
F-statistic	2.765328	Durbin-Watson stat	1.723082
Prob(F-statistic)	0.000443		

Source: E-View Output 2023

Interpretation of Hypotheses

Statement of Hypothesis One:

H₀₁: There is no significant effect of cash and cash equivalent on return on assets of listed agricultural firms in Nigeria

Decision Rule: Accept H₀ if P > 0.05. Otherwise reject

Table above shows that there is a positive and significant effect of cash and cash equivalent on return on assets (0.127; 0.012 < 0.05). This implies that a 1% increase in cash and cash equivalent will bring about a 0.12 % increase in return on assets. This led to the rejecting the null hypothesis and accepting the alternative that said that there is a significant effect of cash and cash equivalent on return on assets of listed agricultural firms in Nigeria.

Statement of Hypothesis Two:

H₀₂: There is no significant effect of cash turnover on return on assets of listed agricultural firms in Nigeria.

Decision Rule: Accept H₀ if P > 0.05. Otherwise reject

Table above shows that there is a positive and insignificant effect of cash turnover on return on assets (0.000; 0.799 > 0.05). This implies that a 1% increase in cash turnover will bring about a 0% increase in return on assets. This led to the acceptance of (H₀₂) that there is no significant effect of cash turnover on return on assets of listed agricultural firms in Nigeria.

The two hypotheses in model two; shows the effect of cash and cash equivalent (CCE), cash turnover (CTUR) on return on equity (ROE).

$$ROE_{it} = \alpha_0 + \alpha_1 CCE_{it} + \alpha_2 CTUR_{it} + e_{it} \quad \text{Equity 2}$$

Dependent Variable: ROE
 Method: Least Squares
 Date: 07/27/23 Time: 11:24
 Sample: 1 50
 Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCE	0.525129	0.284833	1.843636	0.0717
CTUR	0.001544	0.003862	0.399857	0.6911
C	-2.950826	1.651119	-1.787168	0.0805

R-squared	0.573368	Mean dependent var	-3.211052 ²
Adjusted R-squared	0.412936	S.D. dependent var	12.307125
S.E. of regression	2.292154	Akaike info criterion	4.573479
Sum squared resid	241.6826	Schwarz criterion	4.726441
Log likelihood	-110.3370	Hannan-Quinn criter.	4.631728
F-statistic	3.214054	Durbin-Watson stat	1.519370
Prob(F-statistic)	0.000069		

Source: E-View Output 2023

The results revealed a correlation coefficient of ($R^2 = 0.525$, Adjusted $R^2 = 0.412$, Std. Error of estimate = 2.292, DW=1.519) which had demonstrated that a strong relationship exist between independent variable {(cash and cash equivalent (CCE), cash turnover (CTUR))} and dependent variable {(Return on Equity (ROE))}. This therefore implies that there was a variation of 41.2% between the independent and dependent variables. Thus, it means that cash and cash equivalent (CCE), cash turnover (CTUR) on return on equity (ROE) explained 41.2% of the financial performance of listed agricultural firms in Nigeria. The remaining variation is the error term and is attributed to other factors not included in the model. The remaining value for return on equity (ROE) is high since the unexplained variation is above 58.8%. The Durbin-Watson statistic test discovered that there is a positive evidence of autocorrelation in the time series data set. Also, The F statistics value was 3.214 with a P value of 0.000 which was less than 0.05. This indicates that cash and cash equivalent (CCE), cash turnover (CTUR) and return on equity (ROE) were statistically significant in explaining variations in the model.

Interpretation of Hypotheses

Statement of Hypothesis One:

H₀₄: There is no significant effect of cash and cash equivalent on return on equity of listed agricultural firms in Nigeria

Decision Rule: Accept H₀ if $P > 0.05$. Otherwise reject

The table above shows that there is a positive and insignificant effect of cash and cash equivalent on return on equity (0.525; 0.071 > 0.05). This implies that a 1% increase in cash and cash equivalent will bring about a 52 % increase in return on equity. This led to the acceptance

of (Ho4) that there is no significant effect of cash and cash equivalent on return on equity of listed agricultural firms in Nigeria.

Statement of Hypothesis

H₀₅: There is no significant effect of cash turnover on return on equity of listed agricultural firms in Nigeria.

Decision Rule: Accept H₀ if $P > 0.05$. Otherwise reject

Table 6 above shows that there is a positive and insignificant effect of cash turnover on return on equity (0.001; 0.691 > 0.05). This implies that a 1% increase in cash turnover will bring about a 0.1% increase in return on equity. This led to the acceptance of (Ho5) that there is no significant effect of cash turnover on return on equity of listed agricultural firms in Nigeria.

Discussion of Findings

Cash and Cash Equivalent and Financial Performance

Results from the regression coefficient revealed that, cash and cash equivalent of cash management has a significant effect on return on assets but insignificant on return on equity of financial performance as indicated, with P-values of 0.012 and 0.799. The finding of this study agreed and disagreed with the following prior studies, Major and Azali (2022) study found that, there is a positive and significant relationship between cash and banks balances and return on equity. Danson et al (2017) results obtained indicated that cash holding practices and use of technology in cash management had a relevant effect on financial performance of SMEs in Nyeri. Abdirahman and Aaron (2016) findings showed that, there was statistically positive relationship between cash control and cash planning on financial performance of small Media Enterprise in Mogadishu. Wanjuki et al. (2021) findings indicated that cash banking and cash flow forecasting didn't significantly improve financial performance. Odo and Udodi (2022) study revealed a significant negative effect of cash management on returns on assets and Tobin's Q. Returns on equity was negative and non-significant. Liman and Mohammed (2018) result revealed a positive insignificant relationship between operating cash flow and corporate financial performance for the period under review.

Cash Turnover and Financial Performance

Results from the regression coefficient revealed that, cash turnover of cash management has an insignificant effect on return on assets and return on equity of financial performance as indicated, with P-values of 0.136 and 0.071. The finding of this study agreed and disagreed with the following prior studies, Major and Azali (2022) study found that, there is a positive and significant relationship between cash turnover and return on equity. Mwaura and Ngahu (2022) results of linear regression analysis revealed that depicting the relationship between operating cash flow management and financial performance was significant. Musah and Kong (2019) result from the analysis suggested that cash flows positively and significantly affects return on assets (ROA). Kinyanjui et al. (2017) findings of the study revealed that cash holding practices and use of technology in cash management had a relevant effect on financial performance of SMEs in Nyeri.

Chibuike and Celestine (2022) study revealed a positive and insignificant effect of operating activities on liquidity. Also, it revealed a positive and insignificant effect of investing activities on liquidity. Asamu et al. (2019) study found that cash ratio has no significant positive effect on profitability of listed manufacturing companies. Peter et al. (2020) results show that operating cash to total asset of bank, investing cash to total asset and bank size have no

significant effect on financial performance of DMBs. Odo and Udodi (2022) study revealed a significant negative effect of cash management on returns on assets and Tobin's Q. Returns on equity was negative and non-significant. Nangih et al. (2020) results obtained established that cash flows from operating and investing cash flows had negative and insignificant relationship with profitability.

Conclusion

From the forgoing analysis, it is evident that cash management has insignificant effect on financial performance as indicated in the empirical results.

Recommendations

The following recommendations are provided for the study:

1. Given that cash and cash equivalent were found to enhance return on assets as a measure of financial performance of agricultural firms, this study therefore recommends for continuous embracement of these cash and cash equivalent by agricultural firms in Nigeria.
2. It is to be recommended that agricultural firms must reconsider their practices of managing cash turnover in order to generate more profitability and generate enough cash to meet their obligations.
3. The study recommends that in order to ensure better cash management in a firms should shorter their cash conversion cycle because this study finding indicates that long cash conversion period lead to insignificant effect on financial performance in the agricultural sector in Nigeria.
4. To ensure efficient management of cash, clear guidelines and policies should be developed based on the agricultural firms needs to guide the employees in doing the same.

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