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Influences of financial slack resources and risk-taking behaviour on investment decisions of insurance companies in Nigeria (1996 – 2021)

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ABSTRACT

This study examined the influences of financial slack resources and risk taking behaviour on investment decisions of insurance companies in Nigeria. Insurance companies in Nigeria may be crippled by weak risk taking behavior as well as large catastrophic loss if their financial slack resources, current assets, working capital, size, previous performance and other internal reserves are not large enough to cover certain risk exposures, which will in turn discourage them from taking more risk especially in making investment decisions. The researcher employed the use of ex post facto design in which secondary data were obtained from CBN statistical Bulletin from 1996 to 2021. The data were analyzed using the inferential methods of Co-integration bound Test, short run and long run Autoregressive Distributed Lags (ARDL) estimation tests. The finding was that financial slack resources influenced investment decisions of insurance companies in Nigeria positively and significantly in the short-run while risk taking behaviour maintained negative and insignificant influence. On the contrary, there are no significant long-run effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria. Recommendations were that there is need for insurance companies to maintain large amount of financial slack keeping higher level of liquidity, more working capital and current assets reserves and channel these financial slack resources into short term investments. Efforts should be made to improve the company risk taking behaviour on investment decisions for higher returns on investments.

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1. INTRODUCTION

Insurance firms underwrite risks inherent in most sectors of the economy and provide peace of mind to economic entities. The multiplier effect of this risk-taking business enhances rapid social, technological, environmental and economic growth and development. Insurance companies in Nigeria play an important role in the financial services sector by lowering total risk, contributing to economic growth and efficient resource allocation, reducing transaction costs, creating liquidity, facilitating economics of scale and spreading financial losses. Over the years, the insurance industry in Nigeria has underperformed its role in the financial subsector of the economy when compared with its counterpart in other part of the world. Nevertheless, Nigeria is progressively gearing itself towards a brighter future and a growing insurance industry aid in the development and growth of the economy. It encourages savings and investment, job creation and growth in capital markets and financial assets. Over the past decade, the Nigeria insurance industry has grown steadily and this can be shown in the total premiums. Progressively, this can be seen in the introduction of new insurance products in the growing mortgage and housing sector which is evidenced in the increased internal reserves of insurance companies in Nigeria and their willingness to take more risk. This suggests that firms would be interested in action that drives their risk taking capacity and one of such factors is an organisation's slack resources. Bourgeous (1981) defines an organisational slack as "that cushion of actual or potential resources which allows an organisation to adapt successfully to internal pressures for adjustment or to external for change in policy as well as to initiate changes in strategy with respect to the external environment. Since the organisational slack can have a variety of discretionary levels, for the purpose of this study, the most discretionary level is used which is the financial slack (Sharfman, *et al*., 1988). The financial slack refers to the unabsorbed corporate resources such as cash holding, current asset, working capital, cash equivalents and receivables without commitment to any current purpose and is a highly flexible source of capital which can be invested into a wide range of activities (Amahalu and Beatrice, 2017).

Financial slack resources refer to availability of discretionary finances such as to top management, and it reflects the degree of freedom with which management can spend money on both essential and non-essential business activities. From a slack resources theory perspective, greater financial slack leads to greater financial support for social and environmental sustainability causes. With financial slack resources, insurance companies can reduce unexpected and costly surprises and effective allocation of resources could be done efficiently. Insurance companies in Nigeria can also have improved communication and provide senior management a concise summary of threats i.e in terms of risk taking capability which can be faced by the organisation, thus ultimately helping them in better decision making. Also, financial slack has a dramatic impact on the solvency and risk taking level of insurance companies in Nigeria.

Basic attitudes toward risk ought to have bearing on insurance consumption and financial slack resources as well as in explaining insurance buying behaviour. Insurance companies engaging in their main business activities, often hold large investment portfolios in various segment of the financial market (Chen and Yu, 2007). For example, though the main business of insurance companies is to underwrite life or non-life policies, collect premiums and manage claim pay-outs, they also hold large investment portfolios. Investment of funds generated from a prudent underwriting activity does not only add on to company's profitability but also to capital performance which is relevant in the financial stability of the company. The type of the insurance business will inform the sort of investment an insurer is likely to venture. The long term nature of life insurance, allows life insurers to venture into long term investments. Besides due to short term liabilities experience by non-life insurance, insurers are likely to go into short term investment. For an insurance company to achieve strategic investment goals, that is maximizes investment profit, the main task of an insurance investor will be to manage an investment portfolio that will generate maximum income with tolerable risk level. However, how insurers adjust their investment risk taking behaviour against the risk emanated from their main business operation depends on their investment decisions, which is a paramount issue to both the insurers, regulators and policyholders (Zou, *et al*., 2012; Akpan and Joseph, 2017). Investment decision is regarded as the capacity of an insurance firm to take a decision of investing its assets in a portfolio.

Insurance companies invest in government securities, loans and housing or real estate development, among others (Ojo,

2010). According to Insurance Act of 2003, Section 25(1) "an insurer shall at all times in respect of the insurance transacted by it in Nigeria, invest and hold invested in Nigeria assets equivalent to not less than the amount of policy holder's funds in such accounts of the insurer". This law has redefined investment decisions of insurance companies in Nigeria, which encouraged insurance companies to hold assets in government securities, stock, shares and bonds, mortgages and loans, cash and bills receivable and miscellaneous items (Aderibigbe, 2004). The investment decision objectives of insurance companies are mainly determined by safety, liquidity and growth. These determinants, which form the framework of investment portfolio structure of these firms are based on the nature of liabilities of the insurance firms, their operational focus and guidelines of the industry regulators which vary from one country to another and the stages of development in the various countries. The operations and nature of insurance companies globally seeks to provide protection and carefully select the suitable technique to manage risk. In Nigeria today, the nature has not changed as insurance companies are faced with the responsibility of accepting risk application from the insured and corporate organisation. Again, insurance companies in Nigeria may be crippled by weak risk taking behavior as well as large catastrophic loss if their financial slack resources, current assets, working capital, size and other internal reserves are not large enough to cover certain risk exposures, which will in turn discourage them from taking more risk especially in making investment decisions. This focuses on risk taking appetite, which suggests that the more or larger insurers' size, current asset, working capital and other internal reserves/slack resources, the more the insurers will take risk and vice-versa. But this axiom does not seems to be sufficiently investigated scientifically to establish its validity or otherwise.

Moreover, approximately 1.5% of all Nigerian adults are covered by insurance (Amahalu and Beatrice, 2017). Uninsured Nigerians face risks and require better mechanisms to mitigate these risks. Insurance companies with less size, current asset, working capital and other internal reserves tend to leave out these uninsured Nigerians. Only insurance companies with abundance driven reserves take more risk and let out certain class of the society. This does not appear to help insurers make optimum use and strategic investments decision concerning their financial slacks in a manner that build their capacity and growth. Insurance companies offer solutions to risk faced by players in order industries. Individuals and even business firms transfer their uncertainties to insurance firms whose financial performance is determined by asset utilisation, relative profitability and company's financial leverage (i.e financial slack). This gives insurance companies hedge in making good strategic decisions on investments portfolio based on the accumulated financial slack resources. It is on this backdrop that this study seeks to examine the influences of financial slack resources and risk taking behaviour on investment decisions of insurance companies in Nigeria (1996 – 2021). From this objective, the study hypothesizes in a null form that there are no significant short-run and long-run effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Overview of Slack

Slack is the pool of resources in an organization that is in excess of the minimum necessary to sustain routine operations, it is a central concept in a behavioral theory of the firm (Bromiley, 2005; Cyert and March, 1963). How managers use slack and slack's performance effects have long been debated in the strategy literature (e.g., Bourgeois, 1981; Bradley *et al.*, 2011; George, 2005; Kim and Bettis, 2014; Lecuona and Reitzig, 2014; Mousa and Reed, 2013; Natividad, 2013; Tan and Peng, 2003; Wiseman and Bromiley, 1996). Managers can use slack to stabilize their firm's core activities and foster strategic behavior that creates value (Cyert and March, 1963; Thompson, 1967). Alternatively, managers can also use slack for inefficient and value-destroying purposes (Jensen and Meckling, 1976; Leibenstein, 1966; Williamson, 1963). Empirical research has been similarly equivocal about the performance effects of slack, even when considering the existence of distinct types of slack resources (e.g., unabsorbed versus absorbed) and their differential redeployability. Prior conflicting findings may stem from researchers' lack of attention to the environment in which managers allocate and use slack resources. Yet, the environmental influence on managers' goals appears to be stronger now than when Cyert and March (1963) was written. Conceptually, this environment is broader than the firm's industry. It also includes for instance the cultural, economic, legal and political institutions that influence how managers make decisions on the deployment and use of resources (North, 1990). Most prior studies, however, have examined individual countries, without examining their institutional environments, which are crucial to explaining managerial behavior (Meyer and Rowan, 1977; Oliver, 1991).

The behavioral perspective focuses on the allocation of slack within firms. It suggests that slack plays a positive stabilizing and adaptive function and thus contributes to firm performance, although too much slack also has its costs and can lower performance. Though prior empirical studies have primarily focused on the performance effects of financial slack (e.g George, 2005), it is important to test a behavioral perspective on a broader set of slack resources, including those slack resources (such as human resources slack) that have been less rigorously investigated, to determine its generalizability. A priori, the differential performance effects of distinct slack resources are unclear (Tan and Peng, 2003). However, behavioral theorists have noted that slack should not be considered in a generic sense (Wiseman and Bromiley, 1996). Indeed, financial resources are managed differently from human resources. For instance, these resources are different in terms of their divisibility and fungibility and hence their stickiness (Mishina, *et al.*, 2004). Such differences could affect the ability of managers to redeploy these resources (Bourgeois and Singh, 1983; Wang, *et al.*, 2016). In addition, different national institutions are more (or less) likely to affect managers' redeployment of distinct types of slack resources. Overall, these complexities suggest a need to examine the effects of distinct types of slack resources and the power of distinct stakeholders, who provide the firm with these critical resources.

In the behavioral theory of the firm, slack should mainly positively affect firm performance as it plays both a stabilizing and adaptive role (Cyert and March, 1963) by providing managers with the necessary resources to tackle many organizational challenges. Indeed, slack plays a stabilizing role in several ways (Bourgeois, 1981). It enables managers to induce key stakeholders (e.g., employees, suppliers) to stick with the organization by allowing payments to members of the coalition in excess of what is required to maintain the organization (Cyert and March, 1963). Without slack there is significantly less leeway to, for instance, provide key employees perquisites (e.g., extra financial incentives and slack time) to keep them tied to the organization. When key stakeholders cease their relationships with the organization, such disruptions can adversely impact firm performance. In knowledge intensive settings, employee mobility negatively influences firm performance, particularly when former employees create new ventures rather than join established firms. Moreover, such exits often result in the loss of valuable knowledge. Managers can valuably use slack resources to avoid such relationships being ended prematurely. Slack enables managers to reduce potentially dysfunctional conflicts that arise between organizational subunits because of competition over scarce resources (Pondy, 1967). Given bounded rationality, complex organizations function by splitting work into subunits or groups which focus on smaller, more manageable problems. Subunits, however, face different organizational problems, perceive the same problems differently and may have different and even conflicting goals (Cyert and March, 1963). With sufficient slack, managers can satisfy divergent subunit goals without subunits turning into contending factions. Moreover, for those problems that do arise, slack allows for those problems to be aired and solved more easily; indeed, with sufficient slack, managers can come up with a solution for every problem‖ (Moch and Pondy, 1977). Managers may also employ slack to buffer the technical core of the organization from disruptions arising from competition over resources (Cyert and March, 1963; Thompson, 1967). Without any slack or internal shock, absorbers built into their workflow (Bourgeois, 1981), organizations will experience breakdowns in their routine operations, even with the smallest possible internal disruption. Thus, slack buffers interdependent organizational units, which, in a boundedly rational world, cannot perfectly coordinate their activities (Bourgeois, 1981). Slack resources also play an adaptive role as a facilitator of strategic behavior in organizations, fostering innovation and experimentation (Bourgeois, 1981). They allow organizations to more safely experiment with highly uncertain (but potentially lucrative) projects,

fostering ―a culture of experimentation‖ (Nohria and Gulati, 1996). Slack further enables slack search; i.e., it allows managers to explore projects which have strong support from scientists or other corporate champions, but which would not have been approved in the face of resource scarcity (Cyert and March, 1963; Nohria and Gulati, 1996). However, while slack serves a positive function‖, a behavioral perspective also recognizes that maintaining slack costs money so too much slack can lower profitability . Building on the idea coined by Cyert and March (1963) that conflicts over budgets are less intense and managers are less stringent when slack is abundant, Nohria and Gulati (1996) further argue that too much slack diminishes discipline over innovative projects. Finally, managers who control too much slack may become complacent and feel overly optimistic and as a consequence become less likely to experiment or take strategic actions (Kim, *et al*., 2008). Indeed, the presence of more resources leads decision makers to believe they are able to react effectively to competitive attacks, but also makes them less motivated to do so. Overall, organizations are expected to have a desirable level of slack, where too little slack creates many organizational problems and too much slack is equally untenable (Bourgeois, 1981; Sharfman, *et al*., 1988). In a similar vein, Bromiley (2005) states just as individuals have some desirable level of fatness; organizations can have too little or too much slack.

2.1.2 Concept of Slack Resources

Slack resources can be defined as "the pool of resources in an organization that is in excess of the minimum necessary to produce a given level of organizational output" (Nohria and Gulati, 1996). These resources may include an excess of inputs, such as labor and machinery that are not working at full capacity, opportunity costs derived from underinvestment in technologies that may generate greater margins and revenues, or financial slack (Burgeois and Singh, 1983; Meyer 1982; Tan 2003). This work follows the perspective of most studies that have maintained a focus on financial slack resources as a measure of excess resources within organizations. Whereas certain levels of slack resources are considered positive for the organization, in that they constitute a financial cushion that protects the company against unpredicted losses or cash flow shortages (e.g., Rajagopalan, 1997), there is still an enduring debate over the optimal level of lack resources, since some scholars consider that an "excess of slack" is associated with loss of efficiency (e.g., Wu and Tu, 2007). Thus, companies that exhibit high levels of slack may overlook their production and management approaches, since an inefficient use of slack resources, although suboptimal, is it not translated into negative results (Nohria and Gulati, 1996).

Slack resources form a continuum, ranging from unabsorbed to absorbed slack (Singh, 1986). Unabsorbed slack consists of those resources which are currently uncommitted and are readily available for redeployment within firms, e.g cash holding, working capital, cash equivalent (Bourgeois and Singh, 1983). Cash resources represent the most easily redeployable resources and therefore managers have the greatest discretion in allocating them to alternative uses (George, 2005). Absorbed slack consists of those resources that are already tied to current operations, but may be recovered, with more managerial effort and time. Examples are human resources (HR), accounts receivables and overhead expenses (Bourgeois and Singh, 1983; Voss, *et al*., 2008). The allocation and deployment of slack resources are likely to dominate managerial decision making in firms (George, 2005). Typically, these firms lack access to and are often unwilling to access external capital markets. Consequently, though managers in public firms can smooth their activities and invest when appropriate and hence often do not stockpile cash in response to an improvement in performance, private firms often stockpile cash whenever they have an opportunity to do so. Small and medium sized private firms are also usually constrained in their access to the labor market. They frequently face more difficulties when recruiting employees because they are often unknown and lack legitimacy as an employer-of-choice compared to larger, public firms (Williamson, 2000).

2.1.3 Financial Slack Resources of Insurance Companies

According to Voss, Sirdeshmukh, and Voss (2008) organizations accumulate four different types of slack, financial slack, operational slack, customer relational slack, and human resource slack. The financial slack is financial resources in excess of what are required to maintain the organization. It differs from other types of slack in two dimensions; rarity and absorption. Financial slack is related to financial resources with low rarity and low absorption (Voss, *et al*., 2008). In particular, these are high liquid assets (cash, short-term investments, receivables, etc.) and the ability to receive financing (credit lines, reserve borrowing capacity, etc.). Such resources are not rare because there are many ways to be generated internally or acquired from financial markets in short. In addition, financial resources have the lowest degree of absorption because its perfect divisibility, which facilitates easy and quick allocation in different activities. Another characteristic of financial slack is heterogeneity. According to classification of Bourgeois and Singh (1983) financial slack can be divided in three parts – available, recoverable and potential slack. Available slack includes all available financial resources not included in any specific activity. Recoverable slack refers to financial resources involved in a certain activity but can easily be used for something else (for example receivables, inventories, securities). Potential slack consists of financial resources that can be provided by additional financing from external sources and depends on current level of debt. Financial slack, like financial reserves, is a buffer that not only covers the losses from changes in the external environment, but also cushions the internal shocks arising from conflicts in coalition of stockholders (Sharfman, Wolf, Chase and Tansik, 1988). The concept of financial slack extends the view of financial reserves as a buffer with the idea that available financial resources facilitate corporate development and growth. In this regard, financial slack has both passive function as protection and active function as resource for investments and innovation. Insurance companies that maintain a financial slack have additional resources and are able to benefit from good investment opportunities. This is particularly valuable in an environment that requires constant innovation. It is known that innovation processes are associated with a very high degree of uncertainty and there is no guarantee of success. Financial slack makes it possible for companies to innovate without diverting from current business activities.

2.1.4 Current Asset Financial Slack Resources of Insurance Companies

Current asset ratio is the ratio of current asset to total assets. All assets which are acquired for reselling during the course of business in order to get cash are to be treated as current assets. Cash is legal tender or coins that can be used to exchange goods, debt or services. Sometimes it also includes the value of assets that can be converted into cash immediately, as reported by a company. The first function of current asset management is to secure the short term normal business activities, manage resources and enhance liquidity. The essential objective of this practice is to reduce the percentage of liquid assets held by insurance companies in order to fulfill their ongoing activities on one hand, and on the another hand, to achieve a sufficient level of current asset ratio to empower the company to obtain trade discounts to achieve acceptable credit rating and to meet unexpected cash requirements. Good current asset ratio has many advantages related directly to investment activities, especially in flexibility and capitalizing on opportunities. Insurance companies with high current assets can take advantage of more investment opportunities without being too restricted by capital, ensure adequate capital for planned or unplanned opportunities (business expansion, market opportunities during the financial crisis, when unexpected news brings a stock price down, real estate deal, business opportunities, and so on) (Ogundipe, Ogundipe, and Ajao, 2012).

Availability of current assets allows firms to take advantage of the moment. Insurance companies can make profitable investment deals that have a huge impact on their continuity whether for restructuring purposes or for taking advantage of new opportunities. On the other hand, the current asset decision must be sound, thorough and logical in order to avoid the negative impact of holding too much current asset. Regarding current asset holdings, a similar discussion was proposed by past research. The static trade-off model of liquid assets, by Miller and Orr (1966), predicts that firms balance the marginal cost of holding current asset, which would be the opportunity cost of holding no interest bearing money, versus the benefits of holding current asset, mainly argued as protecting future investments from being prevented due to a cash shortage. Optimum current asset would be set when marginal cost and benefit intercept. It follows from the existence of an optimum value for current asset holdings that the cash policy can impact firm value (Miller and Orr, 1966 as cited in Tiago and Joao 2014). Moreover, in a financial market characterized as such, it is interesting to assess how financing and cash policies can affect firm value. Due to high costs, is debt perceived as negative by investors, and if yes, does the maturity of

debt (short or long term) influence firm value differently? With a high opportunity cost of holding cash coupled with the possibility of facing restrictions to finance future investments due to financing cost escalation, how is the cash holdings position of a firm priced by investors in terms of impact on firm value?

Although rapid developments have considerably enriched our understanding of the factors driving firms' current asset holdings, the literature has paid little attention to whether cash policy has a real effect on firms' day-to-day operations. A cash-rich firm can use its war chest to finance competitive strategies. The study also found that a firm can rely on a strong balance sheet to hurt rivals' bottom lines and prospects through aggressive pricing. More generally, a firm may use its current asset reserves to fund a number of alternative competitive policies such as the location of stores or plants, the construction of efficient distribution networks, advertising targeted against rivals, or even the employment of more productive workers. From a different perspective, the study concluded that a firm's stock of current asset can signal the possibility of aggressive behavior, thereby distorting competitors' actions in the product market. Accordingly, one can view current asset holdings as a preemptive device that may affect, for instance, rivals' entry or capacity expansion decisions (Benoit, 2004). Ferreira and Vilela (2004) investigated the determinants of corporate current asset holdings using an empirical investigation from a sample of publicly traded firms from 1987 to 2000 in EMU countries which included Germany, France, Netherlands, Italy, Spain, Finland, Belgium, Austria, Ireland, Luxemburg, Greece and Portugal. The results suggested that current asset holdings are positively affected by the investment opportunity set and cash flows and negatively affected by asset's liquidity, leverage and size. Bank debt and current asset holdings are negatively related, which supports that a close relationship with banks allows the firm to hold less current asset for precautionary reasons. Firms in countries with superior investor protection and concentrated ownership hold less current asset, supporting the role of managerial discretion agency costs in explaining current asset levels.

Frésard (2010) found evidence that firms holding higher current asset than their competition achieve better performance and profitability when measured by return on assets. The study presented evidence that firm's market-share increased than that of their competitors as a result of increasing levels of corporate current asset holdings. The firm employs effective capital management to benefit from operational competitive advantages whatever the economic climate is (Vuorikari, 2012). Return on equity tells what percentage of profit that company makes for every monetary unity of equity invested in the company. ROE does not specify how much cash will be returned to the shareholders, since that depends on company's decision about dividend payments and on how much the stock price appreciates. However, it's a good indication of generating a return that is worth whatever risk the investment may entail.

2.1.5 *Working Capital Financial Slack Resources of Insurance Companies*

Normally most of the insurance **c**ompanies keep their awareness with the short term financing sources and specially concentrate on their working capital management. Working capital assists the insurance **c**ompanies to meet their short-term obligations. If this sustenance deteriorates, consequently does the company's aptitude to fund operations. Study indicates that the management spends substantial time every day to solve the problem concerning working capital resolution for the rationale current assets are short-term reserves transformed into other asset types. While current liabilities, the firm is liable for paying these obligations on an appropriate basis, liquidity for the in progress firm is not dependent relative on the insolvency value of its assets, other than on the effective cash generation (Adams, Hardwick and Zou, 2008). Taken together, result on the level of working capital components become every day, repetitive, uninteresting and time overriding. It involves the choice of the quantity and composition of current assets and how to financing these assets. Current assets comprise all assets that facilitate the standard course of business turn in to the cash within a small period, normally within a year. The final goal of any firm in any industry is to maximize the wealth that increases profit overtime.

However, defensive liquidity of the firm is a significant idea; the predicament is that rising profits at the cost of liquidity be able to bring serious problems to the firm, for that reason, there is a necessity to exchange between these two objectives of the company. One objective should not be at expense of the other because together they have their importance. If we are not bothered about profit, we cannot live for a longer period. Consecutively, if we don't care concerning liquidity, we might experience the problem of insolvency or bankruptcy. Working capital management affects the profitability of the firm, for the reasons depicted; should have appropriate consideration and will. Many insurance **c**ompanies include a most favourable level of working capital that capitalizes on their worth. Some of the researchers reveal that when insurance companies have large amount of working capital they lead to generate more profit of those particular firms. Working capital plays an important role in any financial firm including insurance companies; it has an impact to accomplishment or breakdown of firms in big businesses for the reason that it affects risk taking behaviour of insurance companies and profitability. Expecting that, the idea contributes better understanding of relationship between working capital and profitability. This amount of working capital helps management in promoting risk taking behaviour of insurance companies in order to create value for their shareholder's welfare.

2.1.6 *Concept of Firm's Size and Performance*

Size is positively related to leverage, larger firms are usually more diversified and have more stable cash flow. The probability of bankruptcy is smaller for large firms compared with small ones. Many studies suggest that large firms prefer to issue long-term debt while small firms choose short-term debt to finance their projects. Large firms bear lower costs in issuing debt and equity compared with small firms, Michaelas, *et al*. (1999) because of the advantage of economies of scale and bargaining power with creditors. The concept of organizational performance is very common in the academic literature although its definition is difficult because of its various meanings. For this reason, there is not a universally accepted definition of this concept. In the '50s, organizational performance defined as the extent to which organizations, viewed as a social system fulfilled their objectives. Thus, performance evaluation during this time was focused on work, people and organizational structure. Later in the 60s and 70s, organizations began to explore new ways to evaluate their performance as such performance was defined as an organization's ability to exploit its environment for accessing and using the limited resources (Yuchtman and Seashore, 1967). The years 80s and 90s were marked by the realization that the identification of organizational objectives is more complex than initially considered. Managers began to understand that an organization is successful if it accomplishes its goals (effectiveness) using a minimum of resources (efficiency). Thus, organizational theories that followed supported the idea of an organization that achieves its performance objectives based on the constraints imposed by the limited resources (Lusthaus and Adrien, 1998). In this context, profit became one of the many indicators of performance. Accordingly, there have been various measures of financial performance. For example return on sales reveals how much a company earns in relation to its sales, return on assets determines an organization‘s ability to make use of its assets and return on equity reveals what return investors take for their investments. The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide. Traditionally, the success of a manufacturing system or company has been evaluated by the use of financial measures (Tangen, 2003). The authors, Lebans and Euske (2006) provide a set of definitions to illustrate the concept of organizational performance: performance is a set of financial and nonfinancial indicators which offer information on the degree of achievement of objectives and results after performance is dynamic, requiring judgment and interpretation; performance may be illustrated by using a causal model that describes how current actions may affect future results; performance may be understood differently depending on the person involved in the assessment of the organizational performance (e.g. performance can be understood differently from a person within the organization compared to one from outside); to define the concept of performance is necessary to know its elements characteristic to each area of responsibility; and to report an organization's performance level, it is necessary to quantify the results.

Generally, firm's performance is very essential to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility in achieving the goal legally, not against the law, and conforming to the morale and ethic. Performance also, is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage. Literature

usually distinguishes between two types of firm performance, financial or economic performance and innovative performance. Financial or economic performance is often expressed in terms of growth of sales, turnover, employment, or stock prices, whereas innovative performance is generally expressed in terms of expenditures, patents, percentage of innovative sales, or self-reported innovations Although both types of performance are often inter-related (Damanpour and Evan, 1984), literature often uses both types of performance as separate concepts or only focuses on one of the two. (Knoben and Oerlemans, 2006) It is important also to note that there have been many studies on performance measurement of financial institutions. According to Sahoni (2010), it becomes necessary for business to appreciate as to what creates performance in an organization, since the focus of every organization is so tied to its performance measurement. Lebas and Euske (2002) defined performance as ―doing today what will lead to measured value outcomes tomorrow.‖ Therefore, performance measurement then is concerned with measuring this performance. While Business Performance gives the outcome of investment of a company over a given period of time, business performance then, is the means of providing the most effective, recommended and accurate result of company's activities (Rogers and Wright, 1998). On the other hand, Key Performance indicators are the criteria that companies use to assess their performance. In other words, the corporate performance is a product of the activities and return on investment in a given period. In financial literature, different criteria are used for measuring performance, such as return on assets, Tobin index, investment return, return on equity, economic value added and earnings per share. In each of these criteria, there are advantages and limitations (Neely, 2002). Company performance is the measurement of what had been achieved by a company which shows good condition for certain period of time. The purpose of measuring the achievement is to obtain useful information related to flow of fund, the use of fund, effectiveness, and efficiency (Lebas and Euske, 2002). Besides, the information can also motivate the managers to make the best decisions. There are two main forms of measurement prevalent in the organization: performance measurement and evaluation. Some practitioners use these terms interchangeably. Therefore, evaluation uses quantitative research to determine whether a program achieves its intended results, or outcomes (Neely, 2002). Performance measurement, on the other hand, measures both social impact and organizational performance, though in a less rigorous manner. In recent years performance measurement has gained popularity, especially as shareholders and regulators look for ways to compare organization's efficiency within the periods. A measure (or metric) is a quantitative value that can be used for purposes of comparison (Simmons, 2000).

The key performance indicators are the criteria that a company uses to assess its own performance. No single indicator gives a full picture of the company's success; rather they must be considered in tandem to create a comprehensive overview. Performance Indicators, also known as Success Indicators, help an organization define and measure progress toward organizational goals. Once an organization has analyzed its mission, identified all its stakeholders, and defined its goals, it needs a way to measure progress toward those goals. Therefore, key performance indicators are those measurements (John, 2010). Whatever key performance indicators are selected, they must reflect the organization's goals, they must be key to its success, and they must be quantifiable (measurable). Key performance indicators usually are long-term considerations. The definition of what they are and how they are measured do not change often. The goals for a particular key performance indicator may change as the organization's goals change, or as it gets closer to achieving a goal. They will differ depending on the organization. A business may have as one of its key performance Indicators the percentage of its income that comes from return customers. In order to survive and succeed, firms need to set strategic directions, establish goals, execute decisions and monitor their state and behavior as they move towards their goal. Once a firm becomes large enough that a single manager cannot sense the firm's current state and cannot control its behavior alone, the firm must use performance measurement and control systems to replace the eyes and ears of the beleaguered manager. Several dozen vendors provide business performance measurement information technology solutions. These tools have leveraged the latest advancements in data and application integration approaches, web-based charting and reporting, statistical analysis, artificial intelligence, machine learning and expert system technology (Kellen, 2003). Many studies have shown that traditional accounting ratios play a vital role in predicting the future performance of a firm while others argued that accounting profitability measures are affected by biases and distortions.

2.1.7 Risk Taking Behaviour of Insurance Companies

Risk taking behaviour is one of the factors that can interact with capital structure to give better explanation of firm performance (Akpan, *et al.,* 2017). Theoretically, the prospect theory predicts that a firm's risk profile can affect capital-performance relation (Holmes, *et al*., 2011; Shimizu, 2007 etc). However, the axiom, *'the higher the risk, the higher the return'* suggests further that risk-taking by firms can moderate the relationship between capital and performance. Empirically, Baranoff, *et al.,* (2007), Shim and Lee (2017) and, Dan-Jumbo (2016) showed that risk-taking behaviour can affect the deployment of capital vis-à-vis firm performance; but these authors never tested these assumptions with known capital structure and performance proxies within insurance sector in a developing economy like Nigeria. Thus, while some literatures suggest that higher risk taking can leads to higher returns, some studies suggest otherwise. The dynamic trade-off theory predicts that a firm chooses capital structure based on the attributes that determined the costs and benefits of using debt dynamically (Onaolapo and Kajola, 2010). One of the attribute is tax benefits of debt which is traded off with costs of debt. RBC requires insurance firms to boost capital with either debt or equity. Therefore, the choice of debt or equity is dependent on the expected benefits of debt and such choice would have an effect on firm performance. However, prospect theory has been used in studies linking capital structure, risk management and firm performance. The theory states that firms exhibit both risk-seeking and risk-averting behavior when the outcome is either below or above reference points respectively (Holmes, *et al*., 2011; Shimizu, 2007). By inference, firms would seek risk when performance is low. Logically, the essence of seeking risk is probably to improve performance. This would imply that high risk taking would result in high performance; and because risk seeking involves application and deployment of funds (equity or debt), the relationship between these funds and firm performance could be moderated by the level of risk taken by the firm. Prospect theory thus explains a firm's behavior in relation to risk-return association (Akpan, *et al.,* 2017).

Risk is an inextricable part of organizational life and is the bedrock of any successful business (Dan-Jumbo, 2016). Empirical outcomes show that capital and risk-taking can interact to better explain firm performance (Mankaï and Belgacem, 2015; Cheng and Weiss, 2013; Jokipii and Milne, 2011). It is argued that insurer's safety (performance) depends jointly on the level of total risk in the insurer's asset-liability portfolio as well as its capitalization (Shim, 2010). Unregulated firms take excessive risk in order to maximize its value (Shim, 2010). All of these show that risk-taking behaviuor of firms is an important factor in the relationship between the firm's capital structure and its performance. Risk-taking is defined as choice among alternative outcomes under conditions of probabilistic uncertainty (Berglund, 2007); or the propensity to engage in behaviours that have the potential to be harmful or dangerous, yet at the same time provide the opportunity for some kind of outcome that can be perceived as positive (Allah and Nakhaie, 2011); or the engagement of significant resources to activities that have significant possibilities of failure, such as incurring heavy debt or making large resource commitments to grasp potential high benefits (Hamid, Rangel, Taib, and Thurasamy, 2013). Conventional corporate finance theorists and practitioners seem to treat capital and risk separately whereas there are evidences that a firm's capital, risk and performance are mutually inclusive (Shimpi and Re, 2002). Zec (2012) opined that capital (structure) allocation has a link with insurance pricing, risk and performance management and thus serves as an instrument for managing insurance firms. In similar opinion, Baranoff, *et al.* (2007) explained that insurer's capital structure decisions are made within the framework of enterprise risk.

Some empirical studies showed a positive moderation effect of risk-taking on capital and performance (Yung-Chieh, 2016; Vatavu, 2015; Baxter, *et al*., 2013; Hoyt and Liebenberg, 2011). Eikenhout (2015) found negation moderation and Hamidah (2016) found a mixed moderation effect of risk on capital and performance. There are also evidences that empirical research on capital structure, 'risk-taking behaviour', and firm performance were conducted in developed countries and markets and within non insurance firms. A few studies such as Kyereboah-Coleman (2007), Zeitun and Tian (2007), Abor (2007, 2005) among others empirically investigated this relationship in emerging markets. Insurance-specific studies

suggest that risk-taking may have been the missing factor in capital-performance relationship as results show that capital structure did not directly influence insurer's performance and that higher capital requirement was less important for insurance firms (Muhlnickel, *et al*., 2016). Kaya (2015) found that insurers' leverage ratio which measures capital structure had a negative effect on profitability at a very low level. Adams and Buckle (2003) found that highly leveraged, low liquid insurers and reinsurers performed better, meaning that capital structure positively affects insurance performance. They also found that performance was positively related to risk-taking. Moreover, the relationship among capital structure and performance may change because of regional factors (developed or emerging market), or organization types (insurance or noninsurance) (Shyu, 2013).

2.1.8 Financial Slack Resources and Risk Taking Behaviour of Insurance Companies

Resources of financial slack are not rare and can easily be relocated within a company. This makes financial slack appropriate source of financing for new ventures and increases potential for success in long run. On the other hand, management can use free cash and other financial resources in inefficient way. Positive effects of financial slack can be outlined in three directions: greater resilience to external shocks, curbing internal conflicts, and facilitating innovation and development. Financial slack is a buffer from external environment, protecting insurance companies from negative influences on their risk taking behaviour for three main reasons. First, by absorbing variance of external environment, financial slack prevents interruption in internal business processes, increasing organization's efficiency (Thompson, 1967). Second, slack gives the company "leeway in managing changes in response to a changing environment" (Sharfman, *et al*., 1988). Third, financial slack provides resources "to pay the price of a structural design which may stray from the contingent requirements of contextual variables" (Litschert and Bonham, 1978). The value of financial slack as a protective buffer is significant in times of great change in external environment, especially in financial and economic crises.

Second positive effect of financial slack on risk taking behaviour of insurance companies is based on conflict resolution. In behavioral theory of the firm, a firm includes different participants with diverse interests and slack refers to "payments to members of the coalition in excess of what is required to maintain the organization" (Cyert and March, 1963). Thus, slack can diminish conflicts between different groups and decrease cost of control (Moch and Pondy, 1977). Resolution of conflicts and reduced cost of control due to financial slack improve risk taking behaviour of insurance companies. Third positive effect of financial slack is related to strategic advantages and growth potential of firm. According to resource-based theory, acquisition of specific resources gives competitive advantages to the firm (Penrose, 1959). Financial slack is a valuable resource that can make firm more competitive and "take advantage of opportunities afforded by environment" (Thompson, 1967). Unused slack resources encourage firm to experiment with new strategies. Thus, insurance companies can innovate and obtain significant strategic advantages, which increases vastly performance in long run. In addition, financial slack facilitates innovation by diminishing risk aversion of managers. Available slack protects from losses and makes "experiments" more acceptable for management (Singh, 1986). Insurance companies with financial slack react more aggressively to shifting environmental demands, because of increased risk appetite of their managers (Cheng and Kesner, 1997). Financial slack creates more strategic options for firm to obtain competitive advantages because it provides resources to exploit opportunities when external environment changes (Moses, 1992; Chiu, Liaw, 2009). This strategic advantage is highly valuable in economic downturns and crises when insurance companies with financial slack can acquire strategic resources for price below their economic value.

Financial slack is not always beneficial for insurance companies. Unused slack resources create opportunity cost, which decrease profitability of business and worsen firm performance. Besides opportunity cost, financial slack has negative influence because it aggravates agency problems and cost. The separation of ownership and control creates agency conflict between shareholders and managers and decrease performance (Jensen and Meckling, 1976). In this context, financial slack gives to managers excess resources for their opportunistic behavior, which does not serve to shareholder interests and destroys value. Financial slack can harm insurance companies performance in four directions. First, financial slack is a cushion, protecting firm from negative external impacts, therefore it reduces the pressure on management to seek successful strategies. Firms become less sensitive to developments in environment and make wrong decisions (Starbuck, Greve and Hedberg 1978). In addition, unused resources may give false sense of safety and slow down the manager's reactions (Cheng and Kesner, 1997).

Second, excess resources may diminish firm's innovation ability. The buffer of financial slack allows the company to exist without introducing new products, technologies and processes. Another impediment to innovation is the lower discipline of management (Jensen, 1993; Nohria and Gulati, 1996). Abundant financial resources do not force managers to invest in the best projects because errors in projects are compensated with additional financing. Third, financial slack creates reserves, which compensate the losses from bad decisions. This reduces the criteria for "feasibility" and leads to projects and decisions with low value (Bourgeois, 1981). This is particularly common in investment decisions, where financial slack supports inefficient investment projects (Jensen, 1986). Fourth, protective buffer of financial slack may encourage irresponsible, reckless, risky, and too optimistic behavior of managers, which is reason for significant losses in long run (Lin, Cheng and Liu, 2009). Reserves create incentive for unnecessary costs and suboptimal use of resources, diminishing firm performance (McGrath and MacMillan, 2000).

2.1.9 Investment Decisions of Insurance Companies

The premiums insurance companies received from the policyholders are invested in securities to generate returns on their investments. A fundamental concept in finance records that investments which carries a higher risk has the potential to generate higher returns. For instance a zero-risk investment such as treasury bills has low returns whiles stock or equity investments has the potential to make investors very wealthy. The nature of insurance business determines the types of investment category insurers are likely to invest their assets. Investment choices are also driven by major macroeconomic factors, like interest rate and inflation which has a direct influence on the investment decision of insurers. A major characteristic of the insurance business is that premium pay out always precedes payment of claims or any benefit. As a result, insurance companies are required to have sufficient liquid assets to meet the obligation of claim payment and also have extra cash available for investment to improve financial performance.

The insurance industry as a financial institution is made up of two distinct markets; the life insurance and the general or nonlife insurance business. The activities of the two markets differ in terms of operation, vulnerability, duration of liability and investments. These differences in activities have significant effects on their investment behaviour. General insurance businesses or non-life insurance providing financial protection cover on physical damages to life and properties are rapidly confronted with uncertainty of loss occurrence and are required to settle policyholders claim payment if the loss of an insured risk occurs. This means funds, in the form of liquid assets must be available to meet the contingency of any claim payment. Hence, general insurers most likely invest larger proportion of funds in short term investments due to the short term nature of rapid loss occurrence of the insured risk. According to Joseph and Yusuf (2021), classes of non-life business include among other things, motor vehicle insurance, general accident insurance, marine/aviation insurance, fire insurance, engineering insurance, oil/gas insurance, bonds credit guarantee/ suretyship insurance as well as miscellaneous insurance.

Life insurance businesses are mostly long term in nature and pay benefit of a certain amount to the insured or their nominated beneficially upon a certain event such as death of the individual who is insured. Life insurance includes insurance business of the following classes; whole life, universal life insurance, funeral policies, endowment, term policies and unit linked product. Life insurance involves the undertaking of liability to pay money on death or the happening of any contingency dependent on the termination of human life. In life insurance, premiums become revenues when they become payable by the policyholder. The long term nature of life business makes insurers channel their funds into long term investment, such as corporate bonds and equity securities (Sunder and Monita, 2014). Life insurers have generally been conservative in their investment activities. Other factors the influences investment

risk taking behaviour are corporate governance variables, example, ownership structure, board size, underwriting risk, regulation, product composition, size and leverage. Every type of investment has characteristics which are unique. Some investments have high risk and others low risk. Due to the nature of non-life business, insurers are rapidly associated with high risk, hence, majority of non-life insurance investment assets are invested in stable and liquid investment categories while life insurers invest more of their assets in equity securities.

2.2 Theoretical Review

2.2.1 Resource-Based View Theory

This theory focuses on investments as a resource which is a driver for competitiveness (Hart, 1995). The level of a company's competitiveness on a global market scale can have major implications for the financial situation of that company and other companies involved in trading with it. In being able to deliver quality services with the edge of getting a better profit-margin, companies can ensure a strong financial position (Conner, 1991). As the financial slack could be allocated to further investments cycle would continue. The reduction in investments could be indicative of the pressures involved in the choices necessary to make for top-level managers during times of financial struggle or distress.

2.2.2 Slack Resources Theory

This states that the free cash flow as a measure of highly discretionary financial slack (Sharfman, *et al.*, 1988). The financial slack provides a cushion for firms during financial distress or as a source of funds from which capital can be reallocated to pursue new investment opportunities (Sharfman, *et al.*, 1988; Bourgeois, 1981). Leaving financial slack unused entails putting the company at risk in other areas due to increased risks of agency problems. It could be that leaving the financial slack unused in a war-chest or similar arrangement would be preferable to investing it in a not very liquid resource where it would cease being able to provide an immediate financial cushion (Bourgeois, 1981). It is preferable to have the company surviving the financial crisis than having the company invest its' financial slack in non-liquid. Any sort of slack in a company plays an important role due to resources availability that can be allocated into social or environmental domains. Corporate slack is the ability to use the available corporate resources and reach a set of goals. One of the functions of slack is defined by Thompson (1967) as a possibility to experiment and broaden the range of strategic focus. In other words, slack creates the possibility to increase engagements. Slack can be kept at a certain level as a backup in a case of an economic downturn or other demanding times (Sharfman, *et al.*, 1988). There are three major factors influencing levels of slack, these are the external environment conditions, features of organization and the values of companies' actors (Sharfman, *et al.*, 1988). For example, a growing market attracts new entrants which increase competition for resources. Different types of slack have different influence on the level of managers' discretion and flexibility to reduce internal pressures from shareholders and stakeholders (Sharfman, *et al.*, 1988). Available resources can either be more or less discretionary, and while more discretionary resources have more possibilities and options of being used, the less discretionary resources have less usage possibilities (Sharfman, *et al.*, 1988). Highly discretionary resources are for example cash flow and low discretionary resources are for example low flexibility of the asset capacity. Slack with no further allocation plan is believed to create agency issues in a form of additional costs or risks.

2.2.3 Portfolio Theory

Portfolio theory by Markowitz (1952) has been broadly used in literature (Balogun, 2013; Hutchinson, Seamer and Chapple, 2015; Mangram, 2013). The portfolio theory is based on the concern of investors and economic agents who acts under uncertainty. This theory focuses on the returns of an investment and the risk associated with the investment portfolio. In finance, the higher the risk, the higher the returns. Investment returns are basically the financial outcome for investors whiles the risk is the uncertainty about the outcome the investment will yield. Two main assumptions on portfolio theory are; the normal distribution of expected return and the condition that individual investors are risk averse. The first assumption means that the expected returns and the risk associated with it are sufficient to explain the distribution of the returns while the second assumption clarifies that investors expects higher returns relative to a given risk taking and vice versa. Amidst insurance expectation to receive higher returns per the risk taking, their choice of investing in a particular portfolio is affected by certain background risk from their operations.

2.3 Empirical Review

Rafailov (2017) studied the relationship between financial slack and performance of Bulgarian firms. The results show positive effects on firm performance, especially for small firms. There are positive effects for both types of slack – available and potential. Some negative influence is found only for the largest companies. The study identifies weak nonlinear relationship between financial slack and performance. This means that negative effects of financial slack will dominate only at very high level. Financial slack is a valuable buffer that makes a firm more robust in an uncertain and changing environment. In addition to this strategic advantage, it mitigates conflicts in organization, stimulates innovation activity of firm, and increases the potential for long-term growth. On the other hand, financial slack has negative effects due to reduced control on management. Abundant financial resources could slow the reaction of firm to changes in environment and stimulate irresponsible and reckless behavior of management.

Vanacker, Collewaert and Zahra (2017) studied the interactions between slack resources, firm performance, and the institutional context: Evidence from privately held European firms. Integrating the behavioral and institutional perspectives, they propose that a country's formal institutions, particularly its legal frameworks, affect managers' deployment of slack resources. Specifically, they explore the moderating effects of creditor and employee rights on the performance effects of slack. Using longitudinal data from 162,633 European private firms in 26 countries, they find that financial slack enhances firm performance at diminishing rates whereas human resource (HR) slack lowers performance at diminishing rates. However, financial slack has a more positive effect on firm performance in countries with weaker creditor rights whereas HR slack has a more negative effect on performance in countries with stronger employee rights. The results provide a richer view of the relationship between slack and firm performance than currently assumed in the literature. Amahalu and Beatrice (2017) assessed the extent at which cash holding affects financial performance of quoted insurance firms in Nigeria. Three hypotheses were formulated in line with objective of the study; Ex-post facto research design and time-series data were adopted and the data for the study were obtained from fact books, annual reports and account of the quoted insurance companies under study. Pearson coefficient of correlation and multiple regression were applied for the test of the three hypothesis formulated with aid of STATA 13 statistical software. Findings showed that cash holding (proxy by cash to total book value of assets and cash) has a positive and statistical significant effect on financial performance (proxy by Return on Asset, Return on Equity and Tobin's Q) at 5% significant level.

Yakob, *et al.* (2014) assessed the financial management efficiency of each insurer/takaful operator in both conventional and takaful industry. We also identify the operating system that is more efficient among the conventional and takaful system which involves 20 firms. The results from the slack-based measure (SBM) - data envelopment analysis (DEA) implied that the average insurers/takaful operators have to improve about 20% if it were to perform the best financial management practice. Clearly, the inefficiency in both functions of financial management is caused by both the input and output dimensions. This study also revealed that takaful operators exhibit a relatively more efficient financial management in terms of risk management than conventional insurers. However, it cannot be confirmed whether one type of operating system is better than the other system in terms of investment management, as the result is mixed.

Cummins, *et al.* (2009) investigated whether risk management was a potential determinant of firm efficiency. They concluded that both activities in the insurers' operation, i.e. risk management and financial intermediary, play a significant role in enhancing a firm's efficiency. Lin and Wen (2008) proved that risk management mechanisms can increase the cost efficiency of property and liability insurers. Empirically, they verified that the cost efficiency can be enhanced by handling the investment risk through the financial derivatives. Conversely, the reinsurance method used to handle underwriting risks did not increase the cost efficiency of insurers. However, neither of these studies makes any attempt to analyse the risk management efficiency of insurers themselves. Ren (2007)

computed a Risk Management Performance Index (RMPI) to reflect the performance of risk management for property-liability insurers. Adopting the same methodology as Brockett et al. (2004) the RAM-DEA model was used to produce performance scoring for each firm, thereby constructing an RMPI. Motivated by the financial intermediary function of the insurer, Hsiao and Su (2006) evaluated the investment performance of life insurers in Taiwan across three different groups of insurers. They used DEA to estimate the efficiency scores and calculated the Malmquist Index to measure the productivity change. They concluded that the performance of an investment is a fundamental factor in the overall performance of the business management.

Akpan, *et al.* (2017) examined the effect of capital structure and the moderation effect of risk-taking behaviour of insurance firms on performance of insurers in Nigeria from 1995 to 2002. This study became necessary as literatures in this area and regime are scarce. Secondary data from financial reports of each insurance firm were used. Descriptive statistics were used to describe the characteristics of the data while a two-stage estimation procedure of the fixed effect and random effect models were used to test the hypothetical framework of the study. Result shows that insurance capital structure (measured by equity ratio) had an insignificant negative effect on insurance performance while it had a significant positive effect on insurance performance if measured by technical provision ratios. On average, risk taking behaviour moderates the relationship between technical provision ratio and insurance performance. This study focused on capital structure and moderation effect of risk on performance of insurers in non risk-based capital era. Further study on risk-based capital era will provide more on performance of insurers before and after the implementation of risk-base capital requirement. These findings provide important insight to managers and regulators and investors by fostering more understanding of how to manipulate insurance capital and which source of fund should be used to embark on risky investment to attain superior performance. This investigation adds to literature on insurance capital structure, regulation and risk management and insurance performance in Nigeria. García-Alcober, *et al.* (2019) studied risk-taking behavior, earnings quality, and bank performance: A profit frontier approach. Their analysis centers on the Spanish banking system, which has been severely affected by the burst of the housing bubble and has undergone substantial restructuring. To test hypotheses, they created a database with information on banks and savings banks, their borrowers (non-financial firms), and the links between them. The study contributed to the literature by considering a novel profit frontier approach. The results showed that more inefficient banks take greater risks in selecting their borrowers, and that this high-taking behavior is not offset by higher interest rates.

3. METHODOLOGY

3.1 Research design

The research design adopted for this study is ex post facto design. The choice of this design is justified by the fact that secondary data which is already in existence were used. Therefore, this design aligns with the use of secondary data to achieve the objectives of the study.

3.2 Study population

There are 58 insurance firms in Nigeria operating with general, life and composite insurance businesses (CBN, 2020). Aggregate data of these companies as contained in the Statistical Bulletin of Central Bank of Nigeria (CBN) and Nigeria Insurance Digest from 1996 -2021 were extracted for analysis using Archival Retrieval Technique (ART) technique.

3.3 Variables of the Study

This study has three classes of variables namely the dependent variable, independents variables and control variable, which are discussed in the subsection that follow. The variables upon which data were collected, their measurement, notations as used in this study as well as *apriori* expectations are presented in Table 1 below:

Table 1. Variable Measurement and econometric notations

Variable	Notation	Measurement	Predicted signs
Dependent:			
Investment decisions of insurance companies	IVD	The natural logarithm of total investment.	
Independent:			
Current asset ratio	CAR	current asset/total assets	+/-
Working capital ratio	WCR	current asset/current liabilities	+/-
Risk taking behaviour of insurance companies	RTB	Mean - value of insurance industry's debt.	+/-
Control:			
Firm Size	SIZ	The natural logarithm of total asset.	+/-
Pervious performance	PPM	The natural logarithm of total premiums.	+/-

3.4 Method of data analysis and model specification

The data were analyzed using the inferential methods. These comprise of Co-integration bound Test, short run and long run Autoregressive Distributed Lags (ARDL) estimation tests. Based on the earlier formulated hypothesis, the functional model for this study is specified below:

$IVD_t = f\ (CAR_t, WCR_t, RTB_t, SIZ_t, PPM_t)$ *Equation* 3.0

where;

IVD_t = Investment decisions of insurance companies in Nigeria at time t.

CAR_t = Current asset ratio at time t.

WCR_t = Working capital ratio at time t.

RTB_t = Risk taking behaviour of insurance companies in Nigeria at time t.

SIZ_t = Size of insurance companies at time t.

PPM_t = Pervious performance of insurance companies at time t.

The researcher adopts the Auto-Regressive Distributive Lag ARDL) modeling, also known as bound testing approach, developed and made popular by Pesaran, Shin and Smith (2001). ARDL is a least square regression containing lags of the dependent and independent variables and usually with notations p, q1, q2,…,qk, where p is the number of lags of the dependent variable, q1 is the number of lags of the first explanatory variable, and qk is the number of lags of the k-th explanatory variables. The underlying ARDL specification for the estimation of both long run and short run effects estimation is expressed in equation 3.1. In estimating both long run and short run dynamics, the original specification as proposed by Pesaran and Shin (1998) and Pesaran, Shin and Smith (2001) is employed below;

$$\gamma t = c0 + c1t + \sum_{i=1}^{P} \Phi iyt - i + \sum_{i=0}^{q} \beta^{1}_{Xt-i} + u_t \qquad Equation\ 3.1$$

$p \geq 1$, $q \leq 0$, for simplicity assuming that the lag order q is the same for all variables. Re-parameterization of the model as:

$$\Delta\gamma t = c0 + c1t - \alpha(\gamma t - 1 - \boldsymbol{\theta}\ \mathbf{x}t) + \sum_{i=1}^{P-1} \psi\gamma i \Delta yt - i + \sum_{i=0}^{q-1} \psi^{1}_{Xi} \Delta x_{t-i} + u_t \qquad Equation\ 3.2$$

Incorporating ARDL models specification for the estimation of both long run and short run effects in the hypothesis is expressed below:

Short run effect;

$$\Delta IVD_t = \pi O + \pi_1 IVD_{t-1} + \pi_2 CAR_{t-1} + \pi_3 WCR_{t-1} + \pi_4 RTB_{t-1} + \pi_5 SIZ_{t-1} + \pi_6 PPM_{t-1} + \sum_{i=1}^{p} \alpha i \Delta IVD_{t-I} + \sum_{j=1}^{q} \delta_j \Delta CAR_{t-j} + \sum_{k=1}^{q} \varphi_k \Delta WCR_{t-k} + \sum_{\ell=1}^{q} \partial\ell \Delta RTB_{t-\ell} + \sum_{m=1}^{q} \lambda_m \Delta SIZ_{t-m} + \sum_{n=1}^{q} \Omega_n \Delta PPM_{t-n} + \mu_t \qquad Equation\ 3.3$$

Where; Δ= the first difference of variable, π0= regression constant, q = maximum lag length, π_1…… π_6= short run effects, t = time trend, and μ_t is an indication of stochastic white noise.

Long run effect;

If it is established that there is an existence of cointegrating relationship, the conditional ARDL (p, q1, q2, q3, q4, q5, q6) long run effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria is specified as:

$$IVD_t = \alpha_o + \sum_{i=1}^{p} \alpha i \Delta IVD_{t-I} + \sum_{j=1}^{q1} \delta_j \Delta CAR_{t-j} + \sum_{k=1}^{q2} \varphi_k \Delta WCR_{t-k} + \sum_{\ell=1}^{q3} \partial\ell \Delta RTB_{t-\ell} + \sum_{m=1}^{q4} \lambda_m \Delta SIZ_{t-m} + \sum_{n=1}^{q5} \Omega_n \Delta PPM_{t-n} + \mu_t \qquad Equation\ 3.4$$

Furthermore, the short run effects are estimated by specifying error correction model related with the long run estimates and represented as:

$$\Delta IVD_t = \alpha o + \sum_{i=1}^{p} + \alpha i \Delta IVD_{t-I} + \sum_{j=1}^{q1} + \delta_j \Delta CAR_{t-j} + \sum_{k=1}^{q2} + \varphi_k \Delta WCR_{t-k} + \sum_{\ell=1}^{q3} + \partial \ell \Delta RTB_{t-\ell} + \sum_{m=1}^{q4} + \lambda_m \Delta SIZ_{t-m} + \sum_{n=1}^{q5} + \Omega_n \Delta PPM_{t-n} + \xi ecm + \mu_t \quad \text{Equation 3.5}$$

Where; ξ is the speed of adjustment process and ECM is the residuals generated and transformed from OLS regression [equation 3.1]. Other variables remain as earlier defined. The coefficient of error correction term, *apriori* should be negative and significant (based on the calculated t-value) to give credence to the existence of long run association.

4. ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Analysis of Cointegration Results: Bound Tests

The three options of the decision criteria are adopted when conducting this test. Thus, if the calculated F-statistic is greater than the Critical Value Bounds for the upper bound *I(1)*, then we can conclude that there is cointegration, which implies that there is long-run relationship. On the other hand, if the calculated F-statistic falls below the theoretical critical value for the lower bound *I(0)* bound, then we conclude that there is no cointegration, hence, no long run relationship. Furthermore, the test is considered inconclusive if the F-statistic falls between the lower bound *I(0)* and the upper bound *I(1)*. Analysis of the results of the ARDL bound test for cointegration between deposit money banks performance and the selected explanatory variables are shown in Table 4.1.

Table 2. ARDL Bounds Test

Date: 04/28/22 Time: 23:09

Sample: 1998 2021

Included observations: 24

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	4.110838	5
Critical Value Bounds		
Significance	Io Bound	I1 Bound
10%	2.75	3.79
5%	3.12	4.25
2.5%	3.49	4.67
1%	3.93	5.23

Source: Researcher's Computation (2022)

The ARDL bound test results indicate that the calculated F-statistic is 4.110838. This is less than the upper bound of 4.25 and greater than the lower limit of 3.12 at 5% level. Thus, the results of the bound tests are valid which implies that the null hypothesis of no long run equilibrium relationship is accepted. Moreover, it could be inferred that there is no long run influences of financial slack resources and risk taking behaviour on investment decisions of insurance companies in Nigeria.

4.2 Test of Research Hypothesis

The researcher conducted ARDL estimation in order to test the hypothesis. The hypothesis (H_o) was that: "*there are no significant short-run and long*-run *effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria*". The results are presented in Tables 3 and 4.

Tables 3. Short-run ARDL estimation test

Dependent Variable: IVD(-1)

Method: ARDL

Date: 04/28/22 Time: 23:30

Sample (adjusted): 1998 2021

Included observations: 24 after adjustments

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (1 lag, automatic): CAR(-1) WCR(-1) RTB(-1) SIZ(-1) PPM(-1) ECM(-1)

Fixed regressors: C @TREND

Number of models evalulated: 64

Selected Model: ARDL(1, 0, 0, 0, 1, 0, 0)

Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
IVD(-2)	1.055408	0.296100	3.564366	0.0031
CAR(-1)	0.613128	0.176760	3.468703	0.0034
WCR(-1)	0.004533	0.001857	2.441034	0.0298
RTB(-1)	-0.043504	0.121637	-0.357653	0.7259
SIZ(-1)	0.757771	0.186086	4.072148	0.0011
SIZ(-2)	1.183920	0.490172	2.415315	0.0300
PPM(-1)	-0.058285	0.025638	-2.273412	0.0393
ECM(-1)	0.007032	0.003492	2.013746	0.0423
C	2.045767	1.143611	1.788867	0.0953
@TREND	0.046776	0.016808	2.783021	0.0147

R-squared	0.795395	Mean dependent var	5.206667
Adjusted R-squared	0.692435	S.D. dependent var	0.592369
S.E. of regression	0.051524	Akaike info criterion	-2.799205
Sum squared resid	0.037166	Schwarz criterion	-2.308350
Log likelihood	43.59047	Hannan-Quinn criter.	-2.668981
F-statistic	336.2394	Durbin-Watson stat	1.787542
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

Source: Researcher's Computation (2022)

In a short run perspective, from the results presented in table 4.2, the coefficient of 0.163128 for current asset ratio (CAR) at one lag period indicates a positive relationship with investment decisions (IVD). A t-statistic value of 3.468703 for current asset ratio (CAR) at one lag period reveals that current asset ratio (CAR) is statistically significant in influencing investment decisions of insurance companies in Nigeria in the short run at 5% level. This strength of influence is also corroborated by a computed significant p- value of 0.0034. Furthermore, the coefficient of 0.004533 for working capital ratio (WCR) at one lag period signposts a positive relationship with investment decisions (IVD). A t-statistic value of 2.441034 for working capital ratio (WCR) at one lag period reveals that working capital ratio (WCR) is statistically significant in influencing investment decisions of insurance companies (IVD) in Nigeria in the short run at 5% level. This significant influence is also corroborated by a computed significant p-value of 0.0298. Risk taking behaviour (RTB) coefficient of -0.043504 indicates a negative relationship with investment decisions (IVD) while a t-statistic value of -0.357653 reveals that risk taking behaviour (RTB) is statistically insignificant in influencing investment decisions of insurance companies (IVD) in Nigeria in the short run at 5% level. However, the two moderating variables; firm size and previous performance were statistically significant in influencing investment decisions of insurance companies in Nigeria in the short run at 5% level of significance.

The ECM is statistically significant as the model reports the calculated t-statistic (value) of 2.013746 at lag 1 and a p-value of 0.0423 (which is less than the alpha value of 0.05). However, the coefficient of error correction mechanism (ECM) has the expected and the correct sign. Nonetheless, the coefficient of 0.007032 is infinitesimally low. The low coefficient implies that the speed of

adjustment after shock to equilibrium is low. Furthermore, it infers that the speed of adjustment from the preceding year's disequilibrium in the investment decisions of insurance companies to current year's equilibrium can be achieved but at a lower speed in the short run. The explanatory power of the ARDL ECM model is captured by the coefficient of determination (adjusted R-Square) which measures the variation of the investment decisions (IVD) in the model that is being explained by the combination of all the explanatory variables. The adjusted R-square (coefficient of determination) is about 80%. This is a fair share bearing in mind that no single model can capture all the relevant variables that can influence the investment decisions of insurance companies under consideration. With the Durbin-Watson statistic of 1.78, it signifies that the model is free from any form of serial correlation. The F-statistic of 336.24 denotes that the model is significant in explaining the problem under investigation. This further shows that all the variables in the model have jointly influenced changes in the investment decisions of insurance companies (IVD) in Nigeria in the short run.

This finding is consistent with the finding of Rafailov (2017) where the results of their research showed positive effects of financial slack resources on firm performance. The study identifies weak nonlinear and negative relationship between risk taking behaviour and investment decisions. This means that negative effects of risk taking behaviour will dominate only at very high level in the short run. On the other hand, risk taking behaviour has negative short run effects due to reduced appetite in risk taking by the management. Abundant financial resources could slow the reaction of firm to changes in investment opportunities and stimulate irresponsible and reckless behavior of management in the short run. This finding also corroborated by the finding of Amahalu and Beatrice (2017) when they assessed the extent at which cash holding affects financial performance of quoted insurance firms in Nigeria. Their findings showed that cash holding (proxy by cash to total book value of assets and cash) has a positive and statistical significant effect on financial performance (proxy by Return on Asset, Return on Equity and Tobin's Q) at 5% significant level.

Tables 4. Long-run ARDL estimation test

ARDL Cointegrating And Long Run Form

Dependent Variable: IVD(-1)

Selected Model: ARDL(1, 0, 0, 0, 1, 0, 0)

Date: 04/28/22 Time: 23:25

Sample: 1996 2021

Included observations: 24

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CAR(-1))	-0.613128	0.676760	-0.905976	0.3803
D(WCR(-1))	-0.004533	0.021857	-0.207411	0.8387
D(RTB(-1))	-0.043504	0.121637	-0.357653	0.7259
D(SIZ(-1))	0.757771	0.186086	4.072148	0.0011
D(PPM(-1))	-0.058285	0.025638	-2.273412	0.0393
D(ECM(-1))	0.017032	0.123492	0.137924	0.8923
D(@TREND())	0.046776	0.016808	2.783021	0.0147
CointEq(-1)	0.055408	0.296100	0.187128	0.8542

Cointeq = IVD(-1) - (11.0656*CAR(-1) + 0.0818*WCR(-1) + 0.7851*RTB(-1) + 7.6910*SIZ(-1) + 1.0519*PPM(-1) -0.3074*ECM(-1) -36.9216 -0.8442 *@TREND)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAR(-1)	11.065596	66.150114	0.167280	0.8695
WCR(-1)	0.081817	0.371294	0.220358	0.8288
RTB(-1)	0.785149	4.887170	0.160655	0.8747
SIZ(-1)	7.691036	33.481099	0.229713	0.8216
PPM(-1)	1.051913	5.656048	0.185980	0.8551
ECM(-1)	-0.307397	3.019083	-0.101818	0.9203
C	-36.921550	186.260598	-0.198225	0.8457
@TREND	-0.844209	4.393307	-0.192158	0.8504

Source: Researcher's Computation (2022)

In a long run viewpoint, from the results presented in table 4.3 explanatory variables are statistically not significant in influencing investment decisions of insurance companies in Nigeria in the long run at 5% level. This implies that there are no significant long-run effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Financial slack resources have positive and significant short run effect on investment decisions of insurance companies. Financial slack has several strategic advantages. First, slack is a valuable buffer, enhancing robustness and adaptability of firm in the constantly changing investment environment. In addition, slack facilitates conflict resolution between different stakeholders in a company. Third, financial slack is an important resource to innovations and long-term growth. Excess resources have negative effects, but only when control on management is weak. This study found that for Nigerian insurance companies, financial slack improves investment decisions while risk taking behaviour has negative short run effects due to reduced appetite in risk taking by the management. This can be attributed to high environment uncertainty, limited access to external financing of investments, and lack of agency problems between shareholders and managers. Their risk taking behaviour is lower if the firm generates financial slack by maintaining high level of current ratio and working capital and low size and current asset ratio. The potential financial slack of large firms has mostly negative impact on risk taking behaviour, and should be limited. Based on the findings of this study, the researcher concludes that financial slack resources influences investment decisions of insurance companies in Nigeria positively and significantly in the short-run while risk taking behaviour maintained negative and insignificant influence. On the contrary, there are no significant long-run effects of current asset ratio, working capital ratio and risk taking behaviour on investment decisions of insurance companies in Nigeria.

5.2 Recommendations

There is need for insurance firms to maintain large amount of financial slack keeping higher level of liquidity, more working capital and current assets reserves and channel these financial slack resources into short term investments. Efforts should be made to improve the company risk taking behaviour on investment decisions for higher returns on investments. Short term financial slack resources should be mobilized and channel into short term investments while long term financial slack resources should be mobilized and channel into long term investments.

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