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COMMERCIAL BANKS'CASH HOLDINGS BEHAVIOUR IN THE PRE AND POST ECONOMIC RECESSION PERIOD IN NIGERIA: X-RAYING THE DETERMINANTS

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ABSTRACT:

This study to empirically evaluates the effect of the adopted determinants on the cash-holding behaviour of selected Commercial Banks in the pre and post recession period of Nigeria. Specifically, it intends to ascertain the extent to which Investing activities and Financing activities affect Cash holdings of Systematically Important Banks (SIBs) in the pre and post recession periods of Nigeria. It also intends to determine the extent of relationship between investments of SIBs in Nigeria and the volume of cash held in the pre and post economic recession periods. Secondary source of data collection was solely utilised, hence, the adoption of the ex-post facto research design. A total of seven (7) SIBs in Nigeria were purposively sampled, and extracts from their respective financial statements for the pre economic recession (2011 - 2014) and post economic recession (2015 – 2018) periods duly subjected to relevant analyses using Multiple regression and Spearman Correlation statistical tools. Findings obtained from analyses showed that Investing activities and Financing activities have significant effect on the Cash holdings of SIBs in the pre and post recession periods of Nigeria. It was also discovered that there is a significant relationship between investments of Systematically Important Banks in Nigeria and the volume of cash held by them in the pre and post economic recession periods. The study thus concluded that financial crisis may have changed the cash holding behaviour of SIBs and this is considered to have a long term effect. The study therefore recommends that Systematically Important Banks (SIBs) should be accorded reliable assistance by appropriate regulatory agencies into observing periodic self assessment of their cash holding choices towards ensuring that such decisions does not in anyway pose significant threat to the organisation's going concern in the future. Also, given the magnitude of interest SIBs have in investment, renewed effort should hence be made at ensuring that such Investments are profitable ones pursued at manageable risk levels.

Keywords: *Cash holding decisions, Financing activities, Investing activities, Investments, Systematically Important Banks,*

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1. INTRODUCTION

Cash management is a broad area of finance involving the collection, handling, and usage of cash. It entails assessing market liquidity, cash flow and investment. Cash is an essential component of company's Statement of Financial Position. The decision about the amount of money to hold as cash and cash equivalent remains one of the most difficult issues facing some firms in Nigeria today. Determinants of corporate cash holdings are viewed as those situations that underlie the firms attitude to hold or maintain liquid cash and cash equivalent. These have been widely studied yet not adequately exhausted scholarly as more corporate environment across the globe has continued to witness more corporate failure even in recent times, the demise of Diamond Bank Nigeria Plc being a typical example.Lending their voice, Račić and Stanišić (2017) stressed that concepts explaining determinants that spur organizations to maintain cash at certain level abound has not been sufficiently explored, hence attesting to the need for further, reliable and scholarly insight.Han and Box (2017) noted that firms in United States of America accounted for US$5 trillion in cash holdings between 1990 and 2000. This amounts to about 10% of the annual Gross Domestic Product (GDP), thus indicating tremendous increase in cash holdings by firms in USA. Firms in Japanheld US$2.1 trillion in cash and that translates to 44% of the nation's GDP (Alam, 2010).Korean firms maintained US$4.4 billion in cash, an equivalent of 34% of GDP (Mosavi, Karimipoua, Zarei & Heidari, 2015). Accordingly,virtually every enterprise strives daily to remain financially afloatin the tight and dynamic competitive market. But the question is, what are those specifics that compel corporate organisations to hold cash? Why wouldany growth-oriented firm hoard large amount of cash when such action is not profit assuring?

Apparently, holding cash provides an important buffer against operating volatility and unexpected cash flow shortfalls to lower the probability of financial distress and to ensure self sufficiency and the ability to invest in growth through difficult quarters (Pettit 2007). The absence of cash in corporate organisations is not without its devastating consequence. This is because one of the underlying assumptions borne in mind by firms during the preparation of the Financial Statements is the need to sustain the going concern of the entity. In the corporate environment, every organization is viewed as a going concern. Yet, a firm's achievement and sustenance of this status requires its possession of a feasible amount of cash. This is considered very crucial to entities as cash and cash equivalent are liquid Assets that are meant to increase Shareholders value through investment into profitable engagements amid minimizing costs drastically.Ogundipe, Ogundipe, and Ajao (2012) noted that Firms with high cash holdings can take advantage of more investment opportunities without being too restricted by capital and ensure adequate capital for planned or unplanned opportunities.

It is also worthy to note that cash holdings can be affected by economic recession or financial crises. The impact of financial crises on cash holdings is a recent issue on financial economic literature. Lee and Song (2012) studied the long term impact of Asian financial crisis in eight East Asian countries and concluded that the mean cash to assets ratio for the firms increased to 16.6% in 2005 from 10.7% in 1996. According to Bassey and Ekpo (2018), the financial meltdown that engulfed the world economy between 2007 and 2009 clearly demonstrated the dire adverse consequences of liquidity mismanagement. The Zenith Economic Quarterly (2008) cited in Bassey and Ekpo (2018) reported that the global Equity Market lost about US$30 trillion to the crises while Stock Market prices fell by 35 percent in United Kingdom, 31 percent in United States of America and 73.6 percent in Russia. In Nigeria, the Central Bank of Nigeria (CBN) took an immediate responsive step by injecting over N620 billion into the banking sector to improve the Banks' liquidity and keep them afloat from failing as a result of the financial melt-down that thrived between 2008 and 2009 (CBN, 2013). Yet, the number of operational banks in Nigeria fell from twenty four (24) Commercial Banks as at 31st December, 2007 to fourteen (14) in 2018. Bliss (2015) equally found out that a reduction in the payout of firms during 2008 – 2009 financial crisis was followed, side by side with commendable increase in the cash holdings of Nigeria corporate organisations. This may have been a response to the inevitable action taken by Nigerian banks through the write off of non-performing loans equivalent to 66% of their total capital during the crises (Bassey & Ekpo, 2018).

Given the above situation, this study contributes to existing literatures on the subject by studying the cash holdings decision of Deposit Money Banks in Nigeria during the country's pre and post 2016 economic

recession period. Recession is a phase of economic cycle that occurs after two consecutive quarters of negative growth featuring low output and investment, abnormal increases in unemployment due to massive retrenchment, falls in the availability of credit facilities, illiquidity and layoff as well as reduction in amount of trade and commercial activities. According to the Nigeria Bureau of Statistic (NBS), the Nigerian Economy slid into recession in the first quarter (Q1) 2016 with real GDP of -0.36 percent, and this had a very big impact on cash holdings of firms because during the recession period business activity was very low due to lack of cash in circulation, there was low investment opportunities because Investors lost confidence and trust in public quoted firms and these factors had a negative impact on the liquidity status of the firms traded on the Nigerian Stock Exchange.Holmes (2012) had reported that confidence in the system was very low, all pre-consolidation Nigerian banks put together were smaller than the fourth largest bank in South Africa, and none of them was in the top 1,000 banks in the world. Any private sector entity's loan needs in excess of US$500 million were often met from abroad or from all then Nigerian banks put together.

Before consolidation in Nigeria, all 89 banks put together were smaller than the fourth largest bank in South Africa. Central Bank of Nigeria (CBN)'s rescue effort through the N25billion minimum recapitalization banking reform of 2010 saw more Nigerian banks fold up while some resorted to merger and acquisition as the only bail out means due to liquidity/ cash holding problems. As at 2018 year end, post consolidation banks in Nigeria has further been reduced from 25 banks to 14 banks due to this same illiquidity related challenges. Presently, some financial institutions found it almost difficult to cope with the onslaught of the recent economic recession that hit the Nigeria economy so hard between 2015 and 2016. How are cash holdings of corporate organisations determined under different economic circumstances/situations? Are there systematic differences in the cash holding determinants under such different economic situations? And, if so, how might these differences be explained?

In bid to further restore and sustain confidence in the country's financial system, CBN introduce a policy in 2013 that led to the classification of eight (8) out of the existing fourteen (14) Deposit Money Banks in Nigeria as 'Systematic Important Banks (SIBs)' which the apex financial regulatory body also called 'too-hard-to-fall Banks' due to the commendable strength of their liquidity standing. This confidence, although reassuring, still calls for objective assessment and critical evaluation by Financial Analysts, Economists, Scholars, and Interest groups. It is worthy to note till date, the Nigeria banking sector has continued to witnesses enormous financial challenges that often lead to financial distress despite above concept of the CBN and several past and current banking reforms.Yet the cash holdings decisionsof recognised big Commercial Banks in Nigeria appear not to have received any scholarly attention, especially those recognised by the CBN as Systematically Important Banks.Moreso, Although scholars such as Mohammadi, Kardan and Salehi (2018), Inyiama, Ugbor abd Chukwuma (2017), Ikueze and Egungwu (2017), Alim and Khan (2016),Borici and Kruja (2016),Ali and Yusuf (2015), Danjuma, Umar and Hammawa (2015),Islam (2012) and Prenker and Kuck (2009) have all carried out related studies on determinants of corporate cash holdings, focusing attention on determinants such as current assets, non current assets, asset growth rate, firm size, earnings before interest and tax, net working capital, total determinants, capital structure, managerial ownership, board size, CEO diversity, institutional Shareholders, leverage, cashflow to total assets, Tobin Q, volatility of cashflow et cetera. None of them however, executed laid emphasis on investing activities, financing activities and investments as possible determinants of cash holding hence the intent of the present to fill the gap. This is more as none of these studies were conducted solely on financial institutionsthat areadjudged to be big on the basis of their liquidity standing, Systematically Important Banks (SIBs) in Nigeria for example. More curious is the fact that aside Umrya and Diantimala (2018), Alves and Morais (2018), Mihai, Radu and Dragan (2018), and Stone and Gup (2014) who carried out investigations on cash holding decisions of firms during recession and financial distress periods, no study has been confirmed to have been conducted in Nigeria in that regards. It is against this backdrop that the study seeks to empirically x-ray the determinants of Commercial Banks' Cash Holdings Behaviour in the pre and post economic recession period in Nigeria:. Specifically, the study intends to:

1 To determine the extent to which investing activities and financing activities affects the Cash holdings of SIBs in the pre and post recession periods of Nigeria.

2 To assess the relationship between investment and volume of cash held by DMB in the pre and post economic recession period in Nigeria.

In order to effectively look into the above objectives, the following research questions were formulated
1 To what extent do investing activities and financing activities affect the Cash holdings of SIBs in the pre and post recession periods of Nigeria?
2 What is the relationship between investment and volume of cash held by Commercial Banks in the pre and post economic recession period in Nigeria?

Hypotheses

H_1: Investing activities and financing activities have no significant effect on the Cash holdings of SIBs in the pre and post recession periods of Nigeria.

H_2: There is no significant relationship between the investments and volume of cash held by Commercial Banks in the pre and post economic recession period.

2. LITERATURE REVIEW

2.1 Motives for Holding Cash

Cash is known as the most liquid and less productive assets of a firm. If cash remains idle, it earns nothing but involves cost in terms of interest payable to finance it. Although cash is least productive current assets, firms should hold certain amount of cash for marketable securities. Mainly, there are three motives for holding cash.

2.1.1 Transaction Motive of Holding Cash

The transaction motive refers to the need to hold cash to satisfy normal disbursement collection activities associated with a firm's ongoing operation. Transaction means the act of giving and taking of cash or kinds in the ordinary course of business. A firm frequently involves in purchase and sales of goods or services. A firm should make payment in terms of cash for the purchase of goods, payment of salary, wages, rent, interest, tax, insurance, dividend and so on. A firm also receives cash in terms of sales revenue, interest on loan, return on investments made outside the firm and so on. If these receipts and payments were perfectly synchronized, a firm would not have to hold cash for transaction motive. But in real, cash inflows and outflows cannot be matched exactly. Sometimes receipts of cash exceed the disbursement whereas at other time disbursement exceeds the receipt. Because of this reason, if disbursement exceeds the receipt, a firm should hold certain level of cash to meet current payment of cash in excess of its receipt during the period.

2.1.2 Precautionary Motive of Holding Cash

The precautionary motive refers to the desire to hold cash as a safety margin to act as a financial reserve. A firm should hold some cash for the payment of unpredictable or unanticipated events. A firm may have to face emergencies such as strikes and lock-up from employees, increase in cost of raw materials, funds and labour, fall in market demand and so on. These emergencies also bound a firm to hold certain level of cash. But how much cash is held against these emergencies depends on the degree of predictability associated with future cash flows. If there is high degree of predictability, less cash balance is sufficient. Some firms may have strong borrowing capacity at a very short notice, so that they can borrow at the time when emergencies occur. Such a firm may hold very minimum amount of cash for this motive.

2.1.3 Speculative Motive of Holding Cash

The speculative motive refers to the need to hold cash in order to be able to take advantage of bargain purchases that might arise, attractive interest rates and favourable exchange rate fluctuations. Some firms hold cash in excess than transaction and precautionary needs to involve in speculation. Speculative needs for holding cash require that a firm possibly may have some profitable opportunities to exploit, which are out of the normal course of business. These opportunities arise in conditions, when price of raw material is expected to fall, when interest rate on borrowed funds are expected to decline and purchase of inventory occurs at reduced price on immediate cash payment.

2.2 Consolidation in Nigeria Banking Sector

The Pan Reference Banks Dictionary of Economics defined consolidation as the action of reinvesting a capital gain made on a speculative share in a more conservative security. The term could also connote the selling of equities at a gain and reinvesting of the proceeds in fixed – interest securities. Also, Ugwunta(2011) conceptualized consolidation as a fusion of the assets and liabilities, in whole or in parts, of two or more business establishments to form an entirely new establishment. From the above definitions, consolidation represents the idea of investment and the coming together of individual firms or enterprises as a single entity. Consolidation could also mean larger sizes, larger shareholder bases and larger number of depositors.Reforms have been regular features of the Nigeria banking system. They are usually introduced either in response to the challenges posed by factors and developments such as systemic crisis, deregulation, globalization and technological innovation or as proactive measures both to strengthen the banking system and prevent systemic crises, as is the case in the current reforms. The current reforms, widely referred to as consolidation of the banking system, are part of the broad on-going national economic reforms (Afolabi, 2005). However, the structure of the Nigeria banking system, pre-consolidation, initiated its ineffective performance as it was characterized by a number of structural and operational inadequacies.

The inadequacies include low capital base, large number of small banks with relatively few branches, poor asset quality, illiquidity, dwindling earnings, loss making, insolvency, board room squabbles, poor rating of most of the banks, weak corporate governance including inaccurate reporting and non-compliance with regulatory requirements, declining ethics and huge non–performance of insider related credits. Others included over independence on public sector deposits and foreign exchange trading as well as the neglect of SMEs (Soludo, 2004). Noting the above inadequacies, the CBN indicated that the current commercial banks should recapitalize from a minimum capital base of N2billion in 2004 to N25billion within a period of eighteen months with a mandatory option to mergers and acquisitions. As at the period, 89 banks were in operation made up of about 5 – 10 banks, whose capital base were already above the N25billion marks, another group of 11 – 30 banks, within the N10 to N20 billion on mark, while the remained 50 to 60 banks were quite below the N10 billion mark (Ugwunta 2011). Appropriate legislative backing was obtained for this, and at the end of the exercise, about 25 banks emerged and now 24 with the concluded merger of Standard Chartered Bank and IBTC bank in 2007.

The important aspect of bank capital reform is the need to strengthen the capacity of the banking sector to effectively play its traditional role of financial intermediation as well as its growth and development role required for enhanced productivity growth. Bank capital is a source of long-term fund for banks and when maintained at adequate levels are expected to enhance the capacity of the banking sector to finance real sector activities like manufacturing. Okoye, Adetiloye, Erin and Evbuomwan (2017) posits that bank capitalization is a major determinant of the credit delivery capacity of a bank because equity capital constitutes the backbone of a bank's long-term lending operations. Soludo (2004) attributes the inability of Nigerian banks to play a lead role in the development of the Nigerian economy to weak capital base, poor corporate governance, gross insider abuses, etc. He argues that low capitalization of banks in Nigeria not only accounts for the sector's inability to finance the economy but also renders it vulnerable to unethical and unprofessional practices. Against the background of weak capital base, the Central Bank of Nigeria, on July 6, 2004, raised minimum capital requirement for banks operating in Nigeria from N2 billion to N25 billion with a compliance period of 18 months. To achieve the new regulatory minimum capital within the stipulated time frame, most banks relied on offer and sale of new shares to existing and/or new shareholders as well as series of mergers and acquisitions (banking consolidation).

Proponents of concentration theory argue that banking consolidation promotes increased returns through revenue and cost efficiency gains. They argued that consolidation may also reduce industry risks by eliminating weak banks from the system and creating better opportunities for diversification. Advocates of banking consolidation argue that larger banks can diversify more profitably so that banking systems characterized by a few large banks tend to be less fragile than those with many small banks (Allen and Gale, 2003). Also, Beck (2003) contend that a few large banks are easier to monitor than many small banks so that

corporate control of banks will be more effective and risk of contagion less pronounced in a concentrated banking system.An early view of bank consolidation was that it makes banking more cost efficient because larger banks can eliminate excess capacity in areas like data processing, personnel, marketing, or overlapping branch networks (Somoye, 2008). Consolidation is viewed as the reduction in the number of banks and other deposit taking institutions with a simultaneous increase in size and concentration of the consolidated entities in the sector (BIS, 2001).Irrespective of the cause, however, bank consolidation is implemented to strengthen the banking system, embrace globalization, improve healthy competition, exploit economies of scale, adopt advanced technologies, raise efficiency and improve profitability (Adegbagu & Olokoyo, 2008). Ultimately, the goal is to strengthen the intermediation role of banks and to ensure that they are able to perform their developmental role of enhancing economic growth, which subsequently leads to improved overall economic performance and societal welfare.

2.3 Economic Recession

In line with the National Bureau of Statistics (NBS), the Nigerian economy slid into recession path and was declared so in the first quarter of 2016 which actually was established in 2015 with real GDP of -0.36 percent. According to Adeatyo and Sidiq (2018), recession is when the economy declines significantly for at least six months. It means there is a drop in the following economic indicators:

1. Real Gross Domestic Product (GDP);
2. Income level of individual and revenue generation of government;
3. Employment;
4. Manufacturing and
5. Retail sales.

A recession will typically be characterized by high unemployment, falling average incomes, increased inequality and higher government borrowing, etc (Tejvan, 2012). When a recession lasts for a long time it becomes depression, hence, a depression is a deep and long lastly recession (Investopedia, 2017). However, an economic recession is typically defined as a significant decline in economic activity, real GDP, real income, employment industrial production and sales following a decline in the aggregate demand for at least two consecutive quarters. On the other hand, the National Bureau of economic research (NBER) defined recession as a "significant decline in economic activity. The National Bureau of Economic Research (NBER) defined a recession as a "significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in a real gross domestic product (GDP), real income, employment, industrial production and wholesale-retail sales" (Noko, 2016;NBER, 2008).According to Tejvan (2012) therefore, there are several problems induced by economic recession such as:

i. *Falling Output:*This means that less will be produced resulting to lower real GDP and lower average incomes. Wages tend to rise much more slowly or not at all.
ii. *Unemployment:* a rise in cyclical unemployment is the biggest problem of recession.
iii. *Higher Government Borrowing:* As levels of government borrowing increases, it leads to higher interest rates costs.
iv. *Devaluation in Exchange rate*and others such as falling asset prices, falling share prices, social problems associated with rising unemployment; increased inequality, etc.

2.3.1 Recession Indicators

The technical indicator of a recession is two consecutive quarters of negative quarters of economic growth as measured by a country's Gross Domestic Product (GDP), although the National Bureau of Economic Research (NBER) does not necessarily need to see this occur to call it a recession (Ugwuanyi & Obiekwe, 2017). Besides the two consecutive quarters of GDP decline, economists have two categories of recession indicators:

a. ***Leading indicators***that materialize prior to official declaration of recession. This is the most common leading indicator being the contraction in the stock market. Declines in bread stock indices such as Dow Jones Industrial Average (DJIA) and standard of poor's (S & P) 500 index, often appear several months prior to a recession taking place. This exemplifies 2007

case where the market began declining in August, four months ahead of the official recession in December 2007 (Ugwuanyi, 2017).

b. ***Lagging Indicators***: These of a recession include unemployment rate. Though the Great Recession began in December 2007, the unemployment rate still indicated full employment - a rate of 5% or lower – four months later. The unemployment rate began declining in May 2008, and did not recover until several months after the recession ended in June, 2009. (Ugwuanyi, 2017).

Nigeria's first full year recession began in the year 1987 with output contracted to 0.4 percent in the first quarter from a year earlier, and 0.7 percent point in the fourth quarter (Bohlund, 2016). In 2006, there occurred a recession called the bursting of the real estate bubble on the summer which originally led to the bankruptcy of a large number of floating rate mortgages and then moved to the market of corporate subordinated bonds issued to finance securitized mortgages. The outcome was a wave of collapse, mergers, and nationalizations after September 2008. The 2008 recession is said to be one of the major economic recessions called subprime mortgage crisis. The consequence of the subprime crisis gave birth to instant movement to the financial markets of other countries causing a surprise decline of 40 to 70%.

2.4 Cash holdings and Investment Decision

The cost to be incurred in a cash shortage is higher for firms with a larger investment opportunity goals due to the expected losses that will result from giving up valuable investment opportunities. It is therefore, expected to be a positive relation between investment opportunity and cash holdings. Theories, like pecking order theory also predicts that firms with better investment opportunities have greater financial distress costs because the positive NPV of these investments disappears if bankruptcy should occur. It is advisable that firms with better investment opportunities should keep higher levels of cash to avoid financial distress.

According to Oladejo, Akande and Yinus (2017), cash management entails all actions and activities necessary to maintain appropriate levels of cash to meet operational requirements of a company. Cash holding control is therefore crucial to ensuring that a business remains liquid and able to meet payment obligations. This is carried out through the effective management of cash receipts and payments, cash balances and cash transfers between the different parts of a business.Worthen (2010) noted that most companies used cash for funding external and internal investments at a time when many companies were in financial difficulties. Cash provides operating and strategic flexibility. Because of the uncertainty of the economy, considerable cash holding is often encouraged to permit companies to assume risks that smaller companies cannot afford. Cash has become king to a greater extent than in the past because of the credit crunch. A company with so much cash occupies a disproportionately strong position than obtainable in normal times (Worthen, 2010).

2.5 Theories of Cash Holding and their Determinants

In determining the behaviour of firm's cash holding, grounding theories which remained more pertinent to cash management practices of firms include trade off, pecking order theory and free cash theory (Wasiuzzaman, 2014).

2.5.1 Trade-Off Theory

The trade-off argument postulates that firms set their optimal level of cash holdings by weighting the marginal costs and marginal benefits of holding cash. There are several benefits related with holding cash. First, cash holdings reduce the likelihood of financial distress as it acts as a safety reserve to face unexpected losses or external fund raising constrains. Second, cash holdings allow the pursuance of the optimal investment policy even when financial constraints are met. Otherwise, external fund raising constrains would force the firm to forgo investment projects with positive net present value According to the trade-off theory, firms considered the marginal benefits and cost of holding cash to maximize the shareholder's wealth (Dittmar , Mahrt-Smith and Serveas 2003). The benefits of cash holding stem from the theory of Keynes (1936), concerning the motive of liquidity assets: Transaction cost motive, precautionary motive, and speculative motive. In line with the transaction cost motive, holding cash allow firms to avoid or save

transaction costs to raise funds or to liquidate assets. In relation to the transaction motives, firms hold the cash only to overcome the higher opportunity cost in case of lower cash levels.
However, precautionary motive revealed that cash holding enables firms to finance their investments or project if other financing source is not available.

Despite the benefits of cash holding, cash holding has several drawbacks. According to Jensen (1986), cash holding could increase agency cost. Firms with higher cash holding are not required to access capital market for financing. This situation enables the corporate managers away from the market monitoring.Therefore, managers could pursue their own interests rather than shareholders. In addition, the rate of return on cash or liquid assets is low because of liquidity premium. Studies such as Faulkender and Wang (2006), Ozkan and Ozkan (2004), and Afza and Adnan (2007) emphasized that cash is the output of investment and financing activities. Firms that generate positive cash flows from their operations finance their investments with internal funds and shareholders.According to the previous empirical studies different proxies' for determinants of cash holding behaviour of firm, have been Incorporated to reflect this theory. For instance, Wasiuzzaman (2014), Uyar and Kuzey (2014), Al-Najjar (2011), Ferreira and Vilela (2004) and Opler (1999) employed the dividend payout, leverage, firm size, liquidity and risk, to empirically examine the firm's cash holding perspective in line with the trade-off theory. Nevertheless, these studies provide mix results. It can be Problematic to generalize in other economies due to the unique macro environment of the country.Many studies such as (Ozkan and Ozkan, 2004; Azmat, 2014; Uyar and Kuzey, 2014; Wasiuzzaman, 2014) supported the trade-off theory and signified the role of optimal level of cash.

2.5.2 Pecking Order Theory

The pecking order theory of Myers (1984) states that firms finance investments first with retained earnings, then with safe debt and risky debt, and finally with equity. The purpose of this order of financing is to minimize asymmetric information costs andother financing costs. This theory suggests that firms do not have target cash levels, butinstead, cash is used as a buffer between retained earnings and investment needs. Thus,when current operational cash flows are enough to finance new investments, firms repaydebt and accumulate cash. When retained earnings are not enough to finance currentinvestments, firms use the accumulated cash holdings and, if needed, issue debt.This is because; managers have more knowledge on investment needs and the net present value of those investments. Moreover, the managers are also assumed to act in favour of the firm's current owners and will therefore try to invest on those areas that will maximise the shareholders wealth.This study was based on Pecking order theory because investment has been noted as one of SIBs most sensitive motives for holding cash.

2.5.3 Free Cash Flow Theory

Corporate managers of an organization are basically the agents of shareholders, an agent representing a principal, serves the interest of the principal. The issue at hand is that the agent might have other goals and interests than the principal and could act to achieve these at the expense of the principal. Agency problems that might arise between shareholder and manager concerns are also caused by the optimal level of cash holding. The free cash flow theory on the analysis of such conflicts is now a major part of the financial literature. According to Jensen (1986), managers prefer to hold high cash level to enhance the volume of total assets in their control. They also tried to gain the distinctive powers in the firm's investment and financing decisions. These policies may lead to the over investment issues (Ferreira and Vilela, 2004). Furthermore, they argued that firms with strong affiliation with banks and firms practicing in superior investor protection countries hold lower cash levels. These conditions support the existence of manager discretion and agency cost issues in liquidity management. Finally, it can be argued that management may accumulate cash because it does not want to make pay-outs to the shareholders, and wants to hold these funds within the firm. Drobetz and Grüninger (2007) support this argument and revealed that dividend payments are positively related to cash reserves. This indicates that management may accumulate cash by cutting the dividend or it does not make pay-outs to shareholders, to keep funds within the firm.

2.6 Prior Related Studies

Mohammadi, Kardan and Salehi (2018) adopted the Ordinary Least Square regression analysis to investigate the relationship between cash holdings, investment opportunities and financial constraint with audit fees in ninety (90) Iranian companies for the years 2007 - 2014. Their findings showed that there is a significant relationship between cash holdings and audit fees as well as cash holdings and corporate financial constraint and the audit fees. The study however observed that no significant relationship exist between cash holdings and investment opportunity and audit fees.Alves and Morais (2018) investigated the determinants of firms' cash holdings and how cash holdings were affected by the financial crisis of 2008. Data of non-financial firms for the periods 1995 – 2014 were used with almost 265,000 firm-year observations made. Their findings showed that cash holdings have a positive relationship with investment set and a negative relationship with liquidity and firm size. They also discovered that Cash holdings post-crisis are higher than pre-crisis and there is a spike in cash holdings during recession.

Inyiama, Ugbor1 and Chukwuani (2017) carried out a study on six (6) manufacturing firms listed on the Nigerian Stock Exchange Market (NSE) for the years 2006 – 2015 towards evaluating the relationship between assets growth rate and financial performance of manufacturing firms in Nigeria. Data on Non Current Assets growth rate, Current Assets growth rate and Net Assets growth rate herein as proxies for firm growth (independent variables) and Profit After Tax as proxy for financial performance (dependent variable) were analysed with the aid of Pearson Product Moment Correlation Matrix and the Multiple Regression. Result obtained showed that Non Current Assets growth rate and Net Assets growth rate of manufacturing firms studied positively and strongly related with the profit after tax of the firms for the period of 2006 – 2015. However, Current Assets growth rate positively and weakly related with the profit after tax of the firms for the period covered.Ikueze and Egungwu (2017) examined five Nigerian quoted Manufacturing Companies for the effect of corporate governance on cash holding through observation from 2012 - 2015 financial reports. Data extracts were analysed with aid of Multiple regression model statistical tool. The study found out that the presence of female board members, board's educational level, board compensation and board's age (working experience) have positive influence on cash holding of the companies studied even as board's size and board's ownership have negative influence on cash holding. The study further identified board's ownership as a determinant of cash holding in Nigerian manufacturing companies. Based on their findings, they concluded that, the higher the interest of directors in acquisition of shares of a company, the more the cash holding of that company.

Boriçi and Kruja (2016) investigated the determinants of cash holding in thirty (30) non-financial firms in Shkodra region across different firm sizes and industries for the years 2013 and 2014. Regression analyses were adopted in the study and it was discovered that Firm size, EBIT, Net Working Capital, and Total debt significantly affect the cash holdings decisions of non-financial firms.Alim and Khan (2016) investigated 272 firms listed in the Pakistan Stock Exchange for the years 2001 to 2014 towards examining the impact of corporate governance on firm's cash holdings in family controlled firms and stand alone firms in Pakistan. Regression analytical tool was adopted for relevant analyses carried out. Results obtained from the analyses showed that family controlled businesses hold more cash as compared to stand-alone firms, possibly alluding to the more prevailing agency problems between controlling shareholders and the minority shareholders. Results further shows that managerial ownership has a significant negative relationship with corporate cash holdings; big-five ownership is positively related to cash holdings while board size, CEO duality and institutional shareholders have no effect on firm's cash holdings.Maximilian Hilgan (2015); studied the determinants of cash holdings; Evidence from German listed firms. His thesis examines the firm specific determinants of cash holdings for a sample of 270 German listed firms over the period from 2005 to 2013 using regression analyses. He tested the predictions for the various firm-specific determinants, which are suggested by three theoretical models: the trade-off model, the pecking order theory and the free cash flow theory. He found that firm size, leverage, bank debt and liquid assets have significant negative influences on cash holdings. Moreover, the variable investment opportunity turns out to be positively related with cash holdings. Hence, it can be concluded that the trade-off model prevails in explaining most of the variation in cash holdings among German listed firms. The pecking-order theory receives reasonable support as well, while there is only weak support for the free cash flow theory. Besides, he found that the overall effect of the

firm-specific determinants, and particularly the effect of leverage, decline during the period after the global financial crisis (2009-2013). This may be attributed to the creditors' increased prudence and the tightening of their credit policy, following the financial crisis.

Kariuki, Namusonge, and Orwa (2015) surveyed 156 Chief Finance Officers (CFO) of 156 private firms registered with the Kenya Association of Manufacturers with the intention of determining whether any significant relationship exist between growth opportunities, leverage, firm size and cash holdings of corporate organisations. Feedbacks from selected respondents were analysed with the aid of Multiple regression amalysis statistical tool. Findings showed that while there exist a negative and insignificant linear relationship between growth opportunities and corporate cash holdings, leverage and firm size are significantly positive determinants of corporate cash holdings.Danjuma, Umar and Hammawa (2015) surveyed 310 small and medium scale enterprise towards investigating the mediating effect of cash management in the association of capital structure and liquidity. Pearson's correlation coefficient, multiple regression and sobel test were employed for the relevant analyses carried out. Outcome of the analyses revealed that there is a positive significant relationship between capital structure and cash management, capital structure and liquidity, liquidity and cash management. Ali and Yousaf (2015) investigated the determinants of cash holding in non-financial firms of Germany across different firm sizes and industries. Data set for the period 2000 – 2010 were extracted and analysed using Regression analysis. Evidence obtained show that firm size, working capital, and leverage significantly affect the cash holdings decisions of non-financial firms studied in Germany and thus, are in conformity with the existing literature on the determinants of corporate cash holdings.Stone and Gup (2014) examined the relationship between cash holdings and business cycles between 1976 and 2012 during recessions. The study adopted different but several quarterly data set. They found out that corporate cash holdings initially decline during recessions but increase to levels at or above pre-crisis levels.

Islam (2012) carried out an investigative study sixty six (66) manufacturing firms in Bangladesh in order to determine what variables play major role in taking cash holding decision by firm. For case purpose we have considered manufacturing firms of Bangladesh. The data set contains five years' (2006-2010). Outcome of the regression analyses conducted showed that all variables considered other than net working capital, Tobin's Q and Volatility of Cash flow hold significant relationship with Cash hold by the firms, which contain cash and cash equivalent.Prenker and Kück (2009) conducted a study on Determinant of corporate cash holdings, employed Thomson Datastream database for Swedish and German firms between the years 2000 and 2008 for 174 Swedish firms and 546 German firms. Adopting the Ordinary Least Square regression analyses approach, they found out that while cash flow to total assets is positively related to cash holdings for Swedish firms, there was a negative sign of the same variable for German firms.

Mihai, Radu, and Dragan (2018) investigated the determinants of cash holdings for ninety (90) Romanian companies for the period 2006 – 2015. Data extracts from the Annual Reports covered were analysed with aid of Regression statistical tool using E-views statistical software. Their findings suggest that, for Non Financial companies, cash holdings are influenced by the state of the economy implying that in times of recession, cash could be a good way to ride out the storm without having to ask for extra funding. Thus, companies tend to use internally generated cash before seeking external financing.Umrya and Diantimala (2018) empirically investigated the determinants of cash holdings of manufacturing companies listed on the Indonesian Stock Exchange for the period 2012 – 2017. Adopting the Multiple Linear Regression analysis in testing its hypothesis, the study found out that debt maturity structure has negative significant relationship on cash holdings and probability of financial distress has positive significant relationship on cash holdings.Khalil and Mukhtiar (2017) investigated the identification of the determinants of Cash holding in thirteen (13) firms of the Oil and Gas sector of Karachi Stock Exchange, Pakistan. Data from 2008 – 2015 financial reports of the companies were analysed and results obtained revealed that Cash flow and Net Working Capital are insignificant in relation to cash holding decision of selected firms while Market to Book value and Leverage showed a positive and significant in relationship to cash holding decision of such firms.Guizani (2017) investigated the determinants of the cash holdings for a sample of seventy 70 Saudi firms over the period

2006 – 2014. The Ordinary Leaset Square (OLS) was adopted for the relevant analyses carried out. Their findings showed that conservative firms are less leveraged, have large size, have low investment expenditures and have low cash flow fluctuation even as Saudi firms do adjust their liquidity holdings quickly towards an endogenous target cash ratio.

3. MATERIAL AND METHOD

Ex post facto research design was adopted in this study. Data extracts from the audited financial statements of selected Commercial Banks formally recognised as Systematically Important Banks (SIBs) in 2013 by the Central Bank of Nigeria (CBN) were maximized for analyses purposes. The choice of these financial institutions stems from theiridentity as "too big to fall" banks amid the trend of financial crisis trailing the banking industry in Nigeria. A total of seven (7) out of the eight (8) officially recognised SIBs such as Access bank plc, Diamond bank plc., Ecobank Transnational Incorporated, First Bank of Nigeria Plc, Guaranty Trust Bank Plc, United Bank for African Plc, and Zenith Bank Plc were sampledbased on availability and accessibility to all financial statements for the years 2011 – 2018. Given the above criteria, Skye bank which is now known as Polaris Bank (one of the SIBs in Nigeria) was excluded from the sample in this study.

Data analysis was conducted through SPSS version 25usingMultiple Regression Analysisand SpearmanCorrelationtomeasure the predictive contribution of the independent variable(IV) in explaining the dependent variable (DV), as well as the extent of relationship between the IV and the DV towards understanding whether the presence of the independent variableimproves or weakens the prevalence of the dependent variable.

4. RESULT AND DISCUSSIONS

4.1 Hypothesis One

Using the Multiple Regression Analytical tool, the predictive capacities of investing activities and financing activities in explaining the Cash holding decisions of SIBs in the pre and post recession periods of Nigeria were statistically investigated.

H_1: Investing activities and Financing activities have no significant effect on the Cash holdings of SIBs in the pre and post recession periods of Nigeria.

Below is the outcome of the analysis conducted:

Table 1: Model Summary

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.99281	0.98196	1583311.

a. Predictors: (Constant), Investing Activities and Financing Activities
b. Dependent Variable: Cash & Cash Equivalent
Source: SPSS Ver. 25

Table 2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1610613514044111.000	3	536871171348037.000	23647.199	.000[b]
	Residual	68110118655.986	3	22703372885.329		
	Total	1610681624162767.000	6			

a. Predictors: (Constant), Investing Activities and Financing Activities
b. Dependent Variable: Cash & Cash Equivalent
Source: SPSS Ver. 25

Table 3: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	63445.190	75739.321		.838	.464
	Investing Activities	.095	.001	1.483	120.528	.000
	Financing Activities	-.920	.015	-1.230	-132.65	.000

a. Dependent Variable: Cash & Cash Equivalent
Source: SPSS Ver. 25

Discussion of Result: Table 1 which is the Model summary shows that the adjusted R^2 which measures the overall goodness fit of the regression model recorded values of 0.981, signifying that the model is fit for use in testing hypothesis one. Outcome of the ANOVA table (Table 2) equally attests to this indicating that the equation is statistically significant (p-value of .000 is less than 0.05). Although investing activities and financing activities which are the predictors in this study made strong and statistical significant contributions in explaining cash holding decisions of SIBs in the pre and post recession periods (both recorded p-values of .000 which is less than 0.05), the outcome of the t-statistics showed that, unlike with investing activities that recorded a positive contribution, the predictive contribution of financing activities in explaining the cash holding decisions of SIBs in Nigeria during the periods covered was negative (t-statistics of 120.528 and -132.65).

Decision: Reject null hypothesis and accept the alternate hypothesis when *F-critical value* is greater than the *F-table value*. Adopting the "df" statistics of Table 2, we looked up 3 under 3 in the F-table distribution (5% significance level). The outcome reveals that the F-table value obtained is 5.390 against *F-critical value* of 23647.199. Since *F-critical value* is greater, the null hypothesis is rejected and the alternate accepted. This implies that *Investing activities and Financing activities have significant effect on the Cash holdings of SIBs in the pre and post recession periods of Nigeria.*

4.3.3 Hypothesis Two

Using the Spearman Correlation statistical tool, test of hypothesis twowas carried out to enable the study determine whether any significant relationship exist between investment decisions of Systematically Important Banks and the volume of cash held in the pre and post economic recession periods.

H_2: There is no significant relationship between the investments of SIBs and the volume of cash held in the pre and post economic recession period.

The results are shown in the table below.

Table 4: Correlations

			Investment	Cash & cash equiv.
Spearman's rho	Investment	Correlation Coefficient	1.000	.857*
		Sig. (2-tailed)	.	.014
		N	7	7
	Cash & cash equiv.	Correlation Coefficient	.857*	1.000
		Sig. (2-tailed)	.014	.
		N	7	7

*. Correlation is significant at the 0.05 level (2-tailed).
Source: SPSS Ver. 25

Discussion of Result: Table 4 above shows that Spearman's *rho*is .867 while the sig. value (p-value) was .014. This indicates that a strong and positive relationship exist between investment attitude of SIBs in Nigeria and the volume of cash held, thus implying that SIBs held more cash in the pre and post economic recession periods in Nigeria in preparedness to take advantage of investment opportunities.

Decision: Do not accept the null hypothesis (rejection)if p-value (sig) is less than 0.05, otherwise accept.Since p-value is less than 0.05, we accept the alternate hypothesis, and this implies that *there is a significant relationship between investments of Systematically Important Banks in Nigeria and the volume of cash held by them in the pre and post economic recession periods.*

CONCLUSION AND RECOMMENDATIONS

Having observed that Investing activities and Financing activities have significant effect on the Cash holdings of SIBs in the pre and post recession periods of Nigeria and that there is a significant relationship between investments of Systematically Important Banks in Nigeria and the volume of cash held by them in the pre and post economic recession periods, it could be concluded that in times of recession, cash could possible serve as a good way to ride out the storm without having to ask existing shareholders or the bank for extra funding. Accordingly, financial crisis may have changed the cash holding policies behaviour of SIBs and this is believed to have a long term effect.

The study therefore recommends that Systematically Important Banks (SIBs) should be accorded reliable assistance by appropriate regulatory agencies into observing periodic self assessment of their cash holding choices towards ensuring that such decisions does not in anyway pose significant threat to the organisation's going concern in the future.Also, given the magnitude of interest SIBs have in investment, renewed effort should hence be made at ensuring that such Investments are profitable onespursued at manageable risk levels.

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