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Cash Flow Optimisation Strategies and Performance of Deposit Money Banks

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Abstract. Banks encounter varying challenges in terms of competition which have effect on their competitive ability in meeting customer demands. The need to settle every obligation promptly necessitated the examination of Deposit Money Banks' cash-flow optimisation strategies and performance. Ex Poste research design and content analysis of 8 quoted Deposit Money Banks that published their financial statements between 2010 and 2018 were used. Panel regression on STATA analytical tool revealed that aggregate bank performance (ABP) indicated by ROE, ROA, Capital Adequacy, EPS and dividend. 1per cent increase in customer deposits will yield 57.9per cent increase in the performance of sampled banks while 1per cent increase in loans will yield significant decrease in bank performance. Overall R-square of the model showed that 36.2per cent variations in bank performance can be attributed to cash-flow optimisation variable. This affirms the importance of strategising cash-flow optimisation.

Keywords: Optimisation, Panel Regression, Performance, Quoted Banks, Strategy

1. Introduction

The role of banks and finance industries in enhancing economic development cannot be overstated. This includes the functional role of mobilising idle funds to areas of more relevance in the organisation. Banks have faced daunting problems which challenge their competitive ability thereby affecting continued operational capacity.

One of the approaches to cash management is the cash conversion cycle, it is a common connection between the elements of working capital and the actual flow of cash for business or daily bank operations; similarly it can be described as the period that captures the outlay of cash and the inflow of cash from bank`s simple and extra-ordinary operations. According to Lambrix and Singhvi, 1979, applying the 'working capital management and the working capital cycle informs the importance of optimising the cash flows which is often achieved by reducing the time lapse between the onset of cash conversion cycle. The essence is to ensure that capital adequacy is achieved in order to meet various obligations such as satisfying the expectations of stakeholders through wealth maximisation, dividend payment and enhancing market share. Optimisation implies making the best or most effective use of cash resources in order to enhance attainment of bank's objectives.

The need for proper cash management by firms and business organisations is predicated on holding cash in order to meet the demand for in and outflow of cash (transactions), holding cash to preempt emergencies (precautionary) and holding cash in order to take advantage of possible investment opportunities (speculative). Akinsulire (2014) posited two methods of efficiently managing cash, through cash planning and cash budgeting. This is expected to

include ensuring that the organisation's financial resources are safeguarded effectively through early settlement of customers' obligations and avoiding holding idle cash. Cash holding has influence on the performance of firms; Aiyegbusi and Akinlo (2016) opined that effective cash management if missing, has implication for the business' investment as it directly affects the level of profitability. Adagye (2015) found that two proxies of profitability are positively affected by working capital variables, these are return on asset (ROA), and return on equity (ROE). On the other hand, Bhunia, Khan and Mukhtar (2012) suggested that the relationship between liquidity and profitability of a firm equally influence the rate of continuity of working capital availability.

Cash optimisation refers to the provision of optimal amounts of cash for ATM's and branches whereas cash management refers to the handling, collection and usage of cash. For banks, it involves the use of financial instruments such as treasury bills, money market funds and certificates. The foregoing implies that cash optimisation concerns planning and providing for cash availability in adequate quantity that will meet the daily, monthly and annual needs of the bank.

The benefits arising from effective cash planning and management in these wise are diverse. Banks and financial institutions fill gaps in terms of public financial needs by enabling customer cash and cheque deposits, which translate to bank asset and liabilities. Since customer deposits are held in trust by the banks; ensuring that the payment needs of customers are not endangered, delayed or deterred is crucial to the need for cash optimisation strategies. Often, the policies of the bank derive from the stipulations of the Central bank as the apex bank of the nation and they influence the working capital decisions of banks. Alexander (2018) averred that cash optimisation lower cash-in-vault by 10%, improve security for employee and customers, while the need for armored car fund pick-up fees is reduced, equally, operational efficiency and accuracy of detailed information is enhanced. To optimise cash following Deloite (2018), implies embracing financial and cash flow discipline in both good and more difficult economic times.

Extant literature found that among the indicators of bank performance are capital adequacy, liquidity, profitability and quality of management (Brendan & Raymond, (2010); Pittsburg, (2017); McCaw, (2018); Alexander, (2018); Anye, (2018). Liabilities arising as a result of bank deposits constitute the life-wire of the banks even though management is concerned with risks that may arise on asset yield (Nnamdi, 2007). The extent of inherent risk to this position is the uncertainty that exists in investment decisions and possible loss or depreciation in value if cash remains un-invested. It therefore becomes essential that cash available to business be optimised to overcome the inherent uncertainties.

Optimisation implies engaging in cash planning that includes short term funds, loans, overdrafts, deferred income and accrued expenses. While this position is good, a market which has turned to be highly competitive coupled with high customer expectations need to be approached more proactively. To optimise and achieve expected result, demands application of appropriate strategies. In banking, strategies that focus on cash flow optimisation could be attained with diversifying customer base, debtor cum creditor base and operational base efficiency. Taylor (2018), suggested application of value chain Model to improve flow of materials, information and finances in firms. However, applying the value chain to improve the customer base is of great significance to cash flow optimisation. Value chain strategy aims at service delivery that meets customer interest and needs. Every customer desires product delivery that showcase quality and grant customer satisfaction without bottlenecks, delays and unnecessary complaints. Extant literature (McCaw 2018, Pittsburgh 2017, Jajale, 2017) emphasised that this position influence high turnover which ultimately improve cash flows. Aleksev (2015), posited that attainment of strategic objectives is identified with setting targets (employee/employer), mapping out how the objectives will be attained and stating clearly critical milestones through the map.

Equally, in an environment where interest rate fluctuates, a strong cash position originating from cash optimisation improves liquidity, enables investing in other opportunities, secures financing and reduces the need for incurring high interest rate (FNB 2017). Current operating cash policies as rolled out by the Central Bank include maintenance of the application of a monetary policy rate of 14per cent (July 2016) 13.5per cent (March, 2019), liquidity ratio of 30per cent, cash reserve ratio of 22.5per cent, this decision continues to be operated under the Medium Term Framework due to the influence of monetary policy. Current developments in the domestic and global economies according to CBN 2018, enhance the application of the guidelines by individual banks.

The daily and regular activities and customer demand include withdrawal of large sums through cheque payments, inter-bank customer settlements of financial instruments, Automated Teller Machines (ATM) services, and banks therefore need to preempt liquidity risks through monitoring and control of liquidity level in order to continuously free banks from stress.

Liquidity challenges have significant effect on profitability ratios, solvency and financial performance (Lukorito, Muturi, Nyang'au & Nyamasege (2014). For example, large withdrawals by politicians for electioneering campaign as observed by Onal (2015), is responsible for the cash squeeze of most banks recently in Nigeria. This is further affirmed from the position of Brown (2014) that customer deposit withdrawals impact banks' working capital. Adequate liquidity level is equally needed for payment of dividend as its regular payment has implication on share value (Mbah, Ekechukwu & Ugwu, 2019). Anye (2018) in a research on 'managing liquidity' suggested that lack of prudency in managing investment bank's liquidity resulted into liquidity difficulties in spite of adequate capital levels maintained by the banks. This agrees with Reval, (2017) and Nixdorf, (2017) that emphasized the need for adequate capitalisation and its proper management. The crux of cash optimisation therefore is applying appropriate adequate capitalisation strategies and effective cash management in order to achieve organisation objectives.

The main objective of the study therefore is to examine cash flow optimization and performance of banks (Quoted Deposit Money Banks).

1.1 Statement of Problem

Organisations such as banks need to maintain adequate liquidity level in order to have ready cash to meet daily obligations to depositors. Notwithstanding, customers encountered problems in withdrawing out of their account deposits as a result of the failure of the Automated Teller Machine (ATM), while at times, the ATM declines transactions because there was no cash in the till and sometimes the service provider may not be available. Challenges of security for customers' deposits are equally common with hackers obtaining customer details fraudulently and withdrawing most or all savings in customer's account. Depositors are usually discouraged with failure in banking services. This is because, customer deposits are easy to drop without any hitch, whereas to withdraw out of such deposit is usually with challenges. Equally, the introduction of spurious bank charges or multiple charges as recently being experienced include charges on bank transfer, current account maintenance charges, charge on specified bank deposits and withdrawals in excess of threshold, 3per cent as processing charge and 2per cent for cash deposits in excess of N500,000 (CBN, 2019). These have the tendency of discouraging depositors and customer loyalty.

Liquidity is useful for inventory purchase, payment of salaries, daily operating expenses, settling depositors' demands, enhancing bank value and many others, inadequacy of cash to meet these needs usually jeopardise customer loyalty. However, there is a need for Financial Institutions (FIs), to embrace cash management strategies towards usage-driven levels in line with policies on working capital. It thus becomes imperative that banks pursue appropriate cash flow management techniques in

order to forestall the possible challenges of low cash holding or cash outage which could portend grave implications for the organisation such as low customer patronage or bankruptcy. Besides, incessant cash withdrawals trailed the operations of banks and statistics inferred global challenges as transportation costs 74 per cent, ATM out of cash 63 per cent, reporting and reconciliation 58per cent, fluctuating customer demands 54per cent and manual processes 54per cent. This sheds light on the challenges of attaining the objective of cashless operations. Managing cash operations to improve efficiency in these areas remain a challenge. The incidence of customers in waiting line, non-transparency of processes, forecasting inward cash flows require proactive solution. Failure to meet stakeholder, investors and customers' obligations, managing deposits and loan benefits affect the value of the business, these are unavoidable benefits from deposit money banks which emanate directly from an effective cash optimisation. The broad objective of the study therefore, is to examine the effect of cash flow optimisation strategies on the performance of banks.

The main hypothesis of the study is cash optimisation strategies have no effect on performance of money deposit banks.

The study will examine the effect of cash optimisation on ROE, ROA, EPS, capital adequacy and Dividend per share of money deposit banks in Nigeria

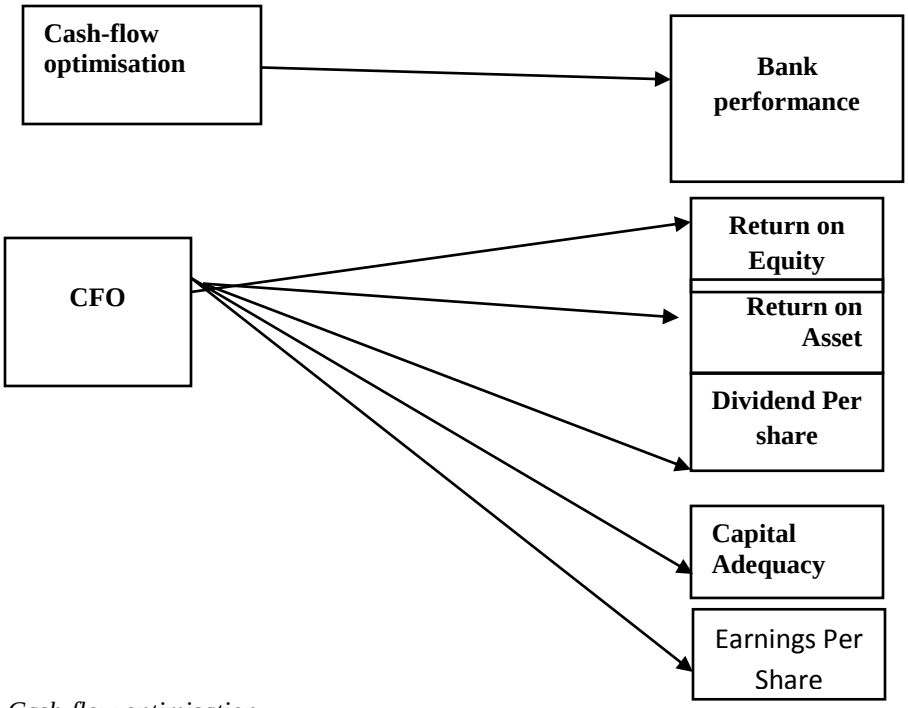
1.2 Operationalisation of Variables

Y= Dependent Variable = Performance
X = Independent Variable
Y = f(X)
Where:
Y = bank performance
$X = f(x_1, x_2, x_{3, x4, x5})$
x_1 = return on equity (ROE)
X_2 = return on asset (ROA)
X_3 = dividend per share (DPS)
X_4 == capital adequacy (CAQ)
x_5 == Earnings per share (EPS)
1.2.1Model of the Study
Cash optimisation model (researcher's model) 2018

Model Representation
CASOP = BP (ROE+ ROA+ DPS + CAQ + EPS = Bank Performance (BP)

$CASOP = a+\beta_1 LiQ + e$…… 1
$ROE = a+\beta_1 LiQ + e$…… 2
$ROA = a+\beta_1 Debt + e$…… 3
$REV = a+\beta_1 DTO + e$…… 4
$BP = a+\beta_1 ROE + \beta_2 ROA + \beta_3 DPS+ \beta_4 CAQ+ \beta_5 EPS + e$

Figure 1



CFO = Cash-flow optimisation
Researcher's Model, 2020

2. Literature Review

2.1 Conceptual Clarifications

2.1.1 Liquidity

The value attached to optimal liquidity in banks are affirmed with different assertions as highlighted in the following discus. Liquidity implies the capacity of the bank to convert its current assets into immediate cash, also it could imply buying or selling a security without affecting its price (Song'e 2015). Bank liquidity enable the ability to meet cash demands of customers, settling current debts on demand as well as other obligations that may exist. A low liquidity may signal financial difficulty while high liquidity ratio implies that fund resources are not being adequately invested. Thus, there needs to be a balance in the liquidity management of the business. Overcoming liquidity challenges thus requires proper management as well as paying attention to liquidity risks. According to Mccaw (2018) liquidity management is 'the cornerstone of every treasury and finance department; equally it is significant for ensuring that cash is available for short-term investments, settling cash for goods and services or meeting short-term debts. Reval (2018), equally suggested a need to forecast cash in order to manage and optimise cash-flow and improve decision making. This involves closely monitoring procurement and inventory, settling suppliers, improving flow of cash between the short-term assets and liabilities (Reval 2017). Proper management of cash is poised to enhance stability, growth and efficiency of the business. It can therefore be briefly summarised that the attempts of banks and organisations to forecast and manage their working capital will undoubtedly reduce risks of cash loss and enhance the liquidity position of the business. From the perspective of capital market participants, Acharya 2016) opined that 'liquidity is considered significant for transaction costs, bid-ask spreads, price impacts and trade securities' market depths'; liquidity thus, could be lost where the credit rating and loanable funds fall.

2.1.2. Cash Optimisation

This involves designing and operating a cash management process to ensure it meets the expectation of the bank and it is achieved by maximising relevant factors such as efficiency, utilisation and outcome, in the process of cash management. Optimisation in this study implies finding the best solution from all possible options that are required to effect proper cash management. Thus, this study examines a model in maximising cash in order to forestall the challenges of low or none liquidity in banks. Banks can enhance profitability through efficient management of cash and currency value chain (Fiserv.com). Embracing a workable strategy is thus advocated for attaining optimum performance by banks. Mclinne (2000) in a study in New Zealand, suggested that the working capital concept is not sufficiently recognised, hence there are deficiencies in the management of working capital. He therefore suggested that cash management should focus on the levels, composition, structure, and performance of working capital as well as introducing financial data for this purpose.

Differentiating between cash optimisation and cash management, Kyriba (2013) opined that cash optimisation involves effective treasury management which includes management of risks, establishing cash certainty and working capital management. Cash management rather implies managing cash flow in terms of cash collection, disbursement and strength (Bee, 2005 and Coutlier, 2009).

2.1. 2.1. Strategies to Achieve Optimisation Objective

Extant literature identified various ways of approaching cash optimization, these include directing cash management policies to encompass budgeting, forecasting and financing, handling daily collections, purchase orders and payment thereof (Adam, Lee, Thibault and Stewien, 2018) The application of predictable cash flows in line with long-range decisions, assessing and measuring accuracy and effectiveness of ongoing cash-handling process, examining cash forecast tools, gathering relevant data from business units, reviewing contingency plans and evaluating technology platforms' are added means of achieving optimisation goal (Reval, 2014). In order to increase efficiency and free-up funds that could be applied to better investments Pittsburgh, (2017) suggested that favorable circumstances around cash flow should be evaluated.

Cash optimisation therefore is identified as effective management of inventory and eliminating stock holding cost, through this, cash is made available for investment in more profit generation for product or service organisations. Secondly, in case of banks, customer base require diversification and this will be achieved through improved customer service. Proper management of the account receivable can be achieved when trade debtors are committed to payment timeline (Al-Tamimi, 2010), charges on late payments are reviewed, and the business with good procurement package that improves account payable are turned around to the advantage of the bank. Key Performance Indicators (KPI) when reviewed regularly, lead to monitoring daily records of sales, purchases and inventory (Fuse Financial Partners, 2015)

Diverse strategies such as optimising cash flow include diversifying the customer base, reporting the cash flow as a means of encouraging transparency, encouraging customer deposits, selling or leasing equipment, sometimes settlement of expenses can be delayed, ordering new stock of materials could be delayed to fully consume store items while payment of interest periods could be varied. The use of technology was advised for cash flow optimisation, effective management of accounts receivable and proper inventory management constitute optimisation techniques that enhance growth, profitability and value adding to the organisation (Deloitte 2018, Anye 2018).

Cash optimisation processes are in-exhaustible; diverse other processes include improving working capital through enhanced customer service and applying marketing strategies that involves the use of new distribution and sales channels.

Equally, embracing competitive financing, minimising risk exposure among others, attract cost reduction while there is also a need to optimise returns through debt reconversion and inventory management. From the foregoing, it is noteworthy that an effective and efficient performance by the bank through cash optimization is not achieved through a solo process, but a combination of proactive processes that removes various risks around cash-flow. Stakeholders have various expectations of the bank, this is enhanced when cash is adequate to meet investment decisions, grow shareholders' wealth, earnings per share and distribute dividends.

2.1.2.2. The Role of the Central Bank (CBN)

Legal backing for the apex banks' monetary policy derive from the Section 12 Sub-sections (1) to (5), CBN Act of 2007, as financial and provisional guidelines are equally provided for the operations of deposit money banks through the Central Bank,. Re-prints of new notes to replace old notes that are withdrawn from circulation enhanced currency stock holdings of the commercial banks. Likewise, the introduction of N100, N500 and N1,000 notes between December 1999 and 2005 was to enhance economic expansion and create efficient payment system by the banks thus, influencing the efficient cash management process in the banks. These acts agree with the position of Acharya (2006) who argued that banks' concerns should focus market and liquidity risks noting its effect on the capital market. Risks include the processes and strategies that banks use to determine cash flow needs during normal and cash-squeezed periods without negatively impacting the overall financial position of the bank. Banks could also be subjected to liquidity risks if the markets on which it depends encounter liquidity losses. These scenarios inadvertently affect the performance of the banks. Differentiating cash optimisation from cash management, is poised to enhance bank performance in the current dispensations when businesses are down due to the fallout of lockdown as a result of corvid-19.

2.1.2.3. Challenges of Cash Optimisation

Various challenges with respect to cash optimisation are identified and they include: inaccuracy in cash forecasts, wastefulness, bad timing and deprivations. True cash cycle management is suggested to require holistic, end-to-end approach in banking operations, (Carrioni, Goltz, Okroy and Stoeckle, 2017). This captures the movement of cash throughout the operations of the organisation, optimising costs, automating the processes, improving consumer experience and enhancing security. Nixdorf (2017), amplifies this by suggesting that cash management is a holistic end-to-end approach since it captures cash movement throughout all the operations of the organisation. Vossen (2010) suggested that banks should create and optimise liquidity in order to give hope to companies especially when other forms of financing become difficult. Managing liquidity risk is to ensure the banks own liquidity so that the bank can continue to serve its function.

Other challenges include increasing volume of cash withdrawals, transportation and cash handling costs and the demand for improving efficiency, transparency and accuracy of processes as well as increasing customer deposits. These could create threats to bank processes hence should be preempted.

2.1.2.4. Benefits of Cash Optimisation

Bank interest rate before 2017 revolved around 21 per cent. However, owing to economic demands and stakeholders in the business sector, interest rate has been pegged to 14 per cent. Thus, in an era where interest rate fluctuates, a strong cash position will lead to a drop-in interest rate. Equally, liquidity will be enhanced to create better opportunities for investment. Pittsburgh (2017) suggested that higher cash balances stand to reduce the need to borrow, while covering the increasing complex costs of the organisation. Adam, Lee, Thibault and Brian (2018) posited that cash optimisation influence prudent investment decisions, cost reduction, enhance financial stability, impute cash discipline and produce performance in terms of profitability and competitiveness. Cash optimisation is essential if profit performance is to be achieved, it constitutes a major desire for

stakeholders wherein wealth maximisation is regarded as a necessity (Shehu and Farouk, 2014). Reval (2014) equally added that cash optimisation will reduce the risk of operational inefficiency where proven cash processes, open line-reporting and forecasting control measures are embraced, thus the need for investing every idle cash and equally ensuring that depositors' demands are met as at when due.

2.1.3. Working Capital / Liquidity

The need for organisations to possess a high working capital strategy in order to remain competitive is linked to being financially disciplined in order to take advantage of certain cash benefits such as fund growth, shareholder returns and cost reduction (Deloitte 2018). Liquidity is influenced by the extent to which the working capital is managed to generate cash. The current asset comprises the stock of goods, bank and cash balances, retained earnings, receivables and debtor balances. It is presumed that none of these items should be allowed to remain high as this would imply capital lock-up. Liquidity is influenced by the extent to which the working capital is managed to generate resources such as cash. The current asset through a good working capital management comprises of stock, bank, receivables, debtors and cash balances. It is expected that none of these items should be allowed to remain high as this would imply capital tie-down. Working capital is interest free, serves as a significant revenue source for a firm (Morgan, 2015). Optimisation of working capital enhances income generation, influence beneficial management of inventory, improves the payables and receivables to increase liquidity, and overall, generates adequate working capital which influences investment decision making.

Liquidity shortages in bank operations negatively affect customer patronage, loyalty and the rate of cash deposits. Working capital management involves the tending both current assets and current liabilities, such that overcapitalisation and undercapitalisation are avoided in order not to jeopardise the continuous operation of the business. (Van Horne 1980). As captured by Pandey (2007), the working capital policy of the bank is significantly influenced by the bank's growth and working capital demands. Optimising working capital enhance hitch free operations in which bills are settled promptly, liabilities and short term obligations are kept at minimum and company's value is enhanced through prompt collection of receivables and investing in the growth of the bank (Akinsulire, 2011; Dije and Shehu, 2015)

According to Abba, Okwa, Soje and Aikpitanyi (2018), capital adequacy ratio enhances the mopping up of losses as a result of the ability to determine the soundness and safety of the cash flow related operations. It further throws light on capital adequacy's importance when assessing the operational efficiency of the banks.

2.1.4. Banks' Regulatory System and Internal Control

The era of bank distress historically revealed regular close down of banks in spite of their period of start-up; between 1951 and 1952, seventeen new banks were established whereas only one of the banks lived beyond two years (Sanda, 2005). The regulatory framework followed the banking ordinance of 1952 and 1958, Central Bank Act of 1958, and the eventual establishment of the Central Bank in 1959. This has also gone through developmental changes that featured amendments to the Act 1968, Banking Decree of 1969, No. 24 of 1991 and the Banks and Other Financial Institutions Decree 25 (BOFID, 1991). These efforts were meant to provide a comprehensive regulatory framework for regulating the operations of banks in Nigeria. Notwithstanding, there were various reports of subsequent bank failures. This reveals the serious importance of creating a reliable internal control system that will curb wrongful practices that impacts the liquidity position of the banks and jeopardise the banking system. Following these, the CBN was mandated to:

Maintain reserves through sound management and investment to ensure security, liquidity and good return on investment, promote monetary and financial stability, regulate the operations of all banks operating in Nigeria such that reserves and vault operations are safe guarded and provide directions for instituting internal

control in the banking system. Monetary Policy ratio, Capital Reserve Ratio and Liquidity ratio as approved by CBN for financial institutions are 14 per cent, 22.5 per cent and 30.5 per cent respectively.

Internal control is considered efficient for working capital management. It enhances an evaluation of the extent of correlation, relationship between established criteria and actual results as well as creating checks and balances for the movement, recording and reporting of cash. Internal control however is not without its challenges— poor stability, backward economic development and failure to apprehend erring officers. Internal control is identified as useful for preempting errors and intentional fraudulent acts and negligence; it is thus earmarked as a driver of sources and quality performance in banks and firms' working capital operations (Schneider 2008). It is therefore required to be a process that must be sustained though, it is not an end in itself (Chekwuani et al, 2016). The attainment of long-term profitability by banks is linked to 'a reliable and standardised' managerial reporting system which is influenced by compliance with banking rules policies and subsisting laws. This, to a greater extent impact possible risks to cash management.

Ayagre and Ishmael (2014), emphasised the importance of a "strong control framework to carefully monitor daily operations. Based on the outcome of their study, control environment and close monitoring were highly rated by respondents with average means of 4.72 and 4.66 from an examination of the internal control framework practiced by banks''. Internal control system is a key function and it involves detailed mechanisms that examine the procedures of executing all activities to achieve efficiency and effectiveness in the operations. Another study that evaluated the control environment of Ghanaian banks, found that strong internal control exists, however the study still recommended that the "board should not remain apathetic to whatever problems the banks encounter'' (Ayagre, 2014).

Cash Optimisation and Return on Equity (ROE), Earnings Per Share and Dividend.

Return on equity is the measure of net income divided by total shareholders' equity expressed in percentage; this is an indication of the bank's ability to turn its equity investments into profits. When the value of ROE increases overtime and on a sustainable basis, it points to the ability of the bank to generate value for shareholders which is an indication of management's good performance. The converse will imply poor performance by management. The performance of the bank equally impacts the growth in earnings per share as a fall out from high profitability, the same applies to creating opportunities for expansion and satisfying the dividend expectations of shareholders.

2.2. Theoretical Discus

Working capital is the life blood of a business as it is the source of funding the day-to-day operations of the firm thus requires optimum attention. Working capital optimisation includes monitoring all factors that influence the cash operating cycle. This agrees with the theory of working capital management which according to MClnnes (2000), contends that if ''working capital is managed according to prescriptive theory then businesses would be able to invest in working capital, finance working capital, monitor factors that influence working capital, manage cash, accounts receivable and inventory accounts''. Through a strategic management of the working capital, Sanjay (2009) noted that liquidity, solvency/bankruptcy, efficiency, profitability and shareholder- wealth-maximisation of the business are impacted.

2.2.1.Commercial Loan Theory

The theory was developed by Adam Smith in the 18th Century, a pertinent position of the theory states that ''a commercial bank should forward only short-term self-liquidating productive loans to business organisations''. Banks' lending decisions are premised on the level of liquidity arising from substantial profits earned from off-balance sheet activities. Loan opportunities equally endear customers to the bank. According to Ahtiala (2005), extending loans to good customers enhance optimality, customer value increases, while provision of liquidity and

services improve bank–customer relationship. This was in anticipation of Central Bank action on lending, the expectation was that with self-liquidating loans and possession of liquidity, loans will not turn out bad, it will earn income for the bank and it will be applied to production process. Notwithstanding these benefits, a situation where loan is not honored due to an outstanding loan may result into loss of production and reduction in customer loyalty. The theory assumes that loans are self-liquidating, however where there is adverse economic effect such as depression, there is possibility that such loans may not be redeemed.

2.2.2. Theories of Demand for Money: Tobin's Portfolio and Baumol's Inventory Approaches

This theory is an off-shoot of Keyne's Theory of Demand for Money which suggested that ''people hold their assets in either all-money or all-bond, thus pointing to its insensitivity to interest rate'' (Dwivedi, 2005). The position was challenged, hence Tobin and Baumoi's Portfolio theory which averred that money held for transaction purposes is interest bearing. Tobin extended this position into the liquidity preference function pointing to people's preference for holding wealth in money form which is assumed a riskless asset. This fact further emphasises the need for bank managers to intensify effort towards cash maximisation in order to satisfy customers' demand for money and providing needed security for it.

2.2.3. Capital Adequacy Theory: Calem and Robb (1996)

Calem and Robb (1966), explained the theory as a measure of a bank's capital expressed as a percentage of the bank's credit risk exposures. It helps to ensure that the bank can absorb a reasonable amount of loss and complies with statutory requirements. The capital adequacy ratio is important given its ability to measure the financial soundness of a bank, it protects the firms themselves, the interests of the customers, the government.

The theories that underpin this study are Theories of Demand of Money and Capital Adequacy theory. The essence of cash optimisation is to ensure cash availability for meeting customer demands which implies the liquidity position of banks should be adequate to meet customer needs. The importance and relevance of these theories are accentuated in the cash optimisation need of banks in order to meet obligations to customers.

The *A-Priori* position is that the approach will enhance customer loyalty, ease the banking processes and enable the realization of performance objectives.

2.3. Empirical Framework

Deloitte (2018) in a study titled 'strategies for optimising cash management' examined variables such as account receivable, accounts payable and inventory and suggested freeing them from the balance sheet, for cash optimisation purposes. He suggested a culture of prioritising application of cash whether business climate is accommodating or not. Equally, initiatives that influence 'prudent investment decisions, cost reduction and cash planning will improve financial stability, cash discipline and performance in terms of greater profitability and competitiveness. Optimal results are only feasible when all operational departments such as marketing, sales, purchases among others collaborate effectively.

In an empirical study by Waeibrorheem and Suriani (2016), on 'determinants of liquidity risk between Islamic and Conventional banks, Time Series based on 2000 to 2010 (10years) data obtained from Islamic banks' annual reports was used. Multivariate regression analysis was used for hypothesis testing, it was found that Islamic banks maintain a higher liquidity percentage and possess unique asset and liability structure. The study suggested that the current excess liquidity of Islamic banks is not unconnected with modality for funding the banks as funds flow from both internal and external sources in which two major fund providers are linked to the funding framework.

Lukorito et al (2014), in a study of the effect of liquidity on profitability of commercial banks,

examined 43 banks in Kenya; these banks reported 'significant growth and improved financial performance' in spite of stiff internal competition. Findings of the study revealed that the variables of liquidity were statistically significant and had positive relationship with banks' profitability. The study suggested that banks need to maintain 'minimum cash balance in order to maximise returns while they equally invest heavily in assets achieve substantial gains and establish sustainable liquidity levels. This reiterates a strong synergy for bank performance through fund sourcing and application thus revealing the importance of financing and cash optimisation.

Kiptoo, Kariuki and Kimani (2017) examined the working capital management practices and financial performance of a Tea processing firm using Correlation on SPSS for analysis. The study found that the firm had established an inventory and payment management policy to guide the firm. The result of the analysis which used Pearson Correlation and ANOVA revealed a negative and significant relationship with the financial performance of the tea firm. Suggestions therefrom are that working capital cycle should be effectively managed in order to improve on profitability.
Gap

Jajale (2017), conducted a study titled 'effect of cash management on the financial performance of commercial banks' in Mogadishu, through a descriptive study investigated variables such as capital adequacy, receivables and cash management in 48 banks and used frequency and percentages for analysing the data. Gubar, Zubareva and Merzljakova (2011), in an empirical study titled 'Cash flow optimisation In ATM Network Model' and with the use of primary data, posited that if the amount of cash upload in the ATM is small, there will be an increase in servicing expenses (route costs) while a larger amount upload will lead to capital tie-up in the ATM. The study thus, suggested a need for optimising cash value for ATM upload in order to overcome the extremes of under or overloading. The two studies focused on the effect of cash management on financial performance and suggested bank management should ensure availability of standardised and written manuals to guide trade credit decisions. This study focused on quoted banks performance indices in Nigeria, using variables such as ROE, ROA, Capital adequacy, DPS and EPS. Data analysis applies panel regression on secondary data to determine the effect of cash optimisation on the performance of banks.

3. Methodology

3.1 Research Design

The study is ex post-facto research design, uses qualitative data obtained through the content analysis method of data gathering.

3.2. Sources of Data

Documentary sources which included Central Bank Annual report, journals, published financial statements of quoted banks, books and statistical reports are potent sources of data for the study.

3.3. Population and Sample

Population is 24 post consolidation banks having minimum capital base of N25 billion which are listed on the Nigerian Stock Exchange (NSE) as at May 2018. Sample of the study is limited to 8 quoted deposit money bank's using published financial statements between 2010 and 2018 which disclose required information for the study.

3.4. Validation of instrument

This lies on the strength of the audited and published financial statement according to stipulated IFRS guidelines, these statements have passed through statutory audit process.

4. Data Analysis and Discussion of Results

Data analysis shall be carried out using simple Panel regression on STATA software. Descriptive analysis will cover Mean and Standard Deviation. Hausman, Breusch and Pagan Lagrangian multiplier test for random effects are applied in the study.

Table 1: Panel Regression Results for Main Model

	ABP (Pool)	ABP (Fixed)	ABP (Random)
C	-208.33 (0.24)	-389.48 (0.01)*	0.305 (0.00)*
LIQ	0.633 (0.00)*	0.124 (0.54)	0.633 (0.00)*
LDR	0.462 (0.21)	0.07 (0.81)	0.462 (0.21)
LIA	57.98 (0.07)*	47.05 (0.07)*	57.98 (0.07)*
CL	-38.55 (0.10)*	-3.87 (0.83)	-38.55 (0.10)*
F-statistics	5.67(0.00)*	2.21 (0.08)*	22.68 (0.0)*
Adjusted R- Squared	0.298	0.061	0.362
Hausman Test	1.00		

Author (2020). Note: (1) bracket [ ] are p-values (2) * , implies statistical significance at 10 percent.

From Table 4.1, the Hausman test was first used to determine whether fixed or random effect is suitable for the model. The probability of this test showed 1.00 which is higher than the acceptable 5 per cent, thus, the null hypothesis to estimate random effect was accepted.

$ABP_{it} = \alpha_0 + \alpha_1 LIQ_{it} + \alpha_2 LDR_{it} + \alpha_3 LIA_{it} + \alpha_4 CL_{it} + \mu_1$

ABP = Aggregate Bank Performance which include ROE, ROA, Capital Adequacy, Dividend and EPS.

From Table 4.1, the size of the coefficient of the independent variable (α) shows that a 1 per cent increase in bank's liquidity will lead to a 0.63 per cent significant increase in their (sampled banks) performance, also a 1 per cent increase in loan to deposit ratio of sampled banks will lead to a 0.46 per cent increase in performance. Furthermore, a 1 per cent increase in the bank's liability will result to 57.9 per cent significant increase to the performance of sampled banks; finally a 1 per cent increase in the loans by customers of the sampled banks will lead to 38.5per cent significant decrease in the performance of the banks. Only LDR does not singularly have a significant effect on the dependent variable (ABP). Also, the overall R-square of the model showed that 36.2 per cent variations in bank performance can be attributed to the cash-flow optimisation variables used in this study, while the remaining 63.8 per cent variations are caused by other factors not included in this model. This shows a moderate explanatory power of the model. However, the F-stat showed a probability value of 0.00 which indicates that the explanatory variables are statistically significant because the p-value is less than 5 per cent, the level of significance adopted for this study. Therefore, the model is statistically significant.

Thus, the study concludes that cash-flow optimisation has significant effect on the performance of sampled deposit money banks in Nigeria. Hence the null hypothesis is rejected.

The outcome of the analysis affirms that cash flow optimisation has significant effect on the performance of sampled banks. This agrees with the position of Lukorito et al (2014) in his study of Kenyan banks which examined the effect of liquidity on profitability of commercial banks. The study noted that a significant growth in profitability and improved financial performance. Waeibbrorheem and Suriani (2016), equally observed that high liquidity percentage has a relationship with the funds flow of the banks. These findings are in harmony with the position of Deloitte (2018) who emphasised prudent investment decisions that focuses on cost reduction and cash planning which will

improve financial stability and hence overall bank performance.

Appraising the Theories of demand for Money, Baumoi in Portfolio theory suggested that bank managers pursue intensified efforts towards cash maximisation to provide for meeting customers' demands. Equally, the Capital Adequacy Theory based on risk assessment to which banks are exposed, suggested the importance of having a sound financial position to protect the interest of customers in terms of their deposits. Hence, maintaining a good liquidity position is apt to enabling prompt payment of dividends, enhanced investment options that would influence earnings growth and loan deposit ratio and high customer patronage and customer retention as well as profitability and stakeholders' wealth. Hence the model of the study which states that Bank performance is influenced by cash flow optimisation –

$BP = a + \beta_1 ROE + \beta_2 ROA + \beta_3 DPS + \beta_4 CAQ + \beta_5 EPS + e$

This implies an inevitable role expected of banks in ensuring that processes eased through ATM use, obtaining cash as at when needed without unnecessary delays.

5. Conclusion and Recommendations

This study focuses on appraising the performance of deposit money banks from the perspective of settling and effecting a dividend decision, retaining cash for business expansion as well as being able to grant loans on customer application as may be required. Cash optimisation in this contest goes beyond the level of cash management; to ensure optimum result especially with the current challenges of cash outage at ATMs and other service delays that customers encounter should be preempted. Likewise, customers' investment needs anchor on the grace of obtaining needed loans and other advisory services. Customer retention lies on the quality of service and benefits derived from the banks, therefore deposit money banks need to proactively workout strategies that will enhance cash operations optimally.

Managers' understanding of and approach to risk factors in terms of their stewardship reveals the strength of the bank in relation to liquidity, customer size, and meeting the expectations of shareholders and other stakeholders. Aggregate Bank Performance which includes ROE, ROA, Capital Adequacy, Dividend and EPS are elements of measuring the performance of the bank and these vividly communicate a lot of information about the bank's capability thus pointing to the need for setting strategies that enhance optimisation of available funds as well as generating more resources to consolidate needs.

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