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Portfolio Management and the Profitability Level of Banks in Nigeria

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ABSTRACT

The study objective is to establish the relationship between portfolio management and financial performance of banks in Nigeria. The research is valuable to bank managers as it informs them on necessary considerations to make while selecting the class of assets in a portfolio, the industry policy makers and contributes to a broader realm of academic research. The study adopts the descriptive analytical research design. The study adopts secondary data and used SPSS to analyze the data. The results show that portfolio management has a positive relationship in profitability level of banks in Nigeria and recommends banks develop robust investment strategies to manage their portfolio investments for better profits.

KEYWORDS: *Portfolio Management, Broad Money, Mean Asset Rating Portfolio, Portfolio Diversification, Capital Market Participation.*

Introduction

The world of investment is strikingly full of unvertainty as investors face the possibility of either making gain or losing a fraction or even sometimes their entire investment funds. Every investor is faced with the decision of either holding back his investible funds (particularly, if the magnitude of returns on his proposed investment is not known) or invest all the same assuming he is a risk taker. Most investors hold thier baskets of investment in more than just one or two portfolio for the obvious reason of diversification which is intended to minimize risk on the investment. Accordingly, Yahaya (2012) was quick to posit that, the main goal of such investors constructing such portfolio was to basically in an attempt to "strike a balance" between mainly two conflicting objectives, namely, making a maximum return/profit at the most minimum risk possible given that a wise choice of constituent assets was made and the proper fraction of investment funds was allocated correspondingly.

In choosing or combining assets in a portfolio, it is important for investors to know the degree of covariance that exists between the assets. Covariance reflects the degree to which the returns of two securities vary or change together. For instance, assets that have a positive upward co-movements tend to yield increase returns. Thus, upward and downward deviations from the expected return will a n can be reduced through diversification since diversification has the ability to reduce the variance expected even when both have the same magnitude of expected return. as the number of securities included in a portfolio increases, the importance of the risk of each individiual security decreases whereas the significance of the covariance relationship increases (Roychoudhury, 2007).

Several investors in Nigeria often face the difficulty of how to allocate their capital to companies quoted in the stock market in order to maximize returns while minimizing risk as ultimate goal. Apart from investors facing the challenge of selecting the type of asset to invest in, they also lack

technical knowledge on how to allocate their funds to the selected portfolio. And this is because of the banks handling their investment portfolios. The FirstBank as a commercial bank is a profit making organization. Its objective includes profit maximization, maximization of earning per share and maximization of share price through increase virtual banking and other programmers. The level of achievement of there objective is essentially a measure of business efficiency. The need therefore arises for the FirstBank to rigorously pursue its goal by making use of all the resources at its disposal. Hence it has become more important in recent time duie to the general ecoonomic downtown and sector by the government for the banking to move from one sphere into other areas of commerce and industry which are deemed to be profitable as asset portfolio adequately meets this needs.Bearing in mind that investment induces the killing of an option; the option of productivity investment at any time in the future, the manager of the portfolio should exercise adequate skill and caution an efficient and effective manager would take into consideration.the high volatile and unpredictable nature of the money and capital marktes in working out an investment policy and such policy should be highly flexible so as to cover the the disadvantage by changes in government fiscal andmonetary policies.This study intends to show how Banks in Nigeria handles portfolio management that impact positively on its profitability level.

Both Government and Private Institutions (national and international organizations) concerned with the development and improvement of portfolio management has over the years continually been in the spree of refinement and advancement of the discipline, yet, the adequate breakthrough has not been thoroughly achieved in finance business industry in the Federal Republic of Nigeria in particular and Africa in general. This generational poser has continued with careless abandon, resulting to lack of proper utilization and practice of Project Management in this part of the world. Despite the publicity about portfolio management, and the many portfolio methods proposed, managers have identified major problems and have raised serious concerns about the effectiveness of portfolio techniques.

The problems according to Cooper et al (2000) lies prominently in the following: Resource balancing - resource demands usually exceed supply, as mamagement has difficulty balancing the resource needs of projects with the resource availability; Priotising projects against one another- many projects look good, especially in their early days, and thus too many projects "pass the hurdles" and are added to the active list. Management seems to have difficulty discriminating between the Go, Kill and Hold projects; Making Go/Kill decisions in the absence of solid information - the up-front homework is often substandard in prokects, the result being that management is required to make significant investment decisions, often using very unreliable data. No wonder so many of its decisions are questionable; Too many minor projects in the portfolio - there is an absensce of major revenue generators and the kinds of projects that will yeild significant technical, market and financial breakthroughs. These problems which are clealy interlinked, i.e., the inability to discriminate between projects invariably leads to a resource balancing problem. Insufficinet resources on key projects in turn results iin project teams short-cutting key activities. Cutting corners on projects results in poor information invariably lead to a tendency to do short-term, quick and simple projects. And so the portfolio problems scontinue, feeding one another in an endless downward sprial. As supposed the banking and finance industry's portfolio management is critically affected. This research aims at studying the portfolio management system of all Banks in Nigeria, and the continous resilence in overcoming the daunting obstacles plaguing the concepts. The Concentration of this study is to elucidate those practices and strategies employed by the Banks in Nigeria that effects advantagiously more than upcoming or middle-class finance groups.

Objectives of the Study

The major objective of this study is to investigate the relationship between portfolio management and the profitability level of banks in Nigeria

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The Specific objectives include:

1. To determine the relationship between mean asset rating portfolio and profitability of Banks in Nigeria.
2. To ascertain the relationship between portfolio diversification and profitability of Banks in Nigeria.
3. To determine the relationship between capital market participation and profitability of Banks in Nigeria.

Conceptual Review

Concept of Portfolio Management

The dictionary of accounting defined portfolio as the collection of different securities or other assets held by an individual or an institution which can be evaluated interns of their combined risk and return. The Journal of Accounting & Marketing (2015), opined that Portfolio management is used to select a portfolio of new product development projects to achieve the maximization of the profitability or value of the portfolio, provide balance and support the strategy of the enterprise.

Portfolio management is the selection, Prioritization and control of an organization's Programmes and projects, in line with its strategic objectives and capacity to deliver. A portfolio is a collection of projects and or programmes used to structure and manage investments at an organisational or functional level to optimize strategic benefits or operational efficiency. The goal is to bounce the implementation of change initiatives and the maintenance of business as usual, while optimising return on investment (APM, 2021).

CFA Romania (2010) defined Portfolio Management as the art and science of making decisions about investment mix and policy, matching investments to objectives, asset allocation for individuals and institutions, and balancing risk versus performance. Portfolio management's meaning can be explained as the process of managing individuals' investments so that they maximise their earnings within a given time horizon.

Importance of Portfolio Management

Portfolio management has emerged as a separate academic discipline in the world. Portfolio theory that deals with the rational investment decision-making process has now become an integral part of financial literature. Investing in securities such as shares, debentures and bonds is profitable well as exiting. It is indeed rewarding but involves a great deal of risk and need artistic skill. Investing in securities is now considered to be one of the most risky avenues of investment. It is rare to find investors investing their entire savings in a single security. Instead, they tend to invest in a group of securities. Such group of securities is called as Portfolio. Creation of portfolio helps to reduce risk without sacrificing returns. Portfolio management deals with the analysis of individual securities into portfolios (Donald in JAM, 2015). The modern theory is of the view that by diversification, risk can be reduced. The investor can make diversification either by having a large number of shares of companies in different regions, in different industries or those producing different types of product lines. Modern theory believes in the perspective of combinations of securities under constraints of risk and return.

Types of Portfolio Management

Whether you're an active investor or a passive market participant, your actions and decisions fall under the realm of portfolio management (Bourgi, 2019).

Although portfolio management strategies vary, they generally fall under four categories:

- Active Portfolio Management

- Passive Portfolio Management
- Discretionary Portfolio Management &
- Non-Discretionary Portfolio Management

Active Portfolio Management

Ang and Chen (2002) stated that active portfolio management requires high level of expertise about the markets. A fund manager implementing an active strategy primarily aims to generate better market returns than the market. The strategy is active in that it requires a constant evaluation of the market to buy assets when they are undervalued and sell them when they exceed the norm. Resultantly, they put a significant share of resources in the trading of securities. The biggest benefit of active strategies is the potential for generating market-bearing returns. It also offers flexibility in that the fund manager can adjust their strategy whenever necessary (Dividend.com).

Passive Portfolio Management

Passive Portfolio management is not concerned with beating the market because its proponents subscribe to the efficient market hypothesis. In order words, they believe fundamentals will always be selected in the value of the underlying asset. Investors who seek to minimize risk often prefer passive strategies. Lower cost is the primary benefit of passive investing, as this strategy is probably the cheapest to implement. Passive strategies have been proven to generate consistently strong long-term gains. One of the downsides of passive investing is security concentration, for example, if you are tracking the S&P 500, you are overly focused on large-cap equity stocks, which open you up to risk. Passive strategies are only suitable for long-term investors, so if you need to your money out, short term volatility could eat into your gains. This particular type of portfolio management is concerned with a fixed profile that aligns perfectly with the current market trends. The managers are more likely to invest in index funds with slow but steady returns which may seem profitable in the long run. Other disadvantages of passive investment strategies include but not limited to: opportunity cost as you are giving up the ability to generate market-beating returns. Also, inabilities to protect against downside risk since you are simply tracking the market instead of hedging against volatility (Dividend.com).

Discretionary Portfolio Management

A discretionary approach to portfolio management gives the fund manager complete control over their client's investment decisions. The discretionary manager makes all the buying and selling decisions on behalf of their clients and utilizes whatever strategy they think is best. This type of strategy can only be offered by individuals who have extensive knowledge and experience in investments. Clients who use discretionary mangers feel confident in handing over their investment decisions to an expert.

The primary advantage of discretionary investing is that you're handing over all your investment decisions to an expert. This tends to make life a lot simpler, especially if you agree with your manager's buy and sell suggestions. Based on investors' goals and risk appetite, the manager may choose whichever investment strategy they deem suitable. One who enjoys being more hands on with your investment; discretionary accounts might be more prohibitive since discretionary mangers charge higher fees for their services (Dividend.com).

Non-Discretionary Portfolio Management

A non-discretionary portfolio manager is essentially a financial adviser. They will give you the pros and cons of investing in a particular market or strategy, but won't execute it without your permission. This is the primary difference between a non-discretionary approach and a discretionary approach under this management, the managers provide advice on investment choices. It is up to investors

whether to accept the advice or reject it. Financial experts often recommended investors to weigh in the merit of professional portfolio managers' advice before disregarding them entirely. The primary benefit of non-discretionary investing is it gives you access to a financial expert without relinquishing control of your investment decisions. The primary downside comes from the need to quickly shift a portfolio's focus in the face of new market conditions. If your manager has to get your approval before buying or selling a particular asset, it could cost you.

The Bottom-Line is that portfolio management is a critical component of investing. Each portfolio management strategy has a unique set of advantages and disadvantages that need to be weighted before deciding which approach to pursue (Dividend.com).

Portfolio Diversification

A diversified portfolio contains a mix of distinct asset types and investments vehicles in an attempt at limiting exposure to any single asset or risk (Booth & Fama 1992) The rationale behind this technique is that a portfolio constructed of different kinds of assets will, on average, yield higher long-term returns and lower the risk of any individual holding or security (Segal, 2021). Diversification strives to smooth out unsystematic risk events in a portfolio, so the positive performance of some investments neutralizes the negative performance of others.

Since the arithmetic average return of portfolio is simply a linear function of the arithmetic average returns of the portfolio constituents, the benefits of diversification lie not in return enhancement, but in risk reduction. Thus, the true benefits of diversification are sensitive to the choice of risk measure (Apollon, 2014).

Market Portfolio

Lintner (1965) and Mossin (1966) agreed that one of the first definitions of a well-diversified portfolio is the market portfolio - based on the Capital Asset Pricing Model, there exists a linear relationship between systematic risk and portfolio return. In this context, the market portfolio exists and consists of all risky assets traded in the market, where each asset is weighted by market value. Fundamental indexing typically considers factors such as sales, earnings, or cash flows in the determination of value (Apollon, 2014).

Number of Securities

Another common way to think about a diversified portfolio is to analyze one that contains a large number of securities. The return variance of a portfolio of a group of securities is lower than the average variance of the individual securities, unless all of the securities are perfectly correlated (Markowitz, 1952). This was first examined in detail by Evans and Archer (1968), who showed the impact on the variance of a portfolio's return as the number of securities increases. They noted that the variance of the formulated portfolios asymptotically approached the variance of the market portfolio as the portfolio size increased.

Fund of Hedge Funds

Denvir and Hutson (2006) mentioned diversification in the context of funds of hedge funds (FOHF) correlation to other indices. Using monthly hedge fund and FHOF returns for the period of January, 1990 to May, 2003 from Hedge Fund Research, they found that although FHOF have lower Sharpe rations than hedge funds, they also exhibited lower correlations than hedge funds; they also exhibit lower correlations with equity indices. The lower correlation persisted when focusing either on the bull or bear markets during that time period. The authors concluded that FHOFs are a better diversification tool than hedge funds due to their lower correlation to equity indices.

Factor Diversification

Bender, Briand, Nielsen, and Stefek (2010) looked at diversification in the context of correlations

across bull and bear markets. They examined factors constructed to represent a specific risk premium, classified by asset, class, style and strategy characteristics. Similarly, Page and Taborsky (2011), stated that even if a combination of risky and risk-free assets seems to offer diversification benefits in most periods, such combinations perform poorly during periods of financial crises, when correlations between asset classes increase. By following a regime approach, investors can achieve lower correlations across risk factors and hence better diversification.

Tail Measures

Apollon (2014) stated that the way portfolio risk is measured is the foundation upon which portfolios are optimized and portfolio diversification is measured. While variance has been widely used as such a measure, distortion risk measures provide an alternative. In a portfolio optimization context, they offer a different way to assign greater weight on the tails (Adam, Houkari, Laurent, 2008). If a risk free asset is added to the portfolio, then the investor obtains either the risk free asset or the tangency portfolio as the optimal solution, hence diversification is still not preferable. Assuming an investor maximizes a spectral utility function, then for two co-monotonic risky assets, he shows that the efficient frontier is a straight line between the risky assets and therefore, contrary to using variance, diversification is never optimal. Instead, the investor will prefer an exclusive investment in one of the risky assets. If spectral utility functions are used in accordance with special risk measures, then maximizing utility is equivalent to maximizing return, and as a result, only corner solutions are obtained.

Other Portfolio Diversification includes:

- Time varying correlation
- Return
- International diversification
- Risk contribution
- Risk ratio
- Information theory
- Principal portfolios (Driessen and Laeven, 2007).

Theoretical Review

Modern Portfolio Theory

This theory focuses to optimize the expected return of portfolio in a particular measure of portfolio risks or equally limit risks for a given level of expected return, by choosing the right and appropriate mix of assets. Even though, MPT is still popular in the fiancé essential presumptions and hypotheses of the theory have been challenged in elated fields like behavioral economics.

MPT is based on the idea of diversification where there is optimization of the investment portfolios through combining different asset types, while there is also measurement of returns and risk of the assets. Calculation of the expected return depends on the historical performance, while calculation of the risk is based on past volatility. Evaluating risks and profitability for total investment portfolio is important rather than simply focusing on the specific assets that change in value, which allows building a portfolio with several assets to maximize returns for a given level of risk (Merton, 1973).

Theory of Active Portfolio Management

This is a dynamic portfolio management strategy where the active managers seek to influence returns and beat the market benchmarks and value, but this also depends on the risk exposure and stock risk. The investors or mutual funds mostly seek to replicate the benchmark index including the weighting

and returns of the index and is mostly associated with the buy and hold strategy of investment (Fama, 1992). Active managers' objective is to achieve a higher return than the benchmark index unlike the passive managers. Typically, active managers seek for valuable information including from research analysts as they aim to exploit market inefficiencies to make a profit like buying undervalued stocks and short selling the overvalued ones. At other times, the goal of the mutual fund, investment portfolio or hedge fund is to reduce risk below the benchmark index and this is possible through actively managing the fund portfolio.

Empirical Review

Jeroz (2017) carried out a research on investment companies and recommended that from time to time portfolios should be monitored, reviewed and modified based on the prevailing market conditions. He was very specific that the portfolio evaluation should be done by benchmarking the set risk and return targets. The portfolio changes are to be done in such a way to achieve the changing market conditions. The study does not appreciate the fact that some investors are passive and that active portfolio management is costly and therefore likely to dilute the marginal benefit.

Miriti (2008) on his study of how easy the investors access information and how firms make disclosures of their financials established a situation where the precision of an inside investor's private signal increases with the increase in their shareholding. Understandably so, an insider who has more internal and confidential information regarding the status of a project or the entire company performance may be expected to engage in larger information-motivated dealings and achieve greater returns. The study did not explain to what extent the insider dealings, information asymmetry and financial disclosures affect the portfolio of investments in firms.

Omondi (2009) on his study of portfolio management and Liquidity risk in centum investments, investigated the results of induced liquidity shock by investor' s behavior on the portfolio management in the course of financial crises in a banking era that lacks deposit insurance funds. It was established that investors responded to the liquidity shock selectively by increasing their cash holdings by selling their securities in the financial market and not by liquidating their bank loans. It is not clear in a way that we can safely conclude that the presence of an institutional lender of last resort would have mitigated the liquidity constraints with regard to the portfolio adjustments by the investors. The study ignored the role of CBN in regulating the market liquidity and inflation.

Tanui (2010) argued that the most predominate source of banks' income is lending through prudent risk management. Therefore, credit risk is the greatest risk to any investor in this sector. The study concluded that majority of the banks have failed and succeeded due to poor and proper management of the loan portfolio risk. He added that this applies irrespective of the prevailing macro-economic factors. The study however did no establish the best credit risk strategies to be used to manage loan portfolios.

Oyedijo (2012) studied how diversification of product and market affected the corporate financial growth and performance of selected Nigerian companies. The regression analysis results implied that diversification done based on relationship significantly impacted on performance whereas diversification which was unrelated negatively an insignificantly affected growth and performance. The study concentrated on only three companies in a country with thousands of companies and therefore a small sample size that would help draw a solid conclusion of the subject matter with regard to Nigerian Companies.

Micheni (2013) sought to establish portfolio management strategies used by Centum Investments and to " determine the effects of portfolio management strategies on financial performance of Centum Investments Limited" . He concluded that the performance of the company was a result of combined strategies and cannot be attributed to a certain strategy. A further research should be carried out to establish to what extent each strategy contributes to the financial performance of the company. The

research concluded that there was a positive correlation between Portfolio diversification and profitability of Banks in Nigeria. The researcher recommends for further research into the cash and cash equivalents, and other diversification in Nigeria banks in order to have an exhaustive knowledge of the asset diversification

Research Methodology

The study used a descriptive analytical research design. Both qualitative and quantitative methods were used to acquire information on the effect of portfolio management on the profitability level of Banks. This was to enable the researcher gather a wide range of information required by the objectives of the study.

This study used secondary data. The secondary data on profitability, liquidity, financial assets, tenor, deposit mix and sector concentration as gathered from the banks' annual reports, management reports and bank supervisory reports as published by Central Bank of Nigeria annually. Data on profit before tax, liquidity measured as absolute cash and cash equivalents, total financial assets, average life of loans and investments, ratio of CASA to fixed deposits and ratio of loan portfolio advanced to a largest sector to the whole loan book was collected.

The data was analyzed through descriptive means and interpreted using inferential statistics. The data analysis was aided by Statistical Package for Social Sciences (SPSS V. 21.0) tool. The research results were presented and summarized using tables and figures.

Model Specification

The model in mathematical form is stated as:

$$\mathbf{Y} = \beta + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \beta_5 X5 + et$$

Where;

Y = Profitability measured by Absolute Profit before Tax

X1 = Liquidity measured by the absolute cash and cash equivalents.

X2 = Financial Assets measured as a ratio of the total banks' financial Assets such as treasury bills, bonds, commercial papers to the total assets.

X3 = Tenor measured in years as weighted average of the life of the loan and investment portfolio.

X4 = Deposit Mix measured as ratio of Current Accounts – Savings Account (CASA) to the total deposits.

X5 = Sector Concentration measured as the ratio of loan portfolio advanced to a largest sector (such as real estate, manufacturing, transport and logistics etc) to the whole loan book.

β = regression constant

β1, β2, β3, β4, β5 = coefficients associated with independent variables

et = Residual (error) term

Data Analysis

Table 4.2.1: Descriptive statistics

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Variables	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
Profit before tax (‘ 000)	44	-1,684, 000	900,000,000	95,965,000	995,965,000
Liquidity (‘ 000)	44	2,585,000	97,433,000	70,937,000	170,955,000
Financial Assets (ratio)	44	.004	.33	.1350	.10611
Tenor	44	3.00	7.00	4.9795	1.22372
Deposit Mix	44	.53	.68	.5957	.04633
Sector Concentration	44	.80	.85	.8260	.01305
Valid N (Listwise)	44				

Source: Results from SPSS

According to the findings above, the mean value for profit before tax of all banks was 8,712 billion. This was affected by some banks making losses over the period, thus pulling the mean down, as evidenced by the standard deviation of 900 billion. Similarly, the mean value for liquidity (absolute cash and cash equivalents) was 9.713 billion, with a similarly large standard deviation of 900 billion, showing that there was variability in the profitability of all banks over the period of assessment. Descriptive statistics for other variables are as shown in the table below.

Diagnostic tests

Multi-collinearity of the variables was examined, to test for correlation between the independent variables. For a good regression model, the independent variables should remain independent, thus reducing predictability based on the other independent variables. The test for multi- collinearity was done using tolerance and variance correlation analysis techniques. The results are as shown in Table 4.2 below;

Table 4.2.2 Diagnostic tests

Model		Collinearity Statistics	
		Tolerance	VIF
	Liquidity	.6100	2.995
	Financial Assets	.7000	2.817
	Tenor	.8950	2.318
	Deposit Mix	.7800	2.489
	Sector Concentration	.8800	2.518

Source: Results from SPSS

From the findings, the tolerance values obtained for liquidity, financial assets, tenor, deposit mix and sector concentration were 0.6100, 0.7000, 0.8950, 0.8800 and 0.7800 respectively which is an indication that there was no perfect linear relationship between the predictor variables as the values were not close to 0. The Variance Inflation Factor (VIF) measures collinearity impact related to regression model variables. VIF values less than 1 and exceeding 10 imply multi-collinearity.

From the findings, liquidity, financial assets, tenor, deposit mix, sector concentration were 2.995, 2.817, 2.318, 2.489 and 2.518 respectively. This shows that there is no multi-collinearity between the variables. Hence it can be construed to imply that there was stability of the beta coefficients hence the beta weights were well estimated.

Normality tests

The normality of data for the variables was tested by use of Shapiro-Wilk test. This was because Shapiro-Wilk Test is advocated for in a scenario whereby sample sizes are lower than 50.

Conclusions were based on significance value obtained, whereby a significance value of the Shapiro-Wilk test exceeding 0.05 implies that the data is normal. The findings are presented in table 4.2.3

below.

Table 4.2.3 Normality tests

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Profit before tax	.733	44	.555	.999	44	.111
Liquidity	.353	44	.922	.899	44	.001
Financial Assets	.400	44	.700	.963	44	.164
Tenor	.459	44	.119	.906	44	.003
Deposit Mix	.555	44	.120	.926	44	.009
Sector Concentration	.319	44	.316	.995	44	.111

Source: Results from SPSS

According to the findings, the banks' financial assets and sector concentration were normally distributed, as their Shapiro-Wilk statistics which is the significance level of the study. From the findings, deposit mix, tenor, liquidity and profit before tax were not normally distributed, as their corresponding Shapiro-Wilk statistic was below 0.05.

Autocorrelation

Durbin-Watson Test was used to test the independence of variables under study. Durbin-Watson tests existence of any serial correlation amongst residuals. The findings are as shown in the table below;

Table 4.2.4 Autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.793	.630	.618	9114.05921	1.517

Source: Results from SPSS

A. Predictors: (Constant), Sector Concentration, Financial Assets, Tenor, Deposit Mix, Liquidity: Absolute cash and cash equivalents
B. Dependent Variable: Profit before tax Durbin-Watson outputs a statistic that is between 0 - 4 where residuals are uncorrelated if Durbin Watson statistic is 2. Values from 0-2 imply a positive autocorrelation, while values from 2-4 imply a negative autocorrelation. However, it is generally accepted that if the test statistic value is in the range of 1.5 to 2.5, the residuals are relatively normal. From the analysis, the value of Durbin-Waston of 1.517 was obtained. Given that this value is between 1.5-2.5 (thus close to 2), a conclusion was made that there is no autocorrelation between variables.

Analysis of Variance (ANOVA)

Analysis Of Variance (ANOVA) was also used to test whether the model predicting the relationship between portfolio management and profitability of Banks was statistically significant. The findings are as shown below in table 4.2.5.

Table 4.2.5 ANOVA

Model		Sum of squares	Df	Mean	F	Sig.
1.	Regression	5365779530.807	5	1073155906.161	12.919	.000[b]
	Residual	3156510862.738	38	83066075.335		
	Total	8522290393.545	43			

Source: Results from SPSS

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A. Dependent Variable: Profit before tax

B. Predictors: (Constant), Sector Concentration, Financial Assets, Tenor, Deposit Mix, Liquidity.

As shown in the findings above, the p-value from the ANOVA test is 0.000, which is less than 0.05. As such, the conclusion was that the model predicting the relationship between portfolio management and profitability of financial banks was statistically significant.

Regression Analysis

In this study, multivariate regression was done to establish the relationship between portfolio management and profitability of all banks in Nigeria. The analysis was undertaken at 5% significance level. The findings are as shown below;

Table Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.793	.630	.618	9114.05921	1.517

Source: Results from SPSS

A. Predictors: (Constant), Sector Concentration, Financial Assets, Tenor, Deposit Mix, Liquidity

B. Dependent Variable: Profit before tax

From the findings in the table above, the regression model had a coefficient of determination (R2) of 0.630. This means that 63% of the deviations in profitability of all banks in Nigeria was jointly accounted for by portfolio management aspects (liquidity, financial assets, tenor, deposit mix and sector concentration). To further understand the relationship between the dependent and independent variables in the study, the coefficients from the regression model are as shown in table 4.7 below;

Table 4.2.6 Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	110259.009	108063.261		1.020	.314
Liquidity	.661	.175	.461	3.772	.001
Financial Assets	.045	.012	.429	3.647	.001
Tenor	-,003	.012	-027	-,261	.795
Deposit Mix	-,197	.326	-,065	-,603	.550
Sector Concentration	-1.252	1.227	-,114	-1,020	.314

Source: Results from SPSS

From the findings, the resulting regression model was;

$$Y = 110259.009 + 0.661X1 + 0.045X2 - 0.003X3 - 0.197X4 - 1.252X5$$

Where Y= Profit before tax, X1= Liquidity, X2= Financial assets, X3=Tenor, X4= Deposit mix and X5=Sector concentration.

Discussion of the Findings

The findings show that holding all other factors constant, profit before tax would be 110259.009. Further to that, all factors held constant, a unit change in liquidity would change profitability before tax by 0.661 units, while all factors held constant, a unit change in financial assets would change profit before tax by 0.045 units. Additionally, if all factors held constant, a unit change in tenor would change profit before tax by -0.003 units, while a change in deposit mix would change profits by -0.197 units. Similarly, a unit change in sector concentration, all factors held constant, would change profitability before tax by -1.252 units.

The results further reveal that liquidity (p=0.001) and financial assets (p=0.001) were significant in predicting the profitability of commercial banks since all the p values were less than 0.05.

On the other hand, tenor (p=0.795), deposit mix (p=0.550) and sector concentration (p=0.314) were not significant in predicting the profitability of commercial banks, as all their p values were more than 0.05. The study is in agreement with Laurie (2013) who concluded that financial asset increases a company's worth. Same findings are supported by Cernas (2011) who affirm that increase in company's financial assets, results to increase in its net worth. Opler, Lee, Rene and Rohan (2001) also concluded that the values of cash and cash equivalents held by company is vital and needs to be in with Opler, Lee, Rene and Rohan (2001) who asserted that the values of cash and cash equivalents held by company is vital and needs to be in large volumes and incorporated in operating strategy of a company. They argued that companies that had large liquidity bases performed well in turbulent times.

From the multiple regression analysis, a coefficient of determination (R2) of 0.630 which implied that 63.0% of the variations in profitability of all banks in Nigeria were accounted by liquidity, financial assets, tenor, deposit mix and sector concentration. Further, it emerged that, the model predicting the link between portfolio management and profitability of banks was statistically significant based on Probability value of 0.000.

1. The study findings established that the amount of financial assets and liquidity held by a bank had a significant contribution to the profitability.
2. The findings of the study also revealed that tenor, deposit mix and sector concentration did not have a significant effect on the profitability of banks in Nigeria over the study period.

Conclusion

Financial assets and liquidity have a significant relationship with profitability of all banks in Nigeria. Therefore, any increase in portfolio held of financial assets and level of financial assets results to increase in the profitability of banks in Nigeria. As a result, this in turn translates to the improved net worth of the banks in Nigeria. In addition, there has been increase in financial assets especially the government securities held by banks over the study period, that is, year 2017 to year 2021. Liquidity which was measured by cash and cash equivalent has a statistically significant relationship with profitability of all banks in Nigeria whereby they have a positive relationship. The trends of cash and cash equivalents over the study period imply that there are fluctuations for the last five years with year 2018 being the lowest and year 2016 being the highest. On the other hand, tenor, sector concentration and deposit mix were not significant in predicting the profitability of banks. They had a negative relationship with the profitability of banks in Nigeria. This means that holding all other factors constant we cannot attribute the portfolio holding of tenor, sector concentration and deposit mix on the profitability of banks.

Finally, the study deduces that a direct relationship exists between financial asset, liquidity and profitability of banks in Nigeria. This relationship is significant. Such impact could be attributed to the positive influence of financial assets through government securities on company' s chances of earning a good return through guaranteed returns. Also, with the reduced margins in loans after the interest rate capping, high liquidity gave the banks chances of making more money from other short term investments.

Recommendations

From these findings;

1. It is recommended to all bank managers to put into place strategies and plans with regard to financial assets portfolios. They should develop robust strategies of managing their investments in financial assets. This could help improve their profitability.
2. The study revealed that liquidity affects the financial performance of banks in Nigeria to a great extent. Hence, it is recommended to all bank managers to review existing liquidity management

plan, specifically on near cash items in order to realign their portfolio holdings to the desired profitability goals. This should involve putting across strategies and plans for diversifying and utilizing cash reserves in a way that translates to positive performance.

3. As a recommendation for policy, this study recommends to the policy makers and the government institutions that regulate the banking sector in Nigeria to put into place a conducive regulation that support portfolio management efforts by banks. This should involve a joint effect by all stakeholders to review the regulations, analyse the impact and finally review them based on the findings.

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