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# The role of Nigerian Agricultural Insurance Corporation towards the development of rural finance in Nigeria

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**Abstract**
*The low or minimal credit delivery to farmers over the years for agricultural purposes by financial institutions has necessitated the need for the establishment of Nigerian Agricultural Insurance Corporation (NAIC). The agency aims to mitigate the risks associated with agricultural financing and to increase access to credits and other financial services to rural people. This paper, therefore, examines the role of Nigerian Agricultural Insurance Corporation (NAIC) in promoting rural finance in Nigeria. The study adopts literature review approach which consist of empirical, theoretical and conceptual literatures to establish the role of NAIC services in promoting rural finance. The result of the analysis revealed that NAIC contributes significantly in the Nigerian economy through the provision of subsidized agricultural insurance services to the Nigerian farmers. The study recommends that the NAIC should introduce various intervention programmes that will ease farmers access for agricultural credits and prompt payments of the insurance claims. This by supporting the Nigerian farmers towards ensuring sustainable food production increase in the Nigerian economy.*
**Keywords:** Agriculture, Food production, Insurance, Risk, Rural finance.

## 1. Introduction

Finance has been the backbone of any business undertaking without which no business can grow and survive in any society of the world. It is an important input required for agricultural development used to purchase all other agricultural farm inputs. Moreover, rural finance constitutes funds set aside to strengthen farming and other income generating activates in order to improve rural people's socio-economic development. In other words, agricultural financing entails the financial resources used to effect activates bordering agricultural production, processing, transportation and marketing, (Abdul, et al, 2022). In other development, efficient and effective financial system has been one of the fundamental requirements towards attaining sustainable development of the World Bank which directly affect agriculture and other income generating activities of both rural. It is used to promote a sustainable economy**,** increase business opportunities and leads to economic growth that improve standard of living of the people thereby reducing poverty (Adejumo & Bolarinwa,2017). In another development, the increasing demand for agricultural financing couple with food crises has been one of the challenges of this century (Lagi, 2021).

Moreover, the goal of agricultural financing policies in Nigeria primarily is to establish a sustainable agricultural financing system that is effective and efficient. In other words, it is aimed at providing efficient and effective institutions and programs that could provide micro and macro credit facilities as well as other financial services to small, medium and large-scale farmers engage in production, processing and

marketing of agricultural products (Ayodele, 2019). Furthermore, the structure of agricultural financing in Nigeria consists of individuals, and organizations that provide agricultural financial services at different levels of the agricultural value chain. The agricultural financial service providers were categorized into informal (non-institutional) and formal (institutional), (Okoji & Chete, 2018). The informal agricultural financial services providers consist of the private individuals, trade creditors, friends and families and other traditional financial service providers such the deposit takers, the rotational savings and credit societies (ROSKAS) and the (ASCRAS). While, the formal agricultural financial organizations consist of the private firms, governmental and non-governmental organizations that provide financial support in the agricultural production. Moreover, the governmental organizations are the federal government agricultural financial institutions that operates within the agricultural financial system of Nigeria.

According to Popogbe and Dauda (2020o), before the oil boom in the 50s and 60s, the agricultural sector contributed over 63 percent and 54 percent of GDP respectively. Moreover, in the 1970s, the agricultural sector suffered neglect due to oil boom to the extent that the agricultural sector contributed less than 25% to the GDP and the country turned to a net importer of different agricultural products (CBN, 2018). More so, National Bureau of statistics (2016) testified that between 1973 and 1980, about 7.07 million tons of wheat, 431,000 tons of maize, and 1.62 million tons of rice were imported across the Nigerian territory. According to the import statistics report, from1980 to 1990, food and live animals worth N17.91 billion naira, from 1991 to 2000 the food and live animals import statistics increased to N627.44 billion naira and from 2001 to 2018 the food and live animals' importation increased to N12.561trillion naira, (NBS & CBN, 2018). However, the Nigerian agricultural sector contribution to GDP has declined, due to neglect of agricultural activities, increase cost of other farm implements and machineries which result in to high rate of inflation, crisis and conflict, as well as low level of social protection to reduce the risk associated with climate changes (Ali et al., 2016). More so, the shortage of food supply over its persistent demand in Nigerians was evident by the low contribution of agricultural sector to GDP and persistent importation of foods items across Nigerian territory through land boarders and inland ports which affects production and consumption of locally produced food items (CBN 2019).

In another development, the advent of the economic recession during the period of 2016 and 2021 aggravated the situation and contributed to further decline of food production in Nigeria. This is to the extent that the food production is not commensurate with the population growth there by creating a huge gap between the demand and supply of food production in Nigeria (Abdurrahman 2022). Oladimeji (2017), opined that in Nigeria and most of the developing countries, the demand for agricultural financing has outstripped its supply and that result in a huge gap in the food production for the Nigerian communities. Moreover, the Nigerian population has increased from 60millin in 1963 to 88.5 million in 1991, 88.5m to 184 million in 2016 (NPC,2016). Consequently, the food production was estimated at the value of 19.53bn in 1980 and of 27,371.30bn in 2018 (CBN, 2019). Thus, it was indicated that the population doubled in 25 years, although the food production index has also increased but considering that the GDP of crop food production has been reported in monitory terms and looking at some economic parameters such as inflation and exchange rate trends the increased did not commensurate with the population growth (Ayodele, 2019).

Furthermore, the Maputo Declaration, in which the members of the United Nations pledged to devote 10% of their annual budgets to agriculture, established the required criteria for this ratio as 10%. Nigeria's agricultural budget falls short of this benchmark. However, the budgetary allocations of Nigeria ware1.3% (N0.10 Trillion) and 2.2% (N0.20 Trillion) of the proposed budgets in 2017 and 2018 respectively and during the period of 2000 to 2018, the Nigerian government allocated 1% to 5% of its capital expenditure to the agricultural sector of the Nigerian economy (CBN, 2018). More so, agricultural credit from the Bank of Agriculture sector declined from N83billion to in 2013 to 66.64 in 2014, 40.62 (2015), and it witnessed further declined to 42.62 from 2016 to 2019 (Nevin, et al, 2019; Osabohien et al 2018).

Based on the review of the various studies (Phuoc & Thanh, 2021; Fadeyi, 2018; Fei, *et al,* 2022; Farias et al, 2020; Peter & Panos, 2020; Miguel, 2020; Prem & Tor, 2020; Erwin & Rein, 2021; Bhuyan, et al, 2022; Meng et al, 2022; Ehiogu & Joseph, 2019; Nathan, 2019) related to agricultural insurance financing and its impact on the agricultural production, the researcher came to the conclusion that there is paucity of studies especially in Nigeria that examined the combined effect of food crop insurance financing, livestock agricultural financing, fishery insurance financing and forestry agricultural financing on agricultural production in Nigeria through the implementation of the policies of the Nigerian Agricultural Corporation during the period of 2012 to 2022. This is due to the fact that most of the studies were targeted on agricultural credit financing. It is in view of this that this study is intended to assess the role Nigerian Agricultural Insurance Corporation on the development of rural finance which basically focused on agricultural production.

## 2. Literature Review

### 2.1 Agricultural Insurance Financing

Jones (2021) describes agricultural insurance as a policy whereby the insured (in this case the farmer) pays a small sum of money (known as premium), in percentage to an insurance company (in this case the insurer), guaranteeing the insurer against any loss that could result from perils (flood, drought, death) covered for a specific period of time (typically not exceeding one year), with a promise to indemnify, that is pay back the estimated value of the loss in case it occurs. Moreover, crop hail insurance, which began in Europe more than a hundred years ago and came to the United States at the turn of the seventeenth century, is an alternate risk management and subsidy scheme.

Since then, both developed and developing nations around the world have adopted it, with varying degrees of success and failure, including the United States of America, Canada, Japan, Mexico, Brazil, Bolivia, Coast Rica, Panama, Mauritius, India, Australia, Iran, Sri Lanka, Zambia, the Philippines, Chile, Israel, Jamaica, Egypt, Cyprus, Bangladesh, Venezuela, Sweden and Nigeria. The fundamental goal of agricultural insurance is to lessen the financial loss experienced by farmers in the event that crops, livestock, fisheries, or forestry harvests are unsuccessful due to natural disasters such as droughts, floods, windstorms, pests, or illnesses. In order to reduce the danger of loss, it is also intended to offer farmers sound technical advisory services. Moreover, governments do subsidize agricultural insurance policies for farmers. This is done in the event of experiencing market failures that could hinder the development of the private insurance markets. However, some reasons have to do with the political and social objectives of justifying the way of spending public money (Peter & Panos, 2019).

In Nigeria, the main role of NAIC is to manage the risks associated with the agricultural production in the economy.

This is achieved through formulation and implementation of the various Insurance policies which serve as collateral for lending banks towards indemnification against losses incurred by farmers. The program also guaranteed other agricultural businesses within the agricultural value chain following damages to products thereby providing funds to service such agricultural loans. In other words, agricultural insurance was created to offer protection against financial losses brought on by a decrease in the expected output from agricultural products. The three main products are livestock, crops, and poultry. Fisheries and forestry are two more. The two primary areas for which commercial insurance coverage were created are crop insurance and livestock insurance (NAIC, 2019).

Moreover, according to the Nigerian National budget report of 1985 on agriculture insurance, the Federal Government of Nigeria established NAIC through decree number 37of 1993 to carry out the following functions:

a) To put into action, oversee, and administer the Agricultural Insurance Program created by section 6 of this Decree of 1993.

b) To give subsidies on the premiums charged on specific crops and livestock policies from grants received from the Federal and State Governments including FCT Abuja;

c) To persuade institutional lenders to direct their lending to agricultural production in light of the additional security that NAIC gives for their loans;

d) To encourage agricultural production in order to reduce the need for ad hoc aid traditionally offered by governments after agricultural crises;

e) To run other insurance-related businesses that the insurance commissioner may approve at rates that are reasonable.

f) To take any action or engage in any transaction that is in the Board's opinion and likely to make it easier to discharge its duties under this Decree in a proper manner.

**2.2 Agricultural Insurance Policies under the Nigerian Agricultural Insurance Corporation (1993 - Date)**

Apparently, agriculture is a risky venture in which unexpected perils occur in form of diseases or pests such as fire, lightning, windstorm, flood, droughts, pests and diseases. Which could wipe out the results of hard work and investments of farmers. It gets worse in places like Nigeria as a country with little advancements have been made in developing agricultural systems that are immune to adverse (natural and man-made) conditions. Moreover, the need for a specialized Agricultural Insurance Company to provide insurance cover to farmers was informed by Government's concern over the vacuum created due to the unwillingness of conventional Insurers to accept Agricultural risks, which they considered too risky.

This led to the establishment of the Nigerian Agricultural Insurance Scheme on 15th of November, 1987. The implementation of the Scheme was initially vested in the Nigerian Agricultural Insurance Company Limited, which was later incorporated in June, 1988 but later turned into a corporation in 1993 by the enabling Act 37 of 1993.

Basically, agricultural insurance policies act as collateral for banks, indemnifying them against monetary losses incurred by farmers and others in the agricultural value chain due to damage to their products. They also provide money for repaying such loans. Essentially, farm insurance is made to cover monetary losses suffered as a result of a decline in anticipated outputs from agricultural products. The three main products are livestock, crops, and poultry. Fisheries and forestry are two more. The two primary areas of commercial insurance coverage include crop insurance and livestock insurance (NAIC, 2019).

### 2.2.1 Crop Insurance Policies

A risk-based scheme called crop insurance policy now covers 128 crops in Nigeria. It was designed to implement yearly payments of subsidies to farmers in the case of any losses incurred as a result of danger. When crop insurance does give farmers money, it does so in the form of indemnity checks that help them recover some of their actual losses. Since they have not really suffered a loss, a number of farmers do pay crop insurance premium fees for a number of years before being indemnified. The following categories have been established for crop insurance policies:

(i) "All Risk" Insurance Policy: As the name implies, this insurance covers risks of material loss or crop damage brought on by the insured dangers. Crops are most frequently at risk from drought, fire, wind, pests, and flood. Crop insurance must be excess-free for the first ten years of operation in order to be useful to Nigerian farmers. After that, experience will inform us of the appropriate excess.

(ii) A harvest policy compensates for loss up to the estimated value of the anticipated harvests. So, the crop's unit price is typically expressed as a proportion of the anticipated production. The harvest policy can be compared to the "agreed value" policy of marine insurance, which specifies what the insurer is willing to pay if a claim is made under the policy, as opposed to the "All Risks" policy where the indemnity is proportional to the actual loss sustained by the farmer.

(iii) Credit Policy: The amount of the loan supplied to the farmer is covered by a crop credit insurance policy. The amount insured here is capped at the production expenses of the farmer, which serve as the foundation for the loan. The Credit Policy is determinable in terms of the amount of indemnity at the moment the insurance is contracted, unlike the "All Risks" policy and Harvest Insurance. The fact that the credit policy is offered as a component of a larger credit program to promote agriculture is another significant feature.

The reduction of the risk-amplification impacts of raising the debt-to-equity ratio is one of the objectives of an agricultural loan program. A crop credit insurance must therefore be assessed in light of the entire agricultural credit program's objectives and in particular in relation to the contribution it makes to the efficiency of the credit system. As is customary, premium prices are anticipated to be on the basis of loss experience, which is quite variable in the case of crop. Only when the meteorological data for the area is known for a lengthy period of time can a reasonable accepted rate be determined.

A multi-peril insurance policy protects the insured against unforeseen losses brought on by calamitous weather, plant illnesses, pest infestations, etc. Farm practices were developed by exclusions under such policies. Crop-revenue protection: Agricultural revenues are calculated by multiplying crop yield by crop price. Crop-revenue insurance is based on the variance from the mean of the farmer's revenues. RMA bases its price determination on the harvest-time futures prices listed in the commodity exchange markets. The predicted income of the farmer is obtained by combining the future price with the average production of the farmer. Before the crop is even planted, revenue protection is made possible by accessing the futures market. There is only one guarantee for a specific financial amount. The policy pays an indemnity if the actual yield and cash settlement price in the futures market are lower than the guarantee. The initiative is known as Crop Revenue Coverage in the US. The price fall that takes place during the crop's growth season is covered by crop-revenue insurance (NAIC, 2018).

### 2.2.2 Livestock Insurance Policies

This is an agricultural insurance policy that consists of the insurance cover against the risk of death, any epidemic, illness or catastrophic caused by various types of

diseases or virus affecting dairy and non-dairy castles, buffaloes, horses and equines, sheep and goats, swine and pigs, poultry and other animals and birds. In Nigeria, during the year 1984, millions of Naira was lost following rinderpest attack on cattle in Borno State. Also, if proper nutrition and veterinary services are available, losses on animals may be reduced. Moreover, quarantines that allow affected people to be separated from the rest of the population would help to slow the spread of contagious diseases. The challenges associated with writing livestock insurance are significant. The insured farmer is required to adequately protect his stock. The insured must maintain records of his animals and regularly take them for cross-checking. These details include the name and address of the owner, the breeds of the animal, its medical history, its age, weight, and number, as well as any markings that can assist in tis identification. (NAIC, 2021).

**2.2.3 Fishery Insurance Polices**

This is related to the production and consumption of aquatic food animals on a global scale through aquaculture and catch fisheries. About 12.8% of fisheries production in 2016 captured came from freshwater bodies, while about 64.2% from aquaculture production came from inland (mainly freshwater) culture systems. Similarly, in 2016, 54.1 metric tons of finfish (mainly from freshwater), 17.1 metric tons of mollusks (primarily from the ocean), and 7.9 metric tons of crustaceans were produced through aquaculture. Moreover, 0.94 Mt. of various aquatic creatures, largely from marine environments, including sea urchins, jellyfish, sea cucumbers, and turtles available in the oceans of the world (FAO, 2018).

**2.2.4 Forestry Insurance Polices**

The "four I's"—intentional, integrated, intensive, and interactive—define this sort of insurance coverage for forest farming, which is an agroforestry activity. The land management system covered by this insurance coverage includes trees alongside crops, cattle, or both on the same plot of land. In addition to protecting the ecosystem and the integrity of the forest from damage caused by catastrophe, hazard, or natural disaster that may occur in the forest, it focuses on maximizing advantages for the landowner. The insurance coverage is intended to cover losses in the practice of forest farming, which involves growing specialty crops or non-timber forest products, some of which have great market value in the global markets (Peter & Panos, 2019).

**2.3 Review of Related Literatures**

Castro, and Chanci (2023), investigated the effect of technical efficiency of Crop Insurance on the Equatorian Rice Farming. The research design is descriptive and correlational in nature. Data envelopment Analysis Approach have been adopted in the cause of the data collection. A secondary correlational data were collected from the quarterly reports of the National Institute of Statistics and Census for the period of 2013 to 2020 for the purpose of the research. The data used for the research covered 5.1 million hectares of land used the Equatorian farmers. Climatic Risk Insurance was used to measure the crop insurance. The statistical model adopted in the cause of the data analysis was Linear Programming techniques. While Rice production output was used as dependent variable. The result of the analysis indicted that the rice farmers with climatic crop insurance operate with increasing return to scale. The study recommended that government of Ecuador should ensure implementation of harmonized and subsidies agricultural insurance for improves agricultural output in Ecuador. The research however, is constrained by adopting Rice Farming in place of various forms of food production outputs.

Ajamunigbohun and Abdul – Azeez (2023), examined the impact of Agricultural Insurance on Food Supply Systems in Nigeria. Survey research design was

adopted in the cause of the research undertaking. The monthly primary data were collected from the A sample of 800 National Agricultural Insurance Cooperation (NAIC) registered farmers in Nigeria. Crop Agricultural Insurance, livestock Agricultural Insurance and Fishery Agricultural Insurance were used to measure agricultural insurance in Nigeria. While, food production index was used to measure the food production in Nigeria. The result of the analysis indicated that the level of agricultural insurance is low and the level of food production supply is low in Nigeria. The study recommended that government should formulate policies that will encourage the patronization the of agricultural towards improve farmers access to finance and reduced risk of loss due to perils which occur as result of unfavourable climatic factors in the Nigeria geographical regions. The study is constrained by excluding including forestry agriculture insurance in its scope of study.

Aliyu, Dawa and Muhammad (2023), assessed the impact of Nigerian Agricultural Insurance Corporation among students of vocational and technical education towards self - reliance on agricultural production. The study adopts literature review approach. The study adopted empirical, theoretical and conceptual literatures to establish the role of NAIC services in promoting self-reliance and financial independence among students of vocational and technical education in relation to agricultural production. The study concluded that inadequate execution of agricultural policy has contributed towards low investor flux in the agricultural production. The study recommended that the government should intervene in the sectorial investment, especially given the need of diversifying Nigerian's oil – based economy. However, due to agricultural subsistence operation of the students, majority of the students found it impossible to satisfy the scheme's standards. To augment that, the students must be encouraged to organize themselves into a powerful organization (farmer's cooperation) in order to increase their access to land. However, the research is conceptual in nature as opposed to empirical research. Moreover, no secondary times series data were covering a period of years have used in the cause of the research.

Bhuiyan, Davit, Xinbin and Zurong (2022), tests whether agricultural insurance impacts on famers income increase or not. Secondary data collected from the Guangdong Rural Statistical data bureau for the year 2009 to 2020. Ordinary Least Square (Fixed Effect Model) was adopted as the statistical tool of analysis. The analysis's findings indicate that the rise of farmers' income was positively and considerably impacted by the increase in agricultural insurance density and insurance per capital compensation. According to the study's recommendations for relevant system design, subsidy strategies, insurance innovation, service quality, and publicity, agricultural insurance should play a full role in boosting farmers' income. Unfortunately, the numerous facets of agricultural insurance are not specifically covered by this study. The study instead looked at finance for general insurance.

Fei, Liu and Wan (2022), investigated an empirical study on the moderating effect of agricultural insurance against natural disasters. Secondary data collected from the China Rural Statistical Yearbook covering 31 provinces of China for the year 2002 to 2018 were adopted in the cause of the research. Ordinary Least Square method (Fixed Effect Model) was adopted as statistical tool of data analysis. In the first instance, a theoretical macroeconomic model was established that combines agricultural risk, agricultural insurance and moral hazard. The theoretical model shows that agricultural insurance can effectively reduce the negative impact of agricultural risk on primary industry production only when moral hazard is not severe. More so, the result of the analysis indicted that

agricultural finance promotes primary industry production. The study recommended that policy makers should strive to develop policies that would improve access to agricultural insurance for improve access to agricultural loan and subsidies. However, the study adds moral hazard to the traditional macroeconomics model which allows a more reasonable role for agricultural insurance. The data used by the study covered 2002 to 2018 and hence did not cover the period of 2022.

Phuoc and Thanh (2021), examined the effect of agricultural insurance policy in agriculture and rural development on ASEAN Countries sustainable development. The adopted secondary data collected from the World Development Index (WDI) and Sustainable Global Development reports (GSDR) for the period of eleven (11) years (2009 – 2020). Ordinary Least Square (Fixed – Effect Model) was used as the statistical instrument of data analysis. The result of the analysis indicted that agricultural finance and rural development have significant positive effect on sustainable development of ASIAN countries. The study recommended that the policy makers of ASEAN countries devise policies that would incentivize agricultural, rural and sustainable development. However, this study is not specific on the various aspects of agricultural insurance. Rather, the study considered general insurance financing.

The idea that the introduction of agriculture insurance will increase welfare in rural communities is assessed by Erwin and Rein (2021). A straightforward theoretical model was developed to show that, in the absence of transaction costs or basis risks, the utility effects of insurance policies are basically unclear. The theoretical analysis's conclusion predicts that when common pastures are damaged, insurance encourages overstocking of community funds and reduces herding's profitability. Unlike conceptual and empirical studies, the research is theoretical. It is for 2020 and will be reported in 2021. Thus, 2022 was not covered.

Peter and Panos (2020), evaluated the extent to which government of the developed and under developed countries subsidize agricultural insurance in Ethiopia. The study is conceptual and it is used to create awareness on the best practices for subsidizing agricultural insurance among farmers by the governments of the nations of the world. The study earmarks several reasons behind the allotment of subsidies among farmers in the developed and under developed nations of the world. Some of these justifications stem from specialized economic issues including market imperfections, externalities, and institutional issues that limited the economy's agriculture sector. In addition to risk management, there are other social and political objectives that must be met. Nonetheless, compared to other possible policies, insurance subsidies are considered as a more politically or economically viable means of achieving those objectives. According to the research, many governments favor subsidizing insurance as a tool for assisting farmers and rural communities in managing the risk involved with agricultural production. However, the study emphasized on subsidized agricultural insurance but did not specify on the various aspects of agricultural insurance. Rather, the study considered general insurance financing. The study also covered the period of 2018 and hence did not cover the periods of 2022.

In Kwara state, Stephen, Emmanuel, and Olani (2020) looked at the production efficiency of livestock farmers who were insured by the Nigerian Agricultural Insurance Cooporation and those who were not. In Kwara state, primary data on livestock producers participating in the NAIC insurance scheme and those who were not were gathered using a structured questionnaire. Stochastic Frontier Production (Cobb – Douglas) Model and t – test statistics to compare the socio-

economic characteristics of two samples of the farmers in Kwara state. The outcome of the empirical investigation showed that cattle production, which is a male-dominated industry, does not involve enough young people. Many people who did not receive benefits from the NAIC intervention plan are not cooperative members. Farmers who have insurance are more productive than those who do not, and both groups have the ability to do so in the future in order to offset any current inefficiencies in production. The study recommended that the insurance institution should develop more strategies that will encourage participation in insurance financing through new interventions and creating more awareness among farmers participation in the program. However, the study is based on the livestock insurance as against other aspects of insurance such as food crops, fishery and forestry insurance financing. The study was limited to the period of 2019 and did not cover the period of 2022.

Nathan (2019), examine the acre for acre impact of federal crop insurance Participation on the conservation reserve program in America. Secondary data were collected from USDA Risk Management Agency for the year 1989 to 2017. Descriptive statistics was used as statistical tool of analysis. The result of the analysis suggest that an additional 1000 acres insured reduces conservation reserve program enrollment by about three acres, though effect of sizes vary by region. The study recommended that the government of America should improve on the local policy initiative such as conservation compliance by introducing incentives to offset local environment consequences of converting land from CRP to insured production. However, the study emphasized on Conservation Reserve Program but did not specify on the various aspects of agricultural insurance. Rather, the study considered general insurance financing. The study also covered the period of 1989 to 2017 and hence did not cover the period of 2022.

Ehiogu and Joseph (2019), examined the effect of agricultural insurance on agricultural sector in Nigeria. Secondary data were collected from the bulletin of the Central Bank of Nigeria and Nigerian Agricultural Insurance financial reports for the period of 2005 to 2018. Ordinary Least Square was used as the statistical tool of data analysis. The result of the empirical analysis indicted that agricultural insurance claims – paid have no significant effect on the volume of credit to food crop sector; agricultural insurance claim – paid have no significant effect on volume of livestock sector and agricultural insurance general reserves have no significant influence on the volume of credit to livestock sector. In summary, the study concluded that agricultural insurance has minimal influence on credit financing to farmers. The study recommended that pilot process should be used to gradually attract farmers to participate in agricultural insurance. However, the study was limited to food crop production insurance and livestock production insurance as against other aspects of insurance such as fishery and forestry which form important component of agricultural insurance. The data used by the study were limited to 2005 to 2018. This as against the current data within the period of 2020 to 2023.

## 3. Methodology

This study is qualitative in nature. An Analytical engagement method was adopted as a method of data analysis (Fama & Conti, 2019). This study involves review of journals, publications and other academic write- ups dealing with rural financing with particular reference to insurance agricultural financing published between the years 2010 to 2022. However, several published articles covering the period before 2010 that have addressed specific issues relating to agricultural financing were also sourced (Evbuomwam,

2016). In relation to this study, emphasis was made on the roles of the Nigerian Agricultural Insurance Corporation on the development of rural financing in Nigeria. More so, the several contributions were focused on institutional financing to rural farmers. Furthermore, other sources of data used were obtained from Google Scholar, Emerald Insight, Science Direct and Ajol using the key words such as "agricultural financing, Insurance Financing, rural financing". in another development, several methods used in paper review were examined (Kersten, *et al*, 2017). The articles were grouped and examined based on the nature of the research methodology used in carrying out the various researches and presentations of the contents. Moreover, a large number of the reviewed articles were based on empirical analysis, few were conceptual in nature and the remaining combined both empirical and conceptual. More so, Phuoc and Thanh (2021), Fadeyi (2018), Fei, Liu and Wan (2022) and Farias, et al, (2020) form part of the empirical literatures used to identify the scope of agricultural insurance and its relevance in relation to crop insurance financing, fishery insurance financing, livestock and forestry insurance financing.

## 4. Result of Review

The empirical literatures also emphasized on the relationship between the insurance policies and farmers output during a particular period ending 2022. Moreover, Castro, and Chanci (2023), Ajamunigbohun and Abdul – Azeez (2023), Aliyu, Dawa and Muhammad (2023), Peter and Panos (2020), Miguel (2020), Prem and Tor (2020), Erwin and Rein (2021) and Bhuyan, et al (2022) form part of the conceptual literatures who emphasized on the prevalence need for increase insurance financing among farmers and insight on how to access financial insurance services by rural farmers through decentralized insurance services from cities to rural arears. In another development, Meng et al (2022), Nathan (2019) and Fei, *et, al* (2022) form part of the theoretical literature relating to the agricultural insurance financing. The research was bent on estimation of the various agricultural insurance models such as acre – for acre insurance financing and moral hazard equilibrium models. Phuoc & Thanh, 2021, Fadeyi, 2018, Fei, et al, 2022, Farias et al, 2020, Peter & Panos, 2020 and Ehiogu & Joseph, 2019 form part of the empirical literatures who posited that there exists a positive significant relationship between agricultural insurance services and rural finance in various agricultural communities of the world. However, the used information and communication technology has not been given a due consideration from the literatures reviewed as it can also facilitate efficient and effective agricultural insurance financing on sustainable basis.

## 5. Conclusion and Recommendations

In conclusion, the Agricultural Insurance Corporation plays a crucial role in the development of rural finance in Nigeria. By providing insurance services to farmers and other rural dwellers, the corporation helps to reduce the risks associated with agricultural activities, which in turn encourages more investment in the sector. This helps to stimulate economic growth, create employment opportunities, and improve the standard of living in rural areas. Furthermore, the Agricultural Insurance Corporation promotes financial inclusion by providing easy access to credit and other financial services to farmers who would otherwise be considered high-risk borrowers. They also provide insurance claims to farmers in the event of perils encountered by the insured. Overall, the corporation's activities contribute significantly to the development of rural finance in Nigeria, which is essential for the country's overall economic growth and development.

The managerial implication of this study is that financial institutions and stakeholders in the agricultural sector should collaborate with the corporation to leverage its insurance services to reduce the risks associated with lending to rural farmers. This collaboration could involve designing appropriate loan products that are tailored to the needs of rural farmers and that consider the risks and uncertainties associated with agricultural production. Financial institutions could also partner with the corporation to provide credit guarantees that would help to reduce the risks associated with lending to farmers.

The government of Nigeria should empower NAIC to discharge its statutory responsibility efficiently and effectively. This is by creating an enabling environment for the provision of agricultural insurance services and encouraging the development of innovative financial products that will cater to the needs of rural farmers. Moreover, the government should also support NAIC through adequate funding to ensure timely payments of all agricultural claims to rural farmers in a form indemnity against the occurrence of perils to promote sustainable increase in food production thereby fostering economic growth and development in the agricultural sector of the Nigerian economy.

**References**

Abdul, M. Y., Saheed, Z., Abraham, A., Bernared, O. A., & Yakubu, I. (2022). Agricultural Financing and Food Security in Nigeria. *A Journal of Economics and Allied Research,* 7(2), 2536 – 7447.

Adejumo, I. & Bolarinwa, B. (2017). Importance of Agricultural Financing with Special Reference to Nigerian Agricultural Financing Schemes. *A Journal of Economics and Business Administration. .4 (2).*

Aina, I., & Omonana, B. (2016). Subsidized Credit Program: The Theory, the Record, the Alternatives, June, 2016.

Ajamunigbohun, S.S., & Abdul – Azeez, I. F. (2023). Agricultural Insurance and Sustainable Food Supply: An Assessment for Nigerian Farmers. A Journal of Agricultural Economics and Development 32 (2), P119 – 130.

Aliyu, M.S., Dawa, U. S., & Muhammad., D.A. (2023). Analysis of the Impact of Nigerian Agricultural Insurance Corporation on Students Attitudes Towards Self- Reliance from Conceptual Point of View. A Global Journal of Agricultural Research. 11(1), pp. 1-9

Ayodele, E. A. (2019). Impact of Agricultural Financing on Nigerian Economy. *An Asian Journal of Agricultural Extension, Economics & Sociology. 31(2), 1-13.*

Bhuiyan, A. M., Davit, M., Xinbin, D.Z., & Zurong, Z. (2022). The Impact of Agricultural Insurance on Farmers Income: Guangdong Province (China) as example. *Plos One. 17 (10) 218-321.*

Castro, M., Duarte, A.R.,Villegas, A., & Chanci, L. (2023). The Effect of Crop Insurance in Ecuadorian Rice Farming: A technical Approach. *The Current Issue and Full Text. A Journal available at Emerald Insight T: 2(4), 432-521.*

Ehiogu, C. P., & Joseph, A. (2019). Effect of Agricultural Insurance on Agricultural Sector in Nigeria. *A Journal of Agriculture and Food Science, 17 (1), 123 -135.*

Erwin, B., & Rein, H. (2021). The Welfare Effects of Index- Based Livestock Insurance: Livestock Herding on Communal Lands. *An Environmental and Resource Economics, 78 (51), 587 – 673.*

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, *5*(6), 149.

Corporation for the year 2021.

Evbuamwan, G.O.(2016). Financing Agriculture for Sustainable Economic Development. *Bullion Publication of the Central Bank of Nigeria.*

Fama, M. &, Conti, M. (2019). Food Security and Agricultural Crises in Financialized Food Rgime in Cambio. *Ruvista Sullie Transforma- zioni social,12,(23); 85 – 97.*

FAO. (2018). The state of world Fisheries and Aquaculture Report. Rome Department of Fisheries, Food Agricultural Organization of the United Nations.

Fadeyi, (2018). Smallholder Agricultural Finance in Nigeria: Literature Review on Research Gap. *An International Journal of New Technology and Research (IJNTR) ISSN, 4* (1), 2451 - 4116.

Fei, M., Liu, Y., & Wan, Y. (2022). An Empirical Study on the Moderating Effect of Agricultural Insurance against Natural Disasters. *A Journal of Economics, 11*(2), 21- 41.

Jones, E. (2021), Agricultural Credit Guarantee Scheme and Economic Growth in Nigeria. *An International Journal of Business and Economics, 2(4) 125- 241.*

Kersten, R, Carisma, B., & Skoet. J. (2017), Small firms, large impact. *A systematic Review of the SME Finance literature. World Development 97, 330-348*.

Lagi, N. (2021). The food Crises: A quantitate Approach of Food Prices including speculators in England: *An International Journal of Agricultural Financing 4(2), 12 - 38.*

NAIC. (2019), An Annual Report of the Nigerian Agricultural Insurance Corporation for the year 2019.

NAIC. (2018), An Annual Report of the Nigerian Agricultural Insurance Corporation for the year 2018.

NAIC. (2021), An Annual Report of the Nigerian Agricultural Insurance

Nathan, D. (2019). The Impact of Federal Crop Insurance on the Conservation Reserve Program. *An Agricultural and Resource Economics Review, (August, 2019), 297 – 327.*

Okonji, A., & Chete, L. (2018). Nigerian Agriculture and Public Expenditure Review- Nigerian Strategy Support Program. Brief No 2. *A conference Paper Presented at International Food Policy Research Institute Abuja, Nigeria. Available at www.ifpri.org*.

Peter, H., & Panos, V. (2020). Best Practices for Subsidizing Agricultural Insurance. *An International Journal of Global Food Security. 25(4). 41- 62.*

Phuoc, H. V., & Thanh, Q. N. (2021). The Role of Agricultural Financing and Development on Sustainability: Evidence from ASEAN Countries. *Agbio Forum Journal, 23(3), 512-632.*

Stephen, O.B., Emmanuel, O.E.B., & Olani, A. (2020). Production Efficiencies of the Nigerian Agricultural Insurance Corporation Insured and Non – NAIC Insured Livestock Farmers in Kwara State. *A Turkish Journal of Agriculture – Food Science and Technology, 9(1), 50 -55.*