Impact of Portfolio Risk on Capital Market Development in Nigeria

AKPA, Paul Hassan

Department of Accounting
Bingham University
Karu, Nasarawa State
E-Mail: akpa012003@gmail.com, Phone No: +234 8149333271

Abstract

This study titled "Impact of Portfolio Risk on Capital Market Development in Nigeria" empirically examined the impact of systematic risk on capital market capitalization in Nigeria from 1986-2020. Time series data and econometric tools were used to test for the stationarity and causality effect. Auto Regressive Distributed Lag Model (ARDL) and Error Correction Model (ECM) techniques were used to examine the short run and long run impact and relationship between Portfolio Risk and Annual Capital Market Capitalization in Nigeria (ACMCN). The study revealed that both in the long run and short run Inflation Rate (INFR)had positive relation with Annual Capital Market Capitalization in Nigeria (ACMCN) and it was statistically significant in explaining changes in Annual Capital Market Capitalization in Nigeria (ACMCN).On the other hand, at long and short run, Interest Rate in Nigeria (INTR)had negative relation with Annual Capital Market Capitalization in Nigeria (ACMCN) and it was statistically insignificant in explaining changes in Annual Capital Market Capitalization in Nigeria (ACMCN).Therefore, the study recommends that government should improve the efficiency and effectiveness of portfolio risk managementin Nigeria since it was statistically significant in determining the improvement of Annual Capital Market Capitalization in Nigeria (ACMCN), it should manage the activities relating to Inflation Rate (INFR) through targeting policies in order (for them to be significant and relevant as monetary policy tools) to encouraging the Annual Capital Market Capitalization in Nigeria. Also, it is recommended thatregulatory bodies such as Central Bank, tax authorities among other to create investment friendly climate such easy access to loan at low interest rate and tax holiday and avoid multiple tax regime as in Nigeria where the Federal, State, and Local government impose tax on nearly the same tax field.

Keywords: Portfolio Risk, Inflation Rate Risk, Interest Rate Risk, Annual Market Capitalization

INTRODUCTION

Risk is described as 'the possibility of loss, or other adverse or unwelcome developments. According to Pandy (2019), portfolio risk is the variability that is likely to occur in the future returns of a project. This has to do with financial risk which is inherent in an investment decision. Farounbi (2020) supported this view by stating that risk occurs where it is not known what the future outcome will be but where the various possible outcomes may be expected with, some degree of confidence from knowledge of past or existing events, in order words probabilities of alternatives could be estimated while he described uncertainty as a situation where future outcome cannot be predicted with any degree of confidence from knowledge of past or existing events thus probability estimates are not available for possible outcomes. This is an indication that risk and uncertainty affects investment decisions and therefore directly or indirectly affect the organizational goals and objectives in focus. This explains why Damodaran (2019) viewed portfolio risk to include Liquidity risk, Default risk, Duration risk, Market risk, Inflation rate risk, Interest rate risk, Exchange rate risk, and Concentration risk. Risks and uncertainties are evident in investment decisions thus the management is paramount to the success of organizations.

The capital market as a subset of the financial market plays a vital role in the economy especially in developing economies that require high long term credit to stimulate the large and untapped real sector for sustainable economic growth. According to Owolabi and Adegbite (2018), capital market is important in the mobilization of various savings in the economy and channeling of such funds to the sectors of needs (i.e. savings to profitable self-liquidating investment; and offers easy access to various forms of financial instruments) that enable economic agents to pool, price, and exchange risk within a given financial period.The capital market as a subset of the monetary marketplace plays a important position within the economy in particular in growing economies that require excessive long term credit score to

stimulate the massive and untapped actual region for sustainable financial increase. in line with Owolabi and Adegbite (2018), capital marketplace is essential within the mobilization of diverse financial savings in the economic system and channelling of such funds to the sectors of desires (i.e. savings to profitable self-liquidating investment; and gives smooth get entry to numerous sorts of monetary contraptions) that permit economic dealers to pool, price, and alternate danger within a given financial period.Capital markets are markets for transacting long term monetary securities, which includes regular stocks, long term debt securities including debentures, unsecured loan stock, and convertible bonds. Government bonds and different public zone securities which includes Treasury payments and gilt-edged stocks also are traded on capital markets (Muktadir-Al-Mukit & Shafiullah, 2016). However, as a marketplace where securities (shares, bonds, stocks) are bought and bought openly with relative ease, the inventory trade may be very essential to the buyers. It is a market for government securities, for corporate bonds, for the mobilization and utilization of lengthy-term budget for improvement - the long time stop of the financial machine. In this market, traders provide long term budget in change for long time monetary property presented through debtors. For that reason, a financial system with an active stock marketplace may additionally have its important stock market index often used as a guide in the size of adjustments within the well known degree of economic activities inside the concerned financial system. Similarly, some other major role of the stock market as an economic organization is that it enhances the performance of capital formation and allocation of sources (Ugochuku & Eleanya, 2018).

The capital market is, generally, regarded as a safe haven for investment. There, your money works for you. The market is a setting for income without stress. Smart and daring speculators can make fortunes there and can also lose a fortune through poor judgment. Despite its attractiveness, the capital market is volatile. In fact, volatility in price of securities is the hallmark of every capital market. Increased risk can emanate from increased volatility. Every day, stock prices go up and down in reaction to any number of issues involving business, the socio-economy and geopolitical events (Dake, 2020). The field of behavioural science has contributed an important element to the risk equation, demonstrating asymmetry between how investors view gains and losses. Investors usually put roughly twice the weight on the pain associated with loss than the good feelings associated with a profit. Every investor wants to play safe with his investments. Often, investors want to know just how much the value of an asset may deviate from its expected outcome, and also how bad things may look way down on the negative side. Value-at-Risk (VaR) on the other hand attempts to uncertainty is the lack of complete certainty. It is a situation where the future outcome cannot be predicted with any confidence from knowledge of past or existing events. Uncertainty presents more than one possibility whereby the true outcome or result is unknown. Uncertainty is immeasurable ie, not possible to calculate whereas, risk is a state of uncertainty where some of the possibilities involve a loss, catastrophe or other undesirable outcome. It is a set of possibilities each with quantified probabilities and quantified losses. One may have uncertainty without risk but not risk without uncertainty. We can be uncertain about the winner of a contest but unless we have some personal stake in it, we have no risk. If we bet money on the outcome of the contest, then we have a risk. Consequently, the measure of uncertainty refers only to the probabilities assigned to outcomes while the measure of risk requires both probabilities for outcomes and losses quantified for outcomes. Uncertainty presents both risk and opportunity, eroding or enhancing value.rovide an answer to this question. The idea behind VaR is to quantify how large a loss in investment could be with a given level of confidence over a defined period (Pandy 2019).

Koontz and Weihrich (2020) opined that due to the high volatility and frequent downturns in the capital market, uncertainties characterize the predictability of returns on investment. As a result of uncertainty, it is extremely difficult to predict the future price of a security and by extension, direction of the capital market. Uncertainty and risk are synonyms but they are not quite the same. Uncertainty must be taken in a sense radically distinct from the familiar notion of risk, from which it has never really been properly separated. The term “Risk” as loosely used in everyday speech and in economic discussion, really covers two things which functionally at least in their causal relations to the phenomenon of investment, are

categorically different. The Port-folio theory such as Capital Asset Pricing Model (CAPM) indicate that 'the greater the potential return being expected, the greater the risk that is being assumed (Pandy 2019). This means for a project with a high expected return, one should expect that the risk involved is equally high. Every investor expects some returns that would cover the organization's financial commitments to services and production as the case may be. However, the problem of inadequacies in risk management has led to various business failures. This was confirmed by Deeson (2021) reporting that 78 businesses failed in the 2019.Bernanke and Gertler (2020)also supported this fact by stating that business mortality was higher than that of birth thus showing the worrisome rate at which investment fail or drop below targeted returns. This confirms the portfolio risk rate at which industries close down and the attendant effects on the Nigerian capital market, national economic growth, and development as workers were disengaged or sent unexpectedly to the labour market due to failed businesses problems occasioned by inadequate management of investment risk and the uncertain investment climate. This scenario further manifested in the sudden drop in the share prices between year 2018 and 2021. The high rate of none performing bank credits granted to various customers further creates a form of stress on liquidity as evidenced as revealed in statistical reports. (nytime.com) reported that in 2019, 78 businesses were reported closed; in 2010 record showed another 8 businesses closure, while in 2021 new closures totalled 11. Also, lack of immediate funds to meet either new investment or running the operations of the existing business on a continuous basis also resulted in the closure of such business.

From the foregoing, risk is a prevalent phenomenon in all aspects of business. The problem that faces investors however is that the future is uncertain and therefore the value of possible risk to the investment or business cannot be determined precisely. This constitutes a problem to decision making for investors and managers too. Given the sudden and continuous drop in share prices since 2008, risk -adverse investors have become apprehensive of which stock is worth the effort whereas for investors in new businesses efforts are still being made. The challenge of such investments are however based on factors such as government policy, inflation rate, interest rate, cash flow available, physical factors such as lighting, good roads etc. Thus the focus of this study is essentially on managing the risk involved in financing projects or new investments with the objectives of examining what constitutes risk, the role of managers in managing risks and the inherent challenges in investment decisions in order to find ways of improving the lot of the investors. Despite the investment policies and reforms, the capital market is yet to live its full potentials and expectations and there have been some argument that the poor performance of capital market in Nigeria, among other things has been due to inconsistency and unfavourable macroeconomic policy especially the monetary policy. The performance of the money targeting, the result or significance of each money target and appropriate mix for optimal macroeconomic policy that will achieve long term growth and market capitalization has not been empirically examined in the previous works.

Besides, most of the recent empirical studies on portfolio risksuch as Kaplan and Mikes (2019), Frank (2020); Gates., Nicholas and Walker (2021) concentrated Business Risks proxied by Strategic Risk, Compliance Risk, Financial Risk, Reputational Risk, and Operational Risk, with little attention on the Portfolio Risks proxied by Interest Risk Rate and Inflation Risk Rate. Furthermore, previous studies have also neglected the issue of causal links or relationships that might exist between investment risk and Nigeian maarket capitalization. This link is necessary to determine whetherportfoliorisk and Nigeian capital maarket. In addition, the results previously obtained may not have provided a robust estimate for effective portfoliopolicy prescriptions. More so, the long run examination methods used in literature are mostly Johansen (1991) and Engle and Granger (1987) co-integration methods, whereas the unrestricted asymmetric autoregressive distributed lag approach developed by Shin and Greenwood-Nimmo (2014) is considered more appropriate particularly in the presence of the disequilibrium nature of the time series data stemming from the presence of possible regime change as happens with most economic policy frameworks. This study, therefore, adopted the autoregressive distributed lagged model and error correction approach to examine empirically the relationship between investment risk and Nigerian capital market.All these provided a robust estimate of the parameters under investigation for effective portfolio

risk on Nigeria capital market. This study closed these identified gaps by adopting a methodological approach that allows for assessing the impact of portfolio risk on capital market development in Nigeria. From the foregoing therefore, the basic hypotheses underlying this study are stated thus;

H_{01}: Inflation risk rate has no significant impact on capital market capitalization in Nigeria.
H_{02}: Interest risk ratehas no significant impact on capital market capitalization in Nigeria.

LITERATURE REVIEW

Conceptual Review

Portfolio Risk

Renn (2019) defined Portfolio Risk as the probability of the assets or units of stock that the company holds to sink, thereby causing a significant loss to the company in terms of their investment being lost. A portfolio is defined as the combination or the collection of stocks or investment channels within the company. Portfolio risk reflects the overall risk for a portfolio of investments. It is the combined risk of each individual investment within a portfolio. The different components of a portfolio and their weightings contribute to the extent to which the portfolio is exposed to various risks.The major risks a portfolio will face are market and other systemic risks. These risks need to be managed to ensure a portfolio meets its objectives. You can only manage this risk if you can first quantify it (Osaze, 2018).
Renn (2019) opined that, there are lots of types of investment risks, both at the portfolio level and the individual security level. Firstly, the following are examples of risks that are specific to individual securities. These risks can easily be managed through diversification - Liquidity risk, Default risk, Regulatory political risk, Duration risk, Style risk, Inflation risk and Interest risk. There are numerous approaches to measuring portfolio risk. All have their advantages and drawbacks. There is no full proof method, so several methods are usually combined. Volatility is the most common proxy for risk – though there are risks that volatility does not capture. Standard deviation is the typical way to measure volatility. This applies to individual securities and to portfolios (Osaze, 2018).

The return of a portfolio can be calculated by simply averaging the weighted returns. Calculating the standard deviation of a portfolio is a little more complicated. A portfolio's historical standard deviation can be calculated as the square root of the variance of returns. But when you want to calculate the expected volatility, you must include the covariance or correlation of each asset.Calculating the correlation and covariance for each stock can become very complicated. The covariance must be calculated between each security and the rest of the portfolio. The weighted standard deviation for each security is then multiplied by the covariance. This will usually result in the portfolio's volatility being lower than most of its components. Renn (2019) opined that there are several ways to limit portfolio risk. In most cases more than one approach is combined. The stock market has historically generated the highest returns but has also experienced the greatest volatility. For this reason, diversifying investments across several asset classes is the first step in managing a portfolio's risk. A substantial percentage of most portfolios should be invested in equities, but this needs to be balanced with other types of assets.A basic diversified portfolio would include stocks, bonds, and cash. Stocks provide the greatest long-term returns, bonds provide predictable income, and cash offers immediate liquidity. While this would be a vast improvement on a single asset portfolio, risk can be further diversified with other asset classes. The objective then is to find assets that have very low correlations with equities and bonds (Frank, 2020).

Inflation Rate Risk

Friedman (2018) referred to inflation as economic phenomenon and may be produced most effective via a more rapid increase in the quantity of cash than output." This becomes described through Brown (2018), as a situation of a rising widespread price degree of vast spectrum of goods and offerings over a protracted time frame. Its miles measured as the rate of increase in the preferred charge degree over a selected period of time. Ngerebo (2017) points out, that the real effect of inflation is as a result of cash phantasm. To the neo-classical and their followers at the University of Chicago, inflation is essentially a monetary phenomenon. Bekaert and Engstrom (2017) see inflation as phantasm which recommend that when anticipated inflation rises, bond yields duly growth, but because equity investors incorrectly discount actual coins flows using nominal costs, the increase in nominal yields results in equity under pricing and vice versa. Svensson (2021) considered that inflation focused on is that form which disregards

absolutely the actual effect of economic coverage each inside the short and medium term and focuses completely on controlling inflation within the shortest viable time horizon. Inflation can also be defined as a continual tendency for charge and money wages to increase. It's far measured via the proportional modifications over time in some suitable fee index, generally a consumer rate index or a GDP deflator (Cengiz & Basarir, 2019).

Interest Rate Risk

Interest rate is described as the price of cash that is the quantity of interest paid per unit of time expressed as a percent of the amount borrowed. The fee of borrowing cash, measured in naira, in keeping with yr in line with naira, borrowed, is the interest rate. Hobby costs range especially in time period/adulthood that is the length of time for repayment and liquidity this is short conversion of assets to budget (Adekunle, Alalade & Okulenu, 2016). Whilst maturity and liquidity collectively with different factors are considered, many specific monetary contraptions and so many one-of-a-kind interest quotes will emerge (Anyanwu, 2018). There are two major sorts of interest fee according to Pandy (2019) that can either be nominal or actual. Nominal interest fee may be measured in naira terms, now not in phrases of goods. The nominal hobby price measures the yield in naira in line with 12 months, according to naira invested while the real hobby fee is corrected for inflation and is calculated because the nominal hobby price minus the charge of inflation. A tremendous actual hobby rate indicates that nominal fees are in extra of inflation at the same time as a poor real rate is an immediate mirrored image of high inflation. Fairly fantastic actual interest costs are perfect as extremely high real charges can motive distress among debtors in addition to constrain investment spending. Interest charges are quite many; therefore, they may be regularly referred to as interest quotes shape.

Capital Market

Capital market is a market for sourcing of medium and long-time period funds by way of both the authorities and personal sectors of the financial system. The strategic roles of the capital market inside the allocation of scarce monetary assets for fast economic growth and development of any country is well documented (Amedu, 2018; Aremu, Suberu and Ladipo, 2017). The study by Ovat (2019) listed the profits of the Nigerian capital marketplace as follows: - It helps the economic system to increase capital formation; presents finances to authorities and agencies at greater attractive terms; affords first-rate supply of investment for SME boom; subjects firms to marketplace discipline hence, enhancing chances of success; provides the essential factors to manipulate financial dangers and guarantees continuity of the employer lengthy after the founder. In line with Aremu, Suberu and Ladipo (2017), the capital market is a marketplace in which each authorities and companies improve long term finances to change securities at the bond and the inventory market. It includes each the primary market in which new issues are allotted amongst investors, and the secondary markets where already current securities are traded. In the capital marketplace, mortgages, bonds, equities and different such funding funds are traded. The capital marketplace additionally facilitates the manner wherein investors with excess budget can channel them to traders in deficit. The capital marketplace provides both in a single day and long term funds and uses financial devices with long adulthood periods. The following economic instruments traded on this marketplace consist of forex instruments, equity coverage, credit marketplace derivatives, and hybrid units (Aremu, et al., 2018).

Market Capitalization

In line with Omotor (2017), marketplace capitalization is the charge of a inventory at any given time increased via the quantity of shares extraordinary. From a market perspective, market capitalization incorporates of the sum of individual extremely good shares with the aid of their charges for all of the companies indexed in a given stock market. Market capitalization may be divided as follows; one, big – cap ranging from $10 – 100 billion; mid-cap ($ 1 – 10 billion); Small-cap ($100 million – 1 billion) and micro-cap ($10 - $ 100 million). Olson (2005) notes that there is no clean consensus or roles governing on

the precise reduce of values and whether categorization should be dollar denominated or percentiles. Market capitalization is the overall fee of all equity securities listed on a stock trade. It's far computed on a every day basis. Market capitalization of a particular agency on a particular day may be computed as made from the range of shares brilliant and the last fee of the percentage. Right here the range of fantastic shares refers to the issue size of the stock. Market Capitalization = remaining rate of share quantity of splendid stocks (Omotor, 2017).

Alternatively, the need to be adjusted through the years as result of inflation, populace alternate and typical marketplace valuation is cut by way of categorization. Normally, these expenses occur on a daily basis depending on variation in rates of the respective shares. Consequently, the need to become aware of suitable signs in order to help players in the inventory marketplace to reveal the changes is essential. Through this, the players are able to make knowledgeable funding selections. stock market indices are the commonly used indicators hired to display and report modifications in marketplace capitalization and marketplace performance. Moya-Martinez, and Ferrer-Lapena (2019) defined inventory market overall performance as a degree of returns on stocks over a time period. The duration over which inventory returns are measured is based totally on personal choices though portfolio managers generally measure stock marketplace overall performance on day by day, weekly, monthly and every year basis. market capitalization figures and stock indices computed each day based totally on person inventory fees are used to measure inventory market overall performance. In like manner, Bakare (2020) referred to capitalization charge as the discount rate used to decide the present cost of destiny earnings. It is one of the primary determinants of the marketplace length of any inventory trade. The increase and development of any financial system depend on the dimensions of market capitalization and its increase charge. Also consolidation recreated the Nigerian capital market with the aid of stimulating activities in each number one and secondary marketplace thru boom in mixture market capitalization and new issues of bank stocks. the size of market capitalization and its growth fees are signs of market size and performance. Marketplace length is also measured through the marketplace capitalization ratio, that's described as the value of shares listed divided by means of GDP. The essence of the marketplace capitalization ratio is that the dimensions of the marketplace need to be positively correlated with the ability to mobilize capital and diversify chance in an economic system (Demirguc-Kunt& Levine, 2016).

Empirical Review

There are quite a range of empirical studies regarding portfolio risk, market capitalization and other capital market variables, however the literature evaluation of study cantered more on latest scholarly works at the difficulty depend starting with the works of Ologunde, Elumilade and Asaolu (2021) who examined the relationships between stock market capitalization rate and interest rate risk. They found that winning hobby charge exerts high quality influence on stock market capitalization. They also observed that authority's improvement inventory charge exerts negative have an effect on stock marketplace capitalization fee and winning hobby fee exerts poor influence on authority's improvement stock price. Their findings seem to take interest rate as the lending charge. If deposit fee will increase, theoretically, buyers will transfer their capital from proportion marketplace to banks. This could exert a terrible effect on stock expenses. Consequently, their work used the deposit price to specific hobby prices in Nigeria. Aziza (2020) also accomplished a study on the effects of inflation on stock market overall performance and demonstrated whether or not economic regulations in diverse international locations affect their personal stock market overall performance and improvement in Australia and New Zealand representing Australia; India and Indonesia representing Asia; Nigeria and South Africa representing Africa; Chile and Trinidad and Tobago representing South America and Jamaica and the United States representing North America. The study used time collection facts from 1988 to 2008. The study found that financial coverage variables inclusive of inflation and interest rate proxied by means of lending price as well as intermediate goal of economic policy inflation price measured at purchaser fee index have longer term relationship with stock market overall performance measured with the aid of boom of marketplace capitalization.

Okoro and Anne (2018) analyzed the effect of investment risk on financial boom in Nigeria, time series facts become used and regular Least Squares (OLS) changed into hired. The study determined that stock marketplace has nice and sizeable impact on monetary increase in Nigeria among the period 1970-2015. but, a sharp comparison become the case in the study by using Afolabi (2019) which empirically ascertained the effect of the Nigerian inventory market at the Nigerian economic system from 1992 to 2018. The Nigerian Capital market turned into proxy as market Capitalization against some variables of the economy inclusive of Gross home Product (GDP), foreign direct funding, inflation rate, general new troubles, cost of transaction and general listing. Using the couple of regression analysis, he discovered that inventory market has a trifling impact at the economy within the duration underneath overview. Dabo (2018) investigated the impact of capitalization of the Nigerian capital market and its impact at the growth of the Nigerian financial system. The paper employed annual time series records from 2001 to 2017(17 year duration) gathered from various issues of vital financial institution of Nigeria's Statistical Bulletin and Annual report and statements of money owed of Nigeria stock exchange. A regression analysis was adopted in computing the interplay among the capitalization of the Nigerian capital market and Nigeria's financial growth. The empirical results showed that, there has been unidirectional causality between capitalization of the inventory marketplace and financial increase, which ran from monetary growth (GDP) to capitalization of the inventory market (MCAP) at 5 percent vast degree. The study established that the Nigerian capital marketplace desires to create more self assurance to buyers, mainly in phrases of transparency and responsibility, for sustainable and increasing capitalization important for sustainable economic boom in the United States. It recommended the enlargement of the Nigerian inventory market through the authorities, creating an allowing investable environment, with the intention to growth each the extent of transactions and wide variety of shares traded in the marketplace. This, it believes will enhance their ability to mobilize assets and successfully allocate them to the maximum effective sectors of the economy.

Also in Nigeria, Felix, Amalachukwu and Oyinloye (2017) tested the empirical effect of portfolio policy tools on performance of the Nigerian capital market the use of time series facts (1986 -2016). Explicitly, thestudy evaluated the effect of monetary coverage rate (the rate at which the critical bank of Nigeria increase credit facility to other monetary establishments operating in the country), cash reserve ratio, interestrate and mortgage to deposit ratio at the performance of the Nigerian capital market. Nigerian inventory alternate and important financial institution of Nigeria annual reports of various versions sourced the relevant records for analysis. The Autoregressive Distributive Lag (ARDL) changed into the method carried out in estimating the model and for co-integration evaluation, even as granger causality evaluation aided in ascertaining the effect of monetary coverage tools on capital market performance. The end result of the evaluation illustrated that monetary coverage gear and capital marketplaces are not proportionally correlated. The study observed that Nigeria capital market performance is not notably stricken by monetary policy announcement with the aid of the important financial institution of Nigeria; rather, it's far financial charge that is extensively prompted with the aid of performance of the capital market. The study recommended that the CBN have to be cautious in fixing the liquidity ratio because of its capability in fuelling or affecting inflation which in turn affects charges of shares within the capital market. The research performed by way of Muktadir-Al-Mukit and Shafiullah (2016), investigated the effect of monetary coverage variables on the performance of new submit crashed stock market of Bangladesh the usage of month-to-month records from 2011. As a dependent variable, Dhaka stock trade (DSE) widespread Index (DGEN) was used as a proxy for inventory market performance and three impartial variables namely money deliver, repo price and inflation price were proxies for monetary coverage gear. The research used econometric techniques of measuring the purposeful dating among monetary variables and market index the use of the concept of Unit root test and co-integration technique. Causal relationships had been investigated the usage of Granger causality check. The coefficients of all the explanatory variables have been located statistically big. through employing co-integration technique, it turned into observed that in the volatile stock marketplace of Bangladesh, a one percentage boom in inflation, in money deliver and in repo rate contributes 2.61and 12.98 percent decrease and six.08

percentage growth within the market index respectively. Ultimately, Granger causality evaluation cautioned the lifestyles of unidirectional causality from inflation to DGEN index and money supply to DGEN index.

Theoretical Framework

Capital Asset Pricing Model (CAPM)

The capital asset pricing model (CAPM) was propounded by Sharpe (1964) and Lintner (1965). This theory believed that the expected extra go back of an asset is linearly proportional to the anticipated extra market return, called the market hazard top class. excess returns are returns above the hazard-loose interest rate. The market hazard of an asset is measured through its beta, which displays the systematic threat of the asset. Officially, it can be written in the following manner: E (Ri) = Rf + pi (E (R m) - R f). Where F. (Ri) is the expected return of asset; (E (Rm) Rf) is the marketplace chance premium; is the systematic chance. The capital asset pricing model (CAPM) is based on several assumptions such as: investor preferences which appears at investor conduct as risk averse people in search of to maximize the anticipated utility of their wealth on the end of the length; imply-variance options which holds that traders take into account most effective the first actions of go back distribution whilst deciding on an investment: the predicted go back and the variance; CAPM additionally holds that there are no operational friction like taxes and transaction prices; and that every one assets are infinitely divisible. Moreover, the concept further holds that all assets may be traded which means that each one claims to future coins-flows may be freely exchanged. by using implication, each investor's wealth is absolutely made from tradable belongings; the concept additionally assumes homogeneous ideals wherein the investment period is the equal for all traders and all investors have the equal investment alternatives. CAPM additionally holds that statistics is offered free of charge and is available concurrently to all buyers consequently, there may be nothing like information asymmetry. All buyers therefore have the identical return, variance, and covariance expectations for all property. The CAPM derived by means of Sharpe (1964), Lintner (1965) and Mossin (1966) and in its zero beta model by way of Black (1972) has a history of extra than thirty years over four decades.

Then again, the CAPM acquired early empirical support, it become eventually challenged on the premise of incompleteness. Also, the Fama& French (1988) look at sparked a debate concerning the validity of the CAPM. A number of papers attempted to address the incompleteness trouble, as an instance research with the aid of Merton (1987). The paintings of Markowitz (1959) on portfolio choice and Sharpe (1964), Lintner (1965) and Mossin (1966) at the Capital Asset Pricing model derived the concept of the slope parameter, fi of the security marketplace line, as a measure of systematic chance. Blume (1973) provided a conscious non-rigorous justification of the usage of the beta coefficient as a measure of danger. The portfolio technique and the equilibrium approach have been used for its justification. Blume (1973) also tested the desk bound of beta coefficient over the years using portfolios of n securities with smallest estimates of pj every portfolio is ranked in ascending order and the product motion and rank order coefficient among the threat measure beta for portfolio of n securities in a single duration and corresponding hazard degree for the identical portfolio inside the next length is tabulated. The findings showed that the product movement correlations multiplied with the quantity of securities in the portfolio. With the aid of implication at least for a portfolio with a massive range of securities, the estimated beta coefficients are exceptionally special over time.

Theory of Investment

The theory of investment was developed by Keynes (1936) and Hayek (1941). Who focused on the employment of capital and funding from a firm's point of view? They regarded funding because the alternate in capital stock at some point of a length. One of the earliest funding theories, however, got here from Irving Fisher in his "Nature of Capital and profits" (1906) and his later work "principle of hobby" (1930). In his idea, even though simplistic and open to some of assumptions, he evolved a simple funding

frontier (Krugman, 1994). according to Goetzmann (1997) an investor have to first be answering the query on what price of go back he's going to call for to maintain a risky security in his portfolio due to the fact there may be a change-off among those two motivations. As such, the investor needs to assess the inherent hazard of not losing any money towards the anticipated return of the funding. The rate of go back measures the growth in wealth and is expressed as a percent over a specific term. One of the finest allies for an investor seeking investment returns is time. That is due to the compounding impact which could make someone's cash develop considerably over a enormously quick time frame. It refers back to the increase of an investment from reinvesting any money that is earned till the withdrawal length which means that the investment no longer only earns a go back primarily based on the unique quantity invested, however also on any go back already paid.

According to Goetzmann (1997), over a sixty eight-12 month's length from 1926 to 1995, a dollar invested in the SPS00 grew to$889. Over the identical length, a greenback invested in company bonds grew to $40. Despite the fact that the returns of the company bonds were lots lower, the danger o! Reaching the expected go back over any duration on this time was much lower, because the return curve changed into flatter, though fairly straight. The SP500 yielded miles better go back, but may additionally have yielded a negative return at any time within that period. The go back curve could consequently be a whole lot more erratic. This puts the investor in the front of the classical change-off of risk vs. return. this is in keeping with the investing precept which holds that the higher the hazard the investor is prepared to take, the higher the go back that he can count on from the investment might be. The margin an investor earns as the result of making an investment in a riskier investment is called the hazard premium. This study is anchored by theory of investment; this is because is closely related to this research work, and because it states that each investor has a sure chance appetite or danger tolerance. Both seek advice from the equal conduct, which suggests how lots danger an investor is ready to take for an anticipated return. to give the investor a wide danger - return profile inside one portfolio, the portfolio supervisor desires to make capital allocation choices which might determine how a great deal of the overall portfolio goes to be invested in low- hazard, low-go back investments vs. unstable.

3. METHODOLGY

The research design for this studyis expost facto research design, this meanscause - effect research design and this was chosen because of the research specific objectives.The study adopts secondary method of data collection. Secondary data is research data that has been previously gathered for other uses by researchers or institutions other than the present user. Our secondary data will be gotten from institutions and organizations that handle information and data relating to capital market and macroeconomic policy indicators in Nigeria. Among them are Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS), Security and Exchange Commission (SEC) and World Bank. And the data spanned from 1986 to 2020, they are time series and they are annual data.

The method that was employed to analyze the behaviour of the data is the use of both descriptive and inferential statistics that is ex post facto method as stated under the research design. The variables which will be used to determine the specific objectives are presented as follows:
i. Dependent variable: AMCCMN = annual capital market capitalization in Nigeria
ii. Independent variables: INFR (Inflation Rate) and INTR which is the interest rate in Nigeria.

Auto-regressive Distributed Lag (ARDL) approach was applied to estimate the impact of portfolio risk indicators on capital market in Nigeria in this study. The ARDL ‘‘Bounds test’’ approach that is based on the ordinary least square (OLS) estimation of a conditional unrestricted error correction model (UECM) for co-integration analysis as established earlier was developed by Pesaran et al. (2001). It was used to test for the existence of a long run relationship as well as to make an estimation of long and short run coefficients that can capture both the short run and long run impacts. Also, the data series order of integrations does not impose any restriction to ARDL application (Pesaran and Pesaran, 1997). Pesaran and Shin (1999) noted that ARDL estimators are consistent with small sample sizes. From the ARDL the

study derived a dynamic error correction model (ECM) following a simple linear transformation, where the ECM integrates short run dynamics with long run equilibrium without losing long run information (Bannerjee, Dolado, Galbraith & Hendry, 1993; Shrestha & Chowdhury, 2005).

Model Specification

As stated above under the technique for data analysis, the study adopts and uses the Autoregressive Distributed Lagged (ARDL) model and the Error Correction Model (ECM) for both the long and short run impact among the portfolio risk variables. The foundation of the model was based on the theoretical framework of the study. Also, the initial model was adopted from the work of Oniore and Akatugbe (2019) which was stated as follows:

$In\text{ACMCN} = \alpha_0 + \beta_1 In\text{INFR} + \beta_2 In\text{INTR} + Ut$ ---------- (1.1)

Where: ACMCN = Annual Capital Market Capitalization in Nigeria
INFR= Inflation Rate in Nigeria
INTR = Official Exchange Rate
In = Natural logarithm, α_0 = the intercept or autonomous parameter estimate, β_1 *and* β_2= Parameter estimate representing the coefficient of INFR and INTR, and Ut = Error term (or stochastic term).

However, the equation (1.1) was modified and specified to follow the study objectives and hypotheses stated. Therefore, below are the specified Autoregressive Distributed Lagged (ARDL) and the Error Correction Model (ECM) according to the specific objectives of the study which are as follows:
The Autoregressive Distributed Lagged (ARDL) model that was used to examine the portfolio risk indicators on capital market capitalization in Nigeria is specified as follows:

$$ACMCN = \alpha_0 + \sum_{g=1}^{l} \alpha_{1i} \Delta ACMCN_{t-1} + \sum_{h=1}^{m} \alpha_{2i} \Delta INFR_{t-i} + \sum_{i=1}^{n} \alpha_{3i} \Delta INTR_{t-i} ----(1.2)$$

Therefore, equation (1.2) was used to estimate and analysis short run impact of portfolio risk indicators on annual capital market capitalization in Nigeria. From equation (1.2) $ACMCN$ is the annual capital market capitalization of the capital market in Nigeria which is the dependent variable. The following are the independent variables: INFR is the inflation rate in Nigeria and INTR is the interest rate in Nigeria. The model, that is equation (1.2) above was used to adjust the estimation until the ECM turned negative. The negative sign of coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value.

Definition of Variables

Table 1: Description of the Variables used for the Model

SN	Variable	Symbol	Explaination	Measurement	Remark	Source
1	Annual Capital Market Capitalization of the in Nigeria.	ACMCN	The value of all listed bond securities based on their market prices	The bond price multiply by the number of bond outstanding	Dependent	SEC, NSE, DMO
2	Inflation Rate in Nigeria	INFR	The general price changes of goods and services in an economy overtime	The measure of changes in general price level of goods and services overtime in Nigeria	Independent	CBN, NBS
3	Interest Rate in Nigeria	INTR	Rate of interest an investor expects to receive after allowing for	This is approximately the nominal interest rate	Independent	CBN, NBS

			inflation	minus the inflation rate		

Source: *Author Compilation, 2020*

RESULTS AND DISCUSSIONS

To assess the impact of portfolio risk on capital market capitalization in Nigeria, model estimation was carried out using annual time series data covering the period 1986 to 2020. The capital market capitalization in Nigeria is the dependent variable which was proxy by Annual Capital Market Capitalization in Nigeria (ACMCN), while portfolio risk variables are the independent variables which are represented by Inflation Rate (INFR) and Interest Rate (INTR).

4.1 Descriptive Analysis of Variables

Table 2: Descriptive Analysis of Variables

	ACMCN	INFR	INTR
Mean	7324.133	20.28286	22.06371
Median	1359.300	12.90000	21.34000
Maximum	38589.58	72.80000	36.09000
Minimum	6.800000	5.400000	12.00000
Std. Dev.	9683.194	18.31077	5.004701
Skewness	1.342567	1.726163	0.428607
Kurtosis	4.301467	4.664401	3.737563
Jarque-Bera	12.98466	21.42114	1.864938
Probability	0.001515	0.000022	0.393581
Sum	256344.6	709.9000	772.2300
Sum Sq. Dev.	3.19E+09	11399.66	851.5992
Observations	35	35	35

Source: *Output from E-views 10.0 (2022)*

The summary of descriptive statistics of relevant variables of study is as reported in Table 2.As may be observed from the table, the mean, median, standard deviation as well as the skewness and kurtosis measures of our variables of interest are given. The mean values of ACMCN, INFR and INTR are 7324.133, 20.28286, and 22.06371respectively. Their respective standard deviations are 9683.194, 18.31077, and 5.004701. Also, the minimum values for Annual Capital Market Capitalization in Nigeria (ACMCN), Inflation Rate (INFR) and Interest Rate (INTR)are 6.8 Billion Naira, 5.4 percent and 12 percent respectively, while the maximum values of Annual Capital Market Capitalization in Nigeria (ACMCN), Inflation Rate (INFR) and Interest Rate (INTR) are 38589.58 Billion Naira, 72.8 percent and 36.1 percent respectively. The Jarque-Bera test of normality shows that the error term in our specified equation is normally distributed. This is evidenced by the respective insignificant Jarque-Bera statistics of the relevant variables.

Correlation Analysis

Table 3: Correlation Analysis

Covariance Analysis: Ordinary
Date: 03/13/22 Time: 15:47
Sample: 1986 2020
Included observations: 35

Correlation Probability	LACMCN	LINFR	LINTR
LACMCN	1.000000		

LINFR	0.817834	1.000000	
	0.0014	-----	
LINTR	0.747027	0.740275	1.000000
	0.0399	0.0316	-----

Source: *Output from E-views 10.0 (2022)*

From table 3 above there is strong and significant positive relationship between Annual Capital Market Capitalization in Nigeria (ACMCN) and Inflation Rate (INFR, Annual Capital Market Capitalization in Nigeria (ACMCN) and Interest Rate (INTR). This is indicated by their high Pearson Correlation coefficient of 0.817834 and 0.747027 respectively and they are both significant at 5 percent level of significance (LOS) since their p-values are0.0014 and 0.0399. Meaning an increase or decrease in Annual Capital Market Capitalization in Nigeria (ACMCN) is associated with an increase or decrease in Inflation Rate (INFR) and Interest Rate (INTR)

Trend and Graphically Analysis

The trends associated with our key variables are equally shown in the following graphs below. Accordingly, the chart associated with Annual Capital Market Capitalization in Nigeria(ACMCN), Inflation Rate (INFR) and Interest Rate (INTR) variables exhibited significant fluctuations (at 5 years intervals) between 1986 to 2018whileMoney Supply (M2) showed upward trending 1990 to 2020 (see the graphs below).

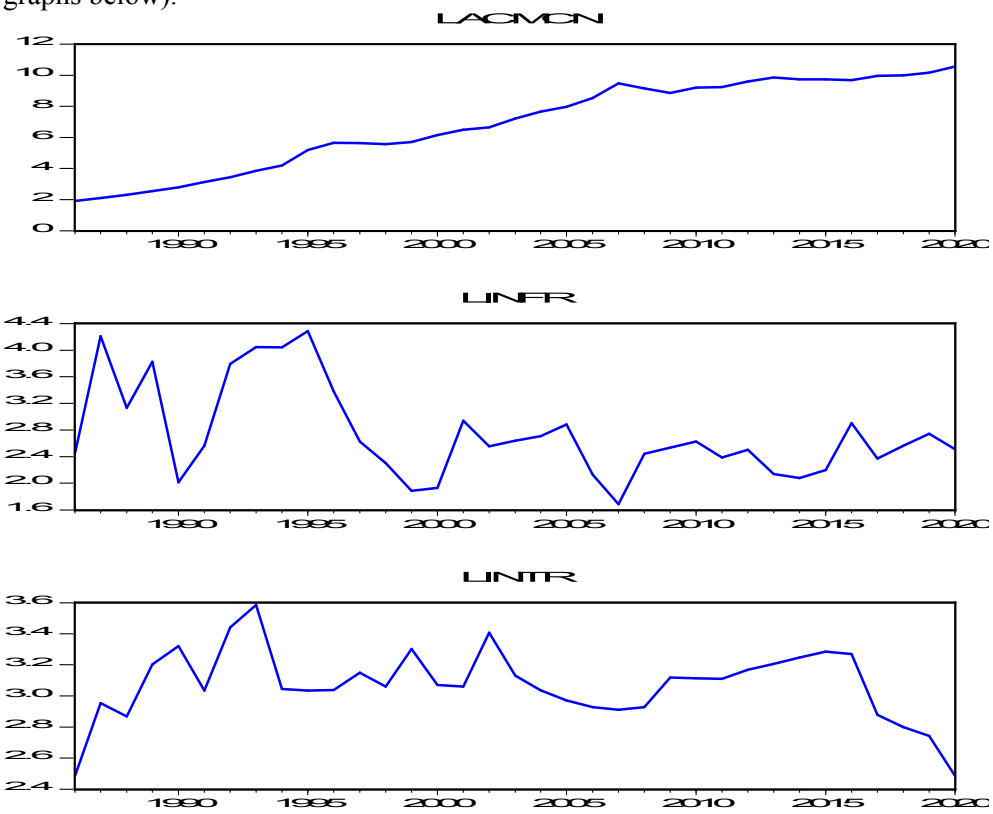

Figure 1: ***Trend Analysis for all the Variables (1986-2020***

Stationarity Test of Variables

Table 4: Augmented Dickey-Fuller Test

Variables	ADF @ Level	ADF @ 1st Stationarity	Stationary Status
ACMCN	0.5108	0.0012	I(1)
INFR	-	0.0321	I(0)
INTR	-	0.0219	I(0)
The critical values for rejection of hypothesis of unit root were from MacKinnon (1991) as reported in e-views 10.0.			

Source: *Output from E-views 10.0 (2022)*

Table 4 shows that the Augmented Dickey-Fuller stationarity test results of the three variables used in this study. From the results, log of Annual Capital Market Capitalization in Nigeria (ACMCN)was stationary after first difference, while log ofInflation Rate (INFR) and log of Interest Rate (INTR) were stationary at level. This implies that the variables are fit and suitable to be used for the analysis.

Co-integration ARDL Bounds Test

Table 5: ARDL Bounds Test of Co-integration

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LACMCN)
Selected Model: ARDL(1, 0, 1)
Case 3: Unrestricted Constant and No Trend
Date: 03/13/22 Time: 15:22
Sample: 1986 2020
Included observations: 34

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.768943	0.960967	0.800176	0.4301
LACMCN(-1)*	-0.030738	0.022172	-1.386339	0.1762
LINFR**	0.041391	0.085262	0.485452	0.6310
LINTR(-1)	-0.136523	0.270740	-0.504261	0.6179
D(LINTR)	-0.497582	0.273964	-1.816230	0.0797

* p-value incompatible with t-Bounds distribution.
** Variable interpreted as Z = Z(-1) + D(Z).

Levels Equation
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LINFR	1.346576	3.417974	0.393969	0.6965
LINTR	-4.441544	8.613107	-0.515673	0.6100

EC = LACMCN - (1.3466*LINFR -4.4415*LINTR)

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)

			Asymptotic: n=1000	
F-statistic	5.435040	10%	2.45	3.52
K	2	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06
			Finite Sample: n=35	
Actual Sample Size	34			
		10%	3.393	4.41
		5%	4.183	5.333
		1%	6.14	7.607
			Finite Sample: n=30	
		10%	3.437	4.47
		5%	4.267	5.473
		1%	6.183	7.873

t-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-5.386339	10%	-2.57	-3.21
		5%	-2.86	-3.53
		2.5%	-3.13	-3.8
		1%	-3.43	-4.1

Source: *Output from E-views 10.0 (2022)*

Having established that the variables are an admixture of I (0) and 1(1)orders of integration. The ARDL bounds test for co-integration was carried out. Table 5 shows that the F-Statistic derived from the ARDL bounds test is 5.435040. When this was compared with the critical values obtained from the Pesaran table at 5% level of significance, its value exceeded both 2.86 and 4.01 for I (0) and I (1) respectively. Based on this, it can be said that the variables are co-integrated or show long run relationships (co-movements). Using the ARDL Bound test with critical value from Narayan (2005), the variables were co-integrated at 1per cent level of significance since the Wald F- statistics is greater than the critical lower and upper bound.

Discussion of Regression Results

Table 6 : ARDL Long-run regression results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
INFR	4.889517	19.245644	-0.254058	0.0019
INTR	-57.28967	71.465268	-0.801644	0.4317
C	1445.8629	1827.616743	0.791119	0.4377

Source: *Output from E-views 9.0 (2021)*

From the long-run regression results shown in Table 4.7 the following interpretation can be inferred; a unit increase in Inflation Rate (INFR) and Interest Rate in Nigeria (INTR) on the average, holding other independent variables constant will lead to 4.889517 and 57.28967-unit decrease in Annual Capital Market Capitalization in Nigeria (ACMCN)respectively. Based on the probability value, the Inflation Rate (INFR) and Interest Rate in Nigeria (INTR) were statistically insignificant in explaining the variation in Annual Capital Market Capitalization in Nigeria (ACMCN).

Based on the coefficient the inflation rate has positive and significant impact on capital market capitalization in Nigeria. Therefore, the $\mathbf{H_{01}}$ which stated that inflation rate as a portfolio risk has no significant impact on the capital market capitalization in Nigeriais **rejected**.Andthe coefficient the interest rate has negative and insignificant impact on capital market capitalization in Nigeria. therefore, the $\mathbf{H_{02}}$ which stated that interest rate as a portfolio risk has no significant impact on capital market capitalization in Nigeria is **accepted.**

Table 7: The Error Correction Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ACMCN)(-1))	0.531035	0.236048	2.249692	0.0353
D(INFR)	6.218151	24.473581	-0.254076	0.0001
D(INTR)	-72.857063	89.153980	-0.817205	0.4230
ECM(-1)	-0.1304621	0.034294	-3.804224	0.0010

Source: *Output from E-views 10.0 (2022)*

From the short-run regression results shown in Table 7, the following interpretation can be inferred; since the variables were found to be co-integrated, implying that they have long-run equilibrium relationship, it is necessary to test for shortrun relationship. From table 7, the ECM parameter is negative (-) and significant which is -0.1304621, this shows that 13 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period.It has been established that the variables are co-integrated and also have short run relationship established from the ECM.Annual Capital Market Capitalization in Nigeria (ACMCN)at lag one and nflation Rate (INFR) at current period waspositively related to Annual Capital Market Capitalization in Nigeria (ACMCN), while Interest Rate in Nigeria (INTR) at current period was negatively related to Annual Capital Market Capitalization in Nigeria (ACMCN).

Discusion of Finding

The error correction model (ECM) andAutoregressive Distributed Lagged (ARDL) results revealed that Inflation Rate (INFR) was statistically significant in explaining the variation in Annual Capital Market Capitalization in Nigeria. This findings and results agreed to the work of Aziza (2020) also accomplished a study on the effects of inflation on stock market overall performance and demonstrated whether or not economic regulations in diverse international locations affect their personal stock market overall performance and improvement in Australia and New Zealand representing Australia; India and Indonesia representing Asia; Nigeria and South Africa representing Africa; Chile and Trinidad and Tobago representing South America and Jamaica and the United States representing North America. The result is also in line with the result of Okoro and Anne (2018) analyzed the effect of investment risk on financial boom in Nigeria. Besides, the study revealed that Interest Rate in Nigeria (INTR) was statistically insignificant in explaining the variation in Annual Capital Market Capitalization in Nigeria. This findings and results were consistent with the work of Asaolu (2021) who examined the relationships between stock market capitalization rate and interest rate risk. The findings of the study is also in agreement with the findings ofFelix, Amalachukwu and Oyinloye (2017) tested the empirical effect of portfolio policy tools on performance of the Nigerian capital market, but not in agreement of findings ofAziza (2020).

CONCLUSION AND RECOMMENDATIONS

Thestudy revealed that both in the long run and short run, Inflation Rate (INFR) waspositively related to Annual Capital Market Capitalization in Nigeria (ACMCN) and was statistically significant in explaining changes in Annual Capital Market Capitalization in Nigeria (ACMCN). On Interest Rate in Nigeria (INTR) was negatively related to Annual Capital Market Capitalization in Nigeria (ACMCN) but it was statistically insignificant in explaining changes in Annual Capital Market Capitalization in Nigeria (ACMCN). The study concludes that risk is a prevalent issue in investment decisions and Nigerian capital market development because it could not be avoided but can be managed. Investment without risk element might not be a worth-while investment because overcoming risk could launch the business into unprecedented success. The extent of to which it constitutes a discouraging factor to investment depends on the investor's attitude to risk. From the general perspective that "prevention is better than cure," managers need to pre-empt risk and its effect through risk analysis methods. Based on the findings the study recommends the following policies.

i. Government should improve the efficiency and effectiveness portfolio risk management in Nigeria since it was statistically significant in determining the improvement of Annual Capital Market Capitalization in Nigeria. Government should manage the activities relating to Inflation Rate (INFR) through targeting policies in order (for them to be significant and relevant as monetary policy tools)to encouraging the Annual Capital Market Capitalization in Nigeria.Besides, government needs to reduce the rate of policy changes as this usually leads to price instability and other negative impacts on investment.

ii. An investigation into the types of risk and plausible means of prevention is essential. Consideration should be given to the nature of business and the need to attain organization goals since each business is exposed to specific risk.Thereis need for regulatory bodies such as Central Bank, tax authorities among other to create investment friendly climate such easy access to loan at low interest rate and tax holiday and avoid multiple tax regime as in Nigeria where the Federal, State, and Local government impose tax on nearly the same tax field. Furthermore, the role of the accountants in educating loan beneficiaries on investment issues is needful as this will sensitize program beneficiaries to determining inherent risks in their decision to invest. To reduce risk meaningfully, the accountants should further ensure that the source of capital to the business be analyzed with interest rate attached, as well as the effect of inflation on the capital, the operations of the business, and Nigerian capital market development.

References

Adekunle, O. A, Alalade, Y.S. A and Okulenu S.A (2016). Macroeconomic Variables and its impact on Nigerian Capital Market Growth. *IIARD International Journal of Economics and Business Management*. 2(2), 22-37.

Alam, M., and Uddin, G.S. (2009), Relationship between Interest Rate and Stock Price: Empirical Evidence fromDeveloped and Developing Countries, *International Journal of Business and Management.* 4(3), 43-51.

Albulescu, T. C, Aubi, C, and Goyeau, D (2017). Stock Prices, Inflation and Inflation Uncertainty in the U.S: Testing the Long-Run Relationship Considering Dow Jones Sector Indexes. Retrieved 15th April 2020, 1-22

Amedu, A. J (2018). Administration of Nigerian Capital Market and National development. Online Publication of Ph.D. Thesis, Department of Public Administration and Local Government, University of Nigeria, Nsukka.

Anyanwu, J. C. (2018). *Monetary Economics: Theory, Policy, and Institutions.* Onitsha: Hybrid Publishers.

Aremu, O. S., Suberu, O. J., and Ladipo O.O., (2017). Impact of the Nigerian capital market operations on the local investments in Nigeria. *Journal of Research in International Business Management*. 1(8), 258-261

Aziza, F. O. F. (2020). The Effects of Monetary Policy on Stock Market Performance: A Cross-Country Analysis. http://dx.doi.org/10.2139/ssrn.1743834. Retrieved from http://ssrn.com/abstract=1743834.

Bernanke, B. S., & Gertler, M. (2020). Monetary policy and asset price volatility. Working Paper 7559. *NationalBureau of Economic Research.*

Brown, K. (2018), Does inflation matter for equity returns, *Journal of asset management,* 6, (4), 259-273.

Cengiz, T., & Basarir, C. (2019), The long-run relationship between stock market capitalization rate and interest rate: Co-integration approach. Procedia – Social and Behavioural Sciences, 143, 1070-1073.

Dabo (2018) investigated the impact of capitalization of the Nigerian capital market and its impact at the growth of the Nigerian financial system.*Journal of Risk Finance*, *Emerald Group Publishing Ghana, 5(3), 17-33*

Dake K (2020), Orienting dispositions in the perception of risk: an analysis of contemporary worldviews and cultural biases*. Journal cross-cultural psychology*. Vol.22 (61) 15 – 26.

Damodaran, G. (2019) Impact of Nigerian Capital Market Capitalization on Growth of Nigeria Economy. *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*. 4(2), 1513-1524.

Deeson A.(2021), Risk and uncertainties. www/nytime.com2011/Wikipedia.

Farounbi k. (2020) *Management accounting*. Lagos: Fb Venutures

Friedman, M., (2018), *Inflation and Unemployment- Nobel Memorial Lecture*, The University of Chicago, Illinois, USA.

Felix N. E., Amalachukwu C. A., and Oyinloye L., (2017). Effect of Monetary Policy on the Performance of the Nigerian Capital Market (1986 – 2016): Stylized Facts from ARDL Approach. *Advances in Research, 14(6), 1-15.*

Frank K. (2020), Risk, Uncertainty and Profit. *Seminal Paper*, University of Chicago

Kaplan R. & Mikes A. (2019), Managing risks: A new framework. *Harvard BusinessReview*

Koontz, H. & Weihrich, H (2020) *Essential of management; an international perspective* (8th ed.), New Delhi: Tata McGraw Hill Education Private Limited.