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Commercial banks' profitability and portfolio management in Ghana

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Abstract
Purpose: The primary goal of the research was to assess the relationship between Ghanaian commercial banks' profitability and portfolio management.
Research methodology: All nine of the Ghana Stock Exchange (GSE)'s listed banks were included in the population of this descriptive study. All nine banks were sampled. This study only considered data from financial statements and bank reports covering the five-year period between 2016 and 2021.
Results: Results showed that asset investment has a positive effect on the financial performance of commercial banks in Ghana. Additionally, a positive effect of the loan portfolio on the commercial banks' financial performance was found. It was finally discovered that asset investment affects the banks' financial performance in a significantly positive way.
Limitations: The study was limited to nine banks listed on the GSE.
Contribution: It was concluded that when there is a good loan portfolio management policy, banks perform well and are profitable. Consequently, it is advised that top management and other stakeholders play a crucial role in achieving strategic goals by championing best practices in portfolio management and evaluating the sufficiency of effective portfolio management factors in an unbiased manner.
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1. Introduction

Banks are being forced to take on more risk in order to acquire higher returns due to increased competition. Technology advancements have also boosted competition by making it easier to copy bank services (Bans-Akutey & Sowah, 2020). The long-standing advantage of being physically close to customers that large branch networks once offered has vanished (Naab & Bans-Akutey, 2021). With individual banks and financial organizations structuring their asset collections in a way that adds value to their investments, portfolio management is becoming an ever-more-important component of banking (Monteiro, Cepêda, & Silva, 2022). The assets kept up are intended to increase profits while lowering anticipated risk. Banks can diversify their risks and increase their earning potential by building an effective portfolio (Oyatoye & Arilesere, 2012).

A portfolio is a grouping of securities, including stocks, debentures, and others. The diversification of investments in a portfolio is done to reduce risk and increase returns (Agblobi, Kuhorfah, & Asamoah, 2020). It gives investors a platform to spread out their portfolios across various investment opportunities. Portfolio management has been defined as the science and art of selecting from a mix of investment options and investment policies, aligning investments with goals, assigning assets to people and organizations, while keeping in check the performance and risks (Purkayastha, Manolova,

& Edelman, 2012). It all comes down to strengths, weaknesses, opportunities, and risks when deciding between debt and equity, local versus foreign, growth and security, and several trade-offs discovered in the quest to maximize return at a particular appetite for risk. By putting together a well-organized set of crucial processes and choices, portfolio management is intended to assist in making the best hierarchical adjustments possible.

Diversification is the distribution of risk and reward within asset classes because it is impossible to predict which subset of a given asset class will perform better than another. Therefore, diversification describes the method where more assets are added to a portfolio so as to lower the risk associated with investments. Portfolio managers in industrialized countries are becoming more and more interested in banking investments because diversification increases portfolio returns while reducing risk (Purkayastha et al., 2012). Additionally, diversification enhances the performance of financial institutions in developing countries (Chakrabarti, Singh, & Mahmood, 2007).

The process of rebalancing involves gradually bringing assets back to their initial target allocation or preserving the asset mix that most accurately reflects an investor's risk and return profile. The risk-taking channel of monetary policy is illustrated by the portfolio rebalancing process, which is used in a particular scenario of an asset purchase program (Albertazzi, Becker, & Boucinha, 2018). Rebalancing therefore means ensuring that the portfolio is in compliance with the minimum and maximum asset allocations specified in the investment policy statement. The intention is to lessen the over-reliance on a single asset class. Many financial organizations perform poorly, which can be attributed to over-concentration and under-performance in such asset classes (Hoshi & Kashyap, 2010). They found that ineffective asset allocation and performance are frequently caused by long-term strategic errors.

Portfolio management is the process of putting governance mechanisms in place to lower the overall costs associated with turning "input" into "output" through projects. These costs—which represent the sum of all project costs—are referred to as transaction costs when considering projects as transactions (Hamzah, Gozali, Annisa, & Pratiwi, 2022). Transaction cost economics (TCE) theory has been suggested by a number of academics, including Blomquist and Müller (2006), as a means of explaining the project and portfolio phenomena.

Between 2017 and 2019, approximately 435 banks and other deposit-taking institutions in Ghana failed (Agblobi et al., 2020). The revocation of their lisences was caused, according to the Securities and Exchange Commission (SEC) and the Bank of Ghana, which oversee these financial institutions, by the institutions' inability to meet the minimum capital requirement, poor corporate governance, liquidity problems, high default risk, and subpar asset management. At the end of 2019, there were 23 commercial banks in Ghana, down from 34 banks in 2017. Nine commercial banks failed altogether, about four of which merged with already-existing banks. Banks generally ask for deposits from both small and large clients in order to provide loans, manage payment systems, and provide a means of communicating monetary policy (Williams, 2020). These asset portfolios are maintained by the banks, who work to ensure that profits are maximized. To draw in more customers and boost their profits, they also broaden their product offering. In recent years, universal banks have grown and opened a number of branches in Ghana's economy.

Consequently, there is a very serious issue with increasing deposit liabilities, which has increased the number of investment portfolios. There is a lot of room for improvement both globally and locally in the area of portfolio management. The portfolio may contain securities and any other asset that is thought to have a long-term value. Everyone ought to have both long-term and short-term plans in relation to finances to help them make financial decisions in an ideal world, but this is rarely the case for the majority of customers of banks in Ghana. Since diversification is a risk-management strategy, managing a portfolio presents challenges for universal banks. The operating environment of the portfolio funds is also hampered by a number of issues, with risk ranking as the biggest one. Risk refers to the unpredictability of the returns of a portfolio as a result of unplanned events. Investors in the universal bank vary in their level of risk tolerance. It has been found that there are significant

conceptual and methodological gaps in portfolio management, particularly when it comes to evaluating the impact of banks' investment portfolios in Ghana (Blomquist & Müller, 2006; Elonen & Artto, 2003). It is also not clear how portfolio management affects the profitability of banks. Knowing this will expose the significance or otherwise of effective portfolio management. Therefore, the research examined the relationship between portfolio management and commercial banks' profitability in Ghana. Specifically, it aimed at investigating the relationship between the financial performance of commercial banks in Ghana and asset investment; examining how loan portfolio affects the financial performance of commercial banks in Ghana; and determining the extent to which investment assets affect the performance of commercial banks in Ghana.

2. Literature Review

2.1 Bank Profitability

The indicators of banking profitability are carefully observed and examined because it has become very necessary to secure the national financial system framework so as to ensure an increase in capital flow volatility as well as flexibility. Different authors have studied the factors that affect the profitability of commercial banks and have divided them into two categories: internal factors and external factors. Factors that are internal to the company and related to managerial choices and goals for achieving policy are referred to as internal factors. Internal variables are additionally known as micro or bank-specific determinants (Almumani, 2013). They are referred to as managerial factors because they are controlled by management. Among the internal variables, the most important ones are the "Capital adequacy ratio, credit risk, productivity growth, and bank performance" (Nsambu, 2014). The internal factors that affect profitability have also been divided into two groups by Lartey, Antwi, and Boadi (2013): factors that affect financial statements and factors that affect non-financial statements. Financial statement determinants include loan composition, cost control, various deposit products, financial productivity, investment variations, and management of liquidity. Determinants of non-financial statements include the availability and definite quantity of bank branches, the magnitude of the bank, and the positioning of the bank.

Environmental factors dominate the list of external factors that management cannot control. These macroeconomic factors, which are related to the industry, include GDP, the structure of the financial markets, the interdependence of trade, development in the economy, inflation, interest rates on the market, and structure of ownership (Li, Zou, & Lions, 2014). In addition to the foregoing indicators, Belete (2018) claimed that internal factors include the bank's asset liability management culture, while external factors—those that impede the bank's efficient operation and performance—include legal, economic, and environmental factors. Additionally, he discussed how asset liability management affects the micro-economic indicators that ascertain commercial banks' profitability.

The analysis of an organization's actual performance in relation to its predetermined goals and objectives is known as organizational performance measurement (Moulin, 2016). Numerous factors, including competitiveness, profitability, resource use, and service quality, among others, affect how well an organization performs. A wide range of strategic management techniques, including optimization of portfolio, conception, total quality management, and other competitive strategies, effect performance in the financial setting. The return on equity (ROE) and return on assets (ROA) will be the main indicators of commercial banks' profitability in this study. A significant measure of the effective use of bank capital is the ROE. This is because it shows the rate of return on the invested capital and its level of interest to shareholders. ROE is a direct indicator of a company's strength, competitiveness, and long-term expansion. It is a significant indicator of how attractive equity is to both current and potential investors. It is a straightforward test of how well investors' funds are managed by the organization. Additionally, ROE reveals if the management is increasing the worth of the company at a pace that is acceptable. For every dollar of equity capital shareholders contribute, ROE calculates their net income after taxes (Li et al., 2014). There are three main issues that come up as a result of ROE as a measure of financial performance. These are issues related to timing, risk issue and value. Owing to these related issues, ROE is mostly not a clear performance indicator. Nonetheless, ROE is still an important and significant indicator. Its interpretation must however

consider the aforementioned limitations because, when ROE is high, it is not always preferable to when ROE is lower (Lesakova, 2007).

According to Ogboi and Unuafe (2013), ROA is a measure of corporate profitability that can be used to assess how well management uses its resources. It gauges how successfully management produces profits by utilizing all of its possessions, as shown on the balance sheet and calculated by net income on the income statement. Investors can use it to assess how the organization's management is utilizing its resources or assets to increase revenue. It is measured by taking the ratio of Net Profit to Total Assets as explained by Kabajeh, Al Nu'aimat, and Dahmash (2012). Higher ratios indicate that management is making efficient use of resources. It is an effective tool for comparing the profitability of various banks or the entire industry of commercial banking (Bentum, 2012). Additionally, it is used to evaluate the effective management of a bank's income and outgoing costs; and demonstrates the capacity of management to turn a profit by utilizing available financial and physical assets of the bank (Obamuyi, 2013).

The procedures involved in choosing the parts of several assets that will be kept in a portfolio so that it performs better than any other portfolio in accordance with some criterion is known as portfolio optimization. The optimization of a portfolio is frequently subject to limitations, including those imposed by regulations, the absence of a liquid market, transaction costs, liquidity restrictions, and turnover restrictions (Jorian, 2012). To be able to keep a desirable risk in the portfolio, return in the portfolio, or both, portfolio optimization changes the weight of each asset in a methodical way (Rasmussen, 2013). The type of optimization varies depending on the desired result, such as maximizing returns, minimizing risks, or the two, while holding on to an effective portfolio: "the highest possible return for a given level of volatility, or alternatively, the lowest possible volatility for a given level of return" (Rasmussen, 2013). There are two stages to portfolio optimization: the first is when observation and experience lead to a belief in future performance, and the second is when the belief in future performance leads to the selection of a portfolio. Therefore, selecting a portfolio requires information processing.

A number of all the risks that arise as a result of risky investment can be nullified or decreased by diversification. Consequently, large portfolios tend to decrease irregular risks, particularly related to respective assets, however regular risks, largely affect all of the portfolio assets (Ross, Westerfield, & Jordan, 2010). According to the systematic risk principle, the benefit of taking on risk depends only on the extent of systematic regular risk since irregular or unsystematic risk can be easily done away with through diversification. In general, a portfolio that has been diversified will have a similar anticipated return as compared to a less diversified portfolio with similar characteristics (but less risk/volatility) according to Ross et al. (2010). This method is evened out by the notion that a portfolio of a variety of investments, on average, will bring forth higher returns and take on lower risk than any one investment in the portfolio. The possibility of having the positive performance of some investments offset the negative performance of others is largely dependent on diversification which aims to eliminate unsystematic risk events in a portfolio. Consequently, the advantages of portfolio diversification can only be achieved if the portfolio securities have a lower-than-ideal correlation (Tobin, 2016).

2.2 Loan Portfolios and Loan Portfolio Management

When loans are issued or bought and kept for repayment in the financial sector, they are referred to as loan portfolios. Loan portfolios are a crucial asset for the majority of financial institutions, including banks, thrifts, credit companies, and microfinance institutions (MFIs). A loan portfolio's value is largely influenced by the magnitude of interest rates the loans earn, the possibility of principal and interest repayment, as well as the structure of the loans. Generally, the loan portfolios of commercial banks frequently represent a larger portion of assets and a sizable source of income, but they are also the MFI's biggest source of risk (Policy, 1998). The process of efficiently managing and routinely evaluating a financial organization's loan portfolio is referred to as "loan portfolio management" (Kariuki, 2016). By recognizing the risks involved in lending to debtors, loan portfolio management (LPM) aims at decreasing the number of non-performing loans to the absolute minimum. To be sure

that a lending institution's lending practices do not put it at risk, LPM, as defined by Mathur and Marcelin (2014), entails analyzing "risks connected with lending" and putting in place procedures.

According to Chen, Hou, Wu, and Chang-Chien (2009), a Financial Intuition's ability to borrow money and investigate new markets determines a portfolio's performance. A thorough analysis of the risks that investors face is the first step in effective portfolio management. Careful risk selection is necessary to maintain high levels of investment quality (Rajeev & Mahesh, 2010). As in the past, it is crucial to continue to put an emphasis on individual investment approval quality control and performance monitoring. Improvements in technology and information systems have made it possible to use management strategies that are more effective (Ankumah & Bans-Akutey, 2021; Bans-Akutey & Sowah, 2020; Okeke, Bans-Akutey, & Sassah-Ayensu, 2021). In the past, a portfolio manager had to rely solely on his or her own judgment to identify signs of increased risk (Karki, 2019).

2.3 Investment Portfolios and Financial Performance

Portfolio selection exemplifies sequential judgment in the face of uncertainty. The risk and reward attitudes of an investor must be carefully taken into account in order to make investments in the face of an uncertain future. To guard against fluctuations in the returns of different investment options, one should build a diverse portfolio. Due to the risk involved in investing, high profits are not always guaranteed when diversifying a company's portfolio. In order to maximize their profits, banks take into account the risks involved with managing their portfolios (Agblobi et al., 2020). According to Oyatoye and Arilesere (2012), insurance businesses can balance their potential underwriting losses and generate a sizable profit by investing in insurance, which is essential to the industry's survival and growth. It is important for insurance investment management risk to take into consideration the firm's liabilities side of the balance sheet, which includes the amount of shareholders' interest, according to Mukti (2012). This means that an insurance fund manager faces different risks than a traditional fund manager.

2.4 Modern Portfolio Theory (MPT)

In 1952, Harry Markowitz put forth the Modern Portfolio Theory, a portfolio selection methodology founded on diversification principles. The MPT model looks to find "the efficient frontier of hazardous assets," or a set of portfolios that are effective. Markowitz's MPT indicated that the rate of return variance was a significant indicator of the existence of risk and was helpful in influencing diversification decisions through some assumptions that serve as a basis for computing variance of the portfolio according to Reilly and Brown (2011). He showed that when a portfolio has the highest expected returns, it may not necessarily be the portfolio with the lowest variation. He, therefore, suggested that stakeholders make use of mean-variance efficient portfolios, not expected return margins, in making investment decisions (Markowitz, 1952). Commercial banks are considered business ventures with a high risk, it is therefore very important for investors who want to lend to high-risk borrowers to develop a successful system that will enable them to be profitable and self-sufficient. The MPT theory demonstrates how conservative investors can increase returns by accepting a certain risk level. The notion is that loan portfolios that are robust, resilient and mostly come with returns that have uncontrolled risk levels.

2.5 The Profitability Theory

This theory offers methods to help financial institutions estimate the volume of loans that can be given out and forecast the revenue from their investments (Harelimana & Gasheja, 2016). Owing to the fact that maximizing investor returns is the aim of business management, profitability cannot be over-emphasized in the field of financial management (McMahon, 1995). The theory suggests that effective management of loan portfolios may help financial institutions to examine how much profit they are likely to receive from the loan portfolios being a function of the amount spent to create the loan portfolio, despite the risk associated with lending. As a result, the financial institutions must work to lower unanticipated losses and accompanying default rates while making sure that expectations regarding profit are as close as possible met.

2.6 Theory of Active Portfolio Management

The theory of portfolio management can be used to explain the risk and return of a portfolio. Its main objective is to determine asset combinations that perform more efficiently than the alternatives. Efficiency here refers to the highest rate of return possible given a particular level of risk. The foundation of portfolio theory is the idea that investors are risk-averse. Before it can be taken into account, an increase in risk in the portfolio must be accompanied by a higher projected rate of return. Portfolio theory incorporates the concepts of asset pricing and portfolio construction. It suggests that a good asset mix might help to reduce some of the risks related to specific assets. Portfolios are built according to the investor's goals, restrictions, preferred level of risk and return, and liabilities. A portfolio is continuously assessed by keeping an eye on activities on the market, the performance of the company and the situation of the investor. Portfolio management basically entails selecting the right mix of investments, creating a unique investment policy statement, and then putting the policy into practice (Merton, 1973). Selecting an investment and then keeping an eye on its progress is essential.

2.7 Review of Empirical Literature

Khalid (2012) made use of a multiple regression model to determine if the quality of the bank's assets and operating performance have any relationship, by examining the effect of "asset quality on private banks' profitability in India". His findings indicated that a bad asset ratio is inversely related to banks' operation when the effects of operational size, the concentration of traditional banking business, and the ratio of the idle fund, are controlled. The findings corroborated the idea that a bank's operational performance would be higher if loan processing operations prior to loan approval were of higher quality. This would result in fewer non-essential activities being needed to facilitate questionable loans.

Opoku, Angmor, and Boadi (2016) assessed the comparative effectiveness of products in Ghanaian commercial banks' product portfolios. Their study made use of secondary data collected from 20 Ghanaian commercial banks from the year 2009 to 2013. They used analysis of variance and ordinary least squares regression analysis to test the hypotheses. The survey indicated that commercial banks' loan products, which are followed by investments, produce the highest income to financial return. Deposits and consulting make the least financial return-boosting contributions. Additionally, there is a strong prediction of financial performance in relation to returning on investment at a significance level of 5%, with loans providing the greatest variance of 87.6%, and then investing products with 63.2%. Findings also indicated that bank deposits and consulting also had a significant impact on commercial banks' financial performance.

A study by Eric (2016) looked into how the quality of a loan portfolio affects a bank's performance using information from ten universal banks in Ghana's annual reports from the year 2007 to 2013. The investigation was carried out using STATA Statistical Software and the panel regression approach. Loan portfolio quality was measured by Loan Portfolio Profitability (LPP) and the ratio of Loan Loss Provision (LLP) to Gross Loan Advances (GLA); and financial performance was calculated by Return on Equity and Net Interest Margin. Serving as controls were the Cost Income Ratio, Liquid Funds to Total Assets, and Total Assets. Findings indicated that while net interest margin impacted the financial performance of the selected institutions positively, LLP/GLA affected it negatively. The results also showed that while there was a negative effect of the ratio of cost-to-income on global banks' performance in Ghana, business size has a positive effect.

Thiong and Kiama (2018) investigated, from 2011 to 2015, the effects of loan portfolio expansion on Kenyan commercial banks' financial performance. With the use of regression, the study analyzed the impact of loan portfolio expansion on financial performance using a sample of 31 Kenyan commercial banks. Both primary and secondary data were evaluated by the use of descriptive statistics. It was found that the financial performance of Kenyan commercial banks is significantly harmed by loan portfolio expansion. This argument suggests that the economic presentation of Kenyan commercial banks was positively impacted by the caliber of a bank's assets. Asset quality was also found to have a

statistically significant effect. Similarly, wealth adequacy positively affected commercial banks' financial presentations in Kenya, whereas liquidity management had a positive negligible impact.

Alhassan, Owusu Brobbey, and Effah Asamoah (2013) conducted research in Ghana on the influence of the quality of bank assets on its progressive behavior. To examine bank lending behavior peroxide as the ratio of advances and loans to the quality of total assets and quality of bank assets, they used a random effects (RE) model and controlled for mobilization of deposits, the efficiency of management, the spread of intermediation, and diversification of income. The empirical analysis showed that declining in the quality of bank asset quality has a longer-lasting effect on bank lending behavior than an immediate one. Equity, intermediation spread, and bank deposit mobilization were also found to have an effect on bank lending behavior. They used data on 25 banks in Ghana from 2005 to 2010.

Alhassan, Andoh, and Kyereboah-Coleman (2014) investigated the causes of the decline in asset quality that occurs during a financial crisis. The study found that a significant determinant of bank asset quality in Ghana is the prevalence of non-productive loans, along with the growth of loans, structure of the bank market, size of the bank, inflation, real rate of exchange, and growing GDP.

A study by George and Ouma (2013) used a descriptive survey design to examine the effect of loan portfolio management on organization profitability. They used commercial banks in Kenya as a case. They examined elements such as asset value, administrative costs, interest expense, and profitability measurements at the organizational level. From the management level, they selected a representative sample. Results revealed that while the loan portfolio affects the bank's profitability directly, non-performing and new loans have a distinct influence. It was also found that paying interest played a significant part in decreasing profitability and added that the company's declining profitability was entirely due to administrative costs, particularly salaries and overheads. They also discovered that asset depreciation and provisions were seen as a drag on a bank's profits in their studies.

It should be emphasized, that though a bank's asset size is a crucial factor in determining profitability efficiency, it does not always correlate to higher profitability. Swamy (2015) examined the variables influencing assets value of banks and their profitability from the year 1997 to 2009 using extensive data sets. The study discovered that while asset size has no discernible effect on profitability when compared to other well-known predictors of commercial bank profitability, investment activity and capital sufficiency do.

3. Research Methodology

This study, in order to ensure a thorough description of the situation, used a descriptive research design. All nine banks that are listed on the Ghana Stock Exchange constituted the population (GSE). Sample size is described by Blumberg, Cooper, and Schindler (2014) as a total and precise list of people from a population who are chosen to take part in a study. Nieman (2014) explained that there is need to choose an economically sound sample with a sufficient number of participants to guarantee a reliable survey. The selection of the sample, according to Rosen and Saunders (2016), is influenced by a variety of elements, such as the amount of time available for the study, the available funds, and the population's characteristics. To produce a suitable and manageable sample when there is a large population, the sample ratio must be low. For this study, all nine banks listed on the GSE were sampled. Financial statements and bank reports, covering up to five years (2016 - 2021) were used for the study. The time frame is deemed suitable for drawing conclusions about the influence of investment and loan portfolio management on the financial performance of the listed banks. Statistics, both descriptive and inferential, were used to analyze the collected data. The conventional least square multiple regression estimation methods were used to analyze the panel data. Pearson’s product-moment correlation coefficient and analysis of variance were used in the analysis. Findings were presented in tables.

4. Results and Discussions

The relationship between financial performance, asset investments, and loan portfolio was determined with the use of the Pearson product-moment correlation coefficient.

Table 1. Correlation Results

Variables	AI	LP
Portfolio management	1	
Loan Portfolio	0.331*	1
Investment Assets	0.248*	0.526*
Financial performance	0.257*	0.370*

*$p < 0.01$.

AI, asset investment; LP, loan portfolio

According to findings from Table 1, financial performance is moderately positively correlated with asset investment (r = 0.257, p 0.01) and loan portfolio (r = 0.370, p 0.1). The relationships between the variables were all significant and positive, suggesting that when one variable increased, the others would follow suit. Additionally, it was discovered that the correlation between the variables was moderate, indicating that the rate at which one variable increases as a result of another is also moderately high.

Table 2. Model Summary of Asset Investment on Financial Performance

Mode l	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.330[a]	.109	.092	.59131

At 33%, R is a good indicator of how well this model describes data, as can be shown in Table 2. R squared is a measure of how well the independent variables explain the dependent. Asset investment accounted for 10.9% of financial performance.

Table 3. ANOVA[a] of Asset Investment on Financial Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	6.832	3	2.277	6.514	.000[b]
1	Residual	55.943	160	.350		
	Total	62.775	163			

Analysis of variance (ANOVA) is shown in Table 3. In order to determine whether or not any independent variables have an effect on the dependent variable, the significant value p is used. P-values below 0.05 indicate that the independent factors had a substantial impact on the dependent variable. The p-value here was .000, indicating that the model was statistically significant.

Table 4. Coefficient of Asset Investment on Financial Performance

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	2.008	.514		3.906	.000

		.437	.132	.325	3.322	.001
1	Supplier Int.					

Table 4 illustrates the relationship between the independent and dependent variables. Increasing the p-value lowers the threshold for significance. P-values for the independent variables is 0.001. The p-value is below 0.05, indicating that it has a substantial impact on operational efficiency.

Table 5. Model Summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.8157	0.6654	0.6432	0.124438

The loan portfolio accounts for 66.54 percent of financial performance variability, as shown in Table 5. The R-squared value here is between 60% and 69%, which is considered a decent match by the rule of thumb.

Table 6. ANOVA of Loan Portfolio on Financial Performance

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	63.703	5	12.741	16.778	.000[a]
	Residual	0.449	33	0.013		
	Total	64.152	38			

Numerator critical value at 5% significance level is 2.50 degrees of freedom (5, 33). The estimated value (16.778>2.50) exceeded the critical value. This shows that the model as a whole is statistically significant. According to the P value (0.000 5%), there is a statistically significant association between loan portfolio and financial performance.

Table 7. Coefficients[a] of Loan Portfolio on Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.917	4.665		3.717	.008
Loan portfolio	.673	.063	.713	2.247	.000

a. Dependent Variable: Financial performance Sig. <0.05

Table 7 shows the effect (B), the relationship (Beta) as well as the significance (Sig.) of the loan portfolio and financial performance. The B value, 0.673, indicated that loan portfolio affects financial performance positively. The significant value of 0.000 showed that the loan portfolio is significant to financial performance.

4.1 Discussions

The first goal was to ascertain the connection between asset investment and the financial performance of Ghanaian commercial banks. It was found that asset investment positively affects financial performance. Similarly to this, Agblobi et al. (2020) claimed that banks consider the risks associated with portfolio management in order to maximize their profits. Oyatoye and Arilesere (2012) assert that because investing in insurance is essential to the survival and expansion of the industry, insurance companies can balance their potential underwriting losses and make a sizable profit by doing so. This is confirmed by Firdaus and Endri (2020).

The second objective sought to examine the loan portfolio's effect on the financial performance of Ghanaian commercial banks. The study's results showed that the loan portfolio affected financial performance in a positive way. In a similar vein, George and Ouma (2013) assessed the effect of loan portfolio management on an entity's profitability in the context of Kenyan commercial banks. Nuriyah, Endri, and Yasid (2018) also examined micro, small-financial financing and its implications on the profitability of Sharia banks. They found that loan portfolios had an effect on the bank's profitability. New advances and non-performing loans had a positive significant effect on the bank's productivity. The interest element was particularly considered as a component attempting to decrease the benefits. Pay overheads in particular accounted for the organization's increasing costs.

The third and last objective sought to determine the extent to which investment assets impact the performance of Ghanaian commercial banks. According to the findings, asset investment has a significant effect on financial performance. This aligns with the findings of Sari and Endri (2019). Similarly, Agblobi et al. (2020) asserted that, in order to maximize their profits, banks take into account the risks involved with portfolio management.

5. Conclusion

This study mainly examined the relationship between portfolio management and the profitability of Ghanaian commercial banks. The population included all 9 banks listed on the Ghana Stock Exchange (GSE). All nine banks were sampled for the study. Data was collected from financial statements and bank reports for the study. The study was limited to a time scope of 5 years from the years 2016 to the year 2021. Data were analyzed quantitatively through descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS V 20).

For the first objective, it was found that asset investment has a positive effect on financial performance. The second objective, which sought to assess how a loan portfolio affects the financial performance of commercial banks in Ghana, identified a positive effect of a loan portfolio on the bank's financial performance. The third and last research objective sought to determine the extent to which investment assets have an impact on the performance of commercial banks in Ghana. According to the study, asset investment has a significant effect on financial performance.

The goal of every organization is to remain in business and portfolio management is one of the ways by which commercial banks can achieve this. Consequently, portfolio management ensures that non-performing loans are reduced to the barest minimum. This would be achieved by locating and eliminating the major potential risks that are related to lending to customers. Also, portfolio management contributes to the profits that banks make by charging interest. Money given to borrowers should be continuously checked for proper management. This means that when there is a good portfolio management policy for loans, banks performance soars higher. The study, therefore, concludes that there is a significant positive relationship between bank profitability and portfolio management.

5.1 Limitation

This study was limited to only banks in Ghana that were listed on the Ghana Stock Exchange. Financial reports of only five consecutive years from 2016 to 2021 were used for the study.

5.1 Suggestion

Future research should consider financial institutions other than commercial banks, such as Savings and Loans organizations or micro finance companies in rural areas of the country. It is also recommended that future studies make use of some primary data rather than secondary data.

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