

THE IMPACT OF ASSET QUALITY ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN INDIA

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Abstract

Commercial banks play a critical role in determining a country's economic stability and progress. There are various factors determining the economic stability and progress of the commercial banks. The quality of assets is one the prominent factors influencing the financial performance of the banks. The objective of this study was to examine the impact of asset quality on the financial performance of the commercial banks. For the purposes of this study the financial performance of commercial banks served as the dependent variable. The asset quality of the commercial banks served as the independent variable. The study used a descriptive research approach to show how the independent variable explained the variance in the dependent variable. A multiple linear regression analysis was applied for the analysis. The results revealed that underwriting standards significantly predicted return on assets, net income to total assets and return on equity. Credit Risk Management Policies, and Procedures significantly predicted net income to total assets. The risk identification significantly predicted net income to total assets, net interest margin and return on equity. The Diversification of Portfolio significantly predicted capital adequacy, efficiency ratio and return on equity. Investment policies, procedures and practices significantly predicted return on assets. Internal Controls and Management Information Systems significantly predicted NPAs, return on assets, net income to total assets and net interest margin and efficiency ratio. The Operational Management Efficiency significantly predicted NPAs.

Keywords: Asset Quality, Financial Performance, Commercial Banks.

1. INTRODUCTION

A number of factors influence the financial performance of the commercial banks in India. An effort has been made to evaluate the financial performance of the commercial banks in India. This evaluation has been done by using asset quality of banks. The principal factor influencing asset quality as a whole is the quality of the loan portfolio and the credit management program. Loans conforming to a type consists of a majority of a bank's assets and take the greatest amount of risk to their capital. Securities may also consist of a large share of the assets and also keep within significant risks. The key area of attention for banks is the quality of their assets, and they have chosen a few sectors of banking that are impacted by this quality. Asset quality defines how effectively a bank is managed because a high proportion of performing assets indicates effective management and compliance with performance indicators. The Indian banking system's asset quality has kept getting better. The gross non-performing loans (GNPAs) of the banking sector have decreased, from 7.4% in March 2021 to a six-year low of 5.9% in March 2022, according to the Reserve Bank of India's most recent financial stability report. Although public sector banks are still under more stress than private sector banks, there has been a general improvement.

Asset Quality

Asset quality is one of the most significant areas for deciding conclusively the as a whole condition of a bank. The asset quality exhibits the quantity of existing and potential credit risk connected with the loan and investment portfolios, other real estate owned, and other assets, as well as off-balance sheet transactions. Asset quality is measured in terms of Underwriting standards, Credit Risk Management Policy and Procedures, Risk Identification, Diversification of Portfolio, Investment Policies, Procedures and Practices, Internal Control and Management Information System and Operational Management Efficiency.

Financial Performance

Sound financial health of a commercial bank is an assurance not merely to its depositors but is significant in equal measure for the shareholders, employees as well as the entire economy. Efforts have been made from time to time, to measure the financial position of banks and manage it efficiently and effectively. An attempt here made to measure the financial performance of commercial banks in terms of NPA, return on average assets, net income to total assets, and adequacy of capital, net interest margin, and return on equity and efficiency ratio.

2. LITERATURE REVIEW

Several researchers conducted research on asset quality of banks and its relationship with profitability and financial performance of commercial banks. **Frost (2004)** underlined that the allowance or provision to loan losses reserve and the non-performing loans ratios (NPLs) were used as a proxy for asset quality. **Grier (2007)** found the low asset quality as the main cause of the majority of bank failures. The loan portfolio being a key asset class, and the potential for loan losses due to past-due loans quality evaluation is the biggest risk the banks confront. The asset quality is of common concern to financial authorities in almost every country of the world. The banking sector considers the management of asset quality extremely important. **Vighneswara (2015)** examined the determinants of bank asset quality and profitability in India from the period from 1997 – 2009. The priority sector credit was found insignificant in affecting the non-performing assets contrary to the general perception and similarly the increase in rural branches had no effect on non-performing assets. **Rakesh Arrawatia, Varun Dawar, Debasish Maitra, Saumya Ranjan Dash (2019)** studied asset quality determinants of Indian banks. The results revealed that banking-, industry-, and macroeconomic-specific factors are responsible for the burgeoning nonperforming loan assets of Indian commercial banks. **Abata (2014)** considered asset quality as an aspect of bank management requiring the evaluation of a firm's assets to facilitate the measurement of the level and size of credit risk associated with its operation. He studied the relationship of assets quality and bank performance of six largest banks in Nigeria. The results revealed that assets quality has a statistically significant impact on bank performance. In Nigeria itself **Lucky Anyike Lucky Nwosi, Anele Andrew (2015)** examined asset quality and profitability of commercial banks. The results proved that percentage of non-performing loans to total loans and non-performing loans to total customers' deposit have positive relationship with return on investment while

percentage of loan loss provision to total loans and percentage of loan loss provision to total asset have negative relationship with return on investment of the commercial banks. The study concludes that there is a positive significant relationship between asset quality and the profitability of the commercial banks. Similarly, **Khalid (2012)** found positive correlation between banks asset quality and operating performance and NPAs ratio negatively associated with operating some researchers studied the impact of GNPA's and NNPA's on the quality of assets of banks. The impact of GNPA's/NNPA on assets quality of banks is evident Due to higher NPA rates, banks will suffer significant revenue losses that will potentially affect their financial performance. Also, due to insufficient funds, banks will have to increase the interest rates on loans to maintain their profit margin which will decrease the quantity of loans and potential interest revenue. The higher the quality of the loan processing activities before loan approval, the lower will be the possibilities of default. An increase in asset quality is likely to result in improvement in operating performance. **Nicholas Kibet Sile, Tobias Olweny Maurice Sakwa (2019)** studied asset quality as a determinant of financial performance of commercial banks in Kenya. The research concluded that asset quality had a statistically significant relationship with bank's financial performance. **Vethamuthu Richard Paul, (2019)** explored impact of asset quality on financial performance of banks in India in a comparative study of public and private sector banks. The results revealed that Gross NPA and the Net NPA ratios have a negative relationship with business per employee, Non-interest Income to Total Assets, Profit per Employee, spread to Total Assets, Funding Structure, Liquid Resources, Cost of Funds, return on Advances, return on Assets, return on Equity, borrowing to Total Resources and Capital to Risk Weighted Assets Ratio (CRAR). The strength of the relationship varies with each of the variables and on each group of banks. The impact has been statistically significant on the Business per Employee, Profit per Employee, Cost of Funds, Return on Assets and Return on Equity. A higher level of non-performing assets eats into the profitability of banks because it needs a higher level of provisioning for bad debts as per the stipulations of the Reserve Bank of India. Apart from the provisioning which is a charge to the Profit and Loss Account, the earnings itself gets reduced because interest on the non-performing assets cannot be recognized. The resultant lower level of profitability had an adverse bearing on these variables **Mohanty & Mehrotra (2021)** studied asset quality and its effect on performance of public and private sector banks in India. The results revealed that the deterioration of asset quality is a subject of distress for the entire banking system in India. Non-performing loans accumulated by Indian lenders are higher than those of banks in emerging economies, such as Brazil, China, Russia, Mexico, Turkey, Malaysia, and the Philippines and South Africa The study revealed a high negative association between the NPA's with asset and equity performance. An inverse relationship between performance and non-productive means show that the banks have an adding trend of performance only because of the ongoing decreasing position of the NPA. However, a comprehensive investigation on the effect of asset quality on performance revealed that public sector banks affected more compared to private sector banks. **M., Vepa, S. (2021)** investigated the financial performance of Indian banks. The study divulged that private sector banks performed better than public sector banks on dimensions of asset quality. The public and private sector banks both displayed satisfactory managerial effectiveness and financial performance. Public sector banks also surpassed private

sector banks in terms of liquidity and sensitivity. As a result, it may be stated that public sector banks kept their long-term solvency position. These banks rely more on capital than deposit money, which enables them to preserve liquidity while dealing with the NPA problem. Private sector banks, on the other hand, continued to retain significant levels of asset quality, which supports their long-term solvency position. **Reddy and Babu (2021)** looked at the Indian commercial banks' asset quality in relation to the NPAS. The study found that non-performing assets negatively impact the performance of Indian banks) which had proved to be a significant roadblock. The asset quality of the banks in India continued to be significantly impacted by factors such as bank size, profitability, credit growth, priority sector lending, accretion of NPAs, and economic development. **Dunia, M.J.**, conducted research on asset quality and the financial performance of commercial Banks. The study came to the conclusion that because of the return on assets, the assessed asset quality has a detrimental effect on financial performance. A non-performing loan is actually a loss, and the more it is, the less profitable the loan is. It is statistically significant that the correlation between the two variables is negative.

Objectives of the Study

The study was undertaken with the following objectives:

Research Methods

The asset quality is taken as the explanatory variable for the study. NPAs, return on average assets, Net Income to Total Assets, Adequacy of Capital, Net Interest Margin, Efficiency Ratio and Return on Equity are the criteria to measure the asset quality. The financial performance of banks is treated as the criterion variable. Return on Average assets, Net Income to Total Assets, Adequacy of Capital, Net Interest Margin, Efficiency Ratio and Return on Equity served as the proxies for the financial performance.

1. To study the asset quality of commercial banks in India
2. To examine the financial performance of commercial banks in India
3. To assess the impact of asset quality on financial performance of commercial banks in India

Research Hypothesis

Research hypothesized that the asset quality has no significant impact on financial performance of commercial banks in India.

Sample and Sampling Technique

The commercial banks in India served as the population for the study. The 16 largest commercial banks (based on the size of the bank) served as the sample for the study. The assets of the banks provided the basis for the list and selection of the 16 largest commercial banks in India. The names of the banks and their total assets for the period from 2018 to 2022 are provided in Table 1. The State Bank of India came out to be the largest bank with the largest capital, and the Indian Overseas Bank was the smallest bank in the sample. Of the sample, nine banks belonged to the public sector and seven to the private sector.

Data Collection

The dataset for the independent and dependent variables was obtained from the audited annual financial results for a period of five years, from 2018 to 2022. The dataset for asset is presented in Table 1. The data for measures of asset quality are presented in tables 2 and 3. The datasets for return on assets, return on equity and net interest margin are presented in Tables 4 to 6. The multiple linear regression technique was used to compute the values of the coefficients of the variables under study.

Analysis and Interpretation

Model Specification

1. Impact Of Asset Quality On The Financial Performance Of Banks

The Multiple Regression Analysis was performed on the data of the Asset Quality and NPAs assets

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND NPAs							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and NPAs	0.1639025	US	0.02606442	0.3914	26.83809	1.199319	0.231376
		CRIMP	0.038165206			1.377034	0.169556
		RID	0.151813989			3.868177	0.000135
		DOP	-0.001294236			-0.02693	0.978537
		IPPP	0.010480258			0.640342	0.522453
		ICMIS	0.0975445			2.066449	0.039668
		OME	0.172065651			3.314028	0.001036

Regression Statistics

The regression equation may be expressed as:

$$NPAs = 0.1639 + 0.151813989 \text{ RID} + -0.010480258 \text{ ICMIS} + 0.172065657 \text{ OME} + u$$

Where,

GNPAs = Gross Non-performing assets;

RI = Risk Identification;

ICMIS= Internal Controls and Management Information Systems;

OME= Operating and Managerial Efficiency

The values $F(7, 292) = 26.83809$, $p < 0.05$ indicating a significant impact of Risk Identification, Internal Control and Management Information Systems and Operating and Managerial Efficiency on Non-performing assets. The $R^2 = 39.14$ demonstrated that the model interprets a 39.14 % variance in NPAs.

Thus, Risk Identification, Internal Controls and Management Information Systems, and Operating and Management Efficiency are the significant predictors of the Gross Non-performing assets. The Underwriting standards, Credit Risk Management Policy and Procedures, Diversification of Portfolio, Investment Policies, Procedures and Practices were found to be insignificant predictors of GNPA's of a bank.

2. Impact Of Asset Quality On Return On Assets

The Multiple Regression Analysis was performed on the data of asset quality management and the return on assets

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND RETURN ON ASSETS							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and NPAs	-3.05007	US	0.042544	0.6682	84.16639	2.246394	0.025426
		CRIMP	0.097266			4.027149	7.2E-05
		R. ID	0.220789			6.455483	4.49E-10
		DOP	0.007259			0.173298	0.862537
		IPPP	0.05021			3.520359	0.0005
		ICMIS	0.133632			3.248565	0.001295
		OME	0.062718			1.386155	0.166757

The regression equation becomes:

$$ROA = -3.05007 + 0.042544 US + 0.05021 IPPP + 0.133632 ICMIS + u$$

Where RA = Return on assets ;

RI = Underwriting Standards;

IPPP= Investment Policies, Procedures and Practices;

ICMIS= Control and Management Information System

The independent variables Underwriting Standards, Investment Policies, Procedures and Practices, Internal Control and Management Information System (significantly predicted F (7, 292) = 84.16639, p < 0.05 indicating significant impact of Underwriting Standards, Investment Policies, Procedures and Practices, Internal Control and Management Information System on return on assets. The R² = 66.862 demonstrate that the model interprets a 66.862 % variance in return on assets. Thus, Underwriting Standards, Investment Policies, Procedures and Practices and Internal Control and Management Information Systems are the significant predictors of the Return on Assets. The, Credit Risk Management Policy and Procedures, Risk Identification, Diversification of Portfolio were found insignificant predictors of the return on assets of a bank.

3. Impact Of Asset Quality Net Income To Total Assets Ratio

The Multiple Regression Analysis was performed on the data of Asset Quality measurement and Net Income to Total Assets.

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND NET INCOME TO TOTAL ASSETS RATIO							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and NPAs	0.807633	US	0.04816	0.37076	24.58264	2.167308	0.03102
		CRIMP	0.088566			3.125266	0.001955
		R. ID	0.118509			2.953187	0.003401
		DOP	-0.0281			-0.57167	0.567985
		IPPP	-0.00027			-0.01639	0.986933
		ICMIS	0.104723			2.16974	0.030833
		OME	0.092019			1.733333	0.084092

The regression equation became:

$$\text{NITAR} = 0.807633 + 0.04816 \text{ US} + 0.088566 \text{ CRIMP} + 0.118509 \text{ RI D} + 0.104723 \text{ ICMIS} + u$$

Where,

NITA; Net income to total assets;

US= Underwriting Standards;

CRIMP= Credit Risk Management Policy and Procedures;

RI = Risk Identification,

ICMIS = Internal Controls and Management Information Systems

The independent variables Underwriting Standards, Credit Risk Management Policies, and Procedures, Risk Identification, and Internal Control and Management Information Systems significantly predicted $F(7, 292) = 24.58264$, $p < 0.05$ Net income to total assets ratio. The $R^2 = 0.37076$ demonstrated that the model interprets a 37.07 % variance in Net Income to total assets ratio is explained by the four asset quality measurement variables.

Thus, Underwriting Standards, Credit Risk Management Policies, and Procedures, Risk Identification, and Internal Control and Management Information Systems are the significant predictors of the Net Income to Total Assets. The Diversification of Portfolio, Investment Policies, Procedures and Practices and Operating and Managerial Efficiency were found insignificant predictors of the Net Income to total assets of a bank.

4. Asset Quality and Capital Adequacy

The Multiple Regression Analysis was performed on the data of Asset Quality and Capital Adequacy.

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND CAPITAL ADEQUACY							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and NPAs	-2.14975	US	0.053492	0.79431	161.0964	4.310989	2.22E-05
		CRIMP	0.070532			4.457219	1.18E-05
		R. ID	0.140109			6.252594	1.43E-09
		DOP	0.056126			2.045209	0.04173
		IPPP	0.032218			3.447765	0.000648
		ICMIS	0.195418			7.250835	3.73E-12
		OME	0.052893			1.784272	0.075418

The regression equation becomes:

$$CA = -2.14975 + 0.056126 \text{ DOP} + 0.032218 \text{ IPPP} + u$$

Where

CA = Capital Adequacy;

DOP = Diversification of Portfolio;

IPPP = Investment Policies, Procedures and Practices

The independent variables Diversification of Portfolio and Investment Policies, Procedures and Practices significantly predicted $F(7, 292) = 161.0964$, $p < 0.05$ indicating significant impact of Diversification of Portfolio and Investment Policies, Procedures and Practices on Capital Adequacy. The $R^2 = 0.794319$ demonstrate that the model interprets a 79.43 % variance in Capital Adequacy ratio is explained by the Diversification of Portfolio and Investment Policies, Procedures and Practices. Thus, Diversification of Portfolio and Investment Policies, Procedures and Practices are the statistically significant predictors of the Capital Adequacy. The Underwriting Standards, Credit Risk Management Policy and Procedures, Risk Identification, and Internal Controls and Management Information System and Operating and Managerial Efficiency were found insignificant predictors of the Capital Adequacy of a bank.

5. Asset Quality And Net Interest Margin

The Multiple Regression Analysis was performed on the data of Asset Quality and Net Interest Margin.

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND NET INTEREST MARGIN							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and Net Interest Margin	3.577878	US	0.022294	0.460292	35.5762	1.331758	0.183978
		CRIMP	0.015576			0.729589	0.466226
		R. ID	-0.00834			-0.27586	0.782853
		DOP	0.115107			3.109039	0.002062
		IPPP	-0.00397			-0.31502	0.752969
		ICMIS	0.092107			2.533196	0.011826
		OME	0.037192			0.929951	0.353165

The regression equation

$$\text{NIM} = 3.8351 + 0.93929 \text{ Risk Identification} + 0.080081 \text{ ICMIS} + u$$

Where NIM= Net Interest Margin; RI: Risk Identification; ICMIS = Internal Controls and Management Information Systems

The independent variables Risk Identification and Internal control and Management Information Systems significantly predicted $F(7, 292) = 35.5762$, p lesser than 0.05 indicating significant impact of Risk Identification and Internal Control and Management Information Systems on Net Interest Margin. $R^2 = 0.46.02$ demonstrate that the model interprets a 42.02 % variance in Net Interest Margin is explained by the two asset quality measurement variables. Additionally, coefficient was further assessed to ascertain the impact of explanatory variables on Capital Adequacy.

Thus, Risk Identification and Internal Controls and Management Information Systems are the significant predictors of the Net Interest Margin. The Underwriting Standards, Credit Risk Management Policy and Procedures, Diversification of Portfolio, Investment Policies, Procedures and Practices and Operating and Managerial Efficiency were found insignificant predictors of the Net Interest Margin of a bank.

6. Impact Of Asset Quality On Efficiency Ratio

The Multiple Regression Analysis was performed on the data of Asset Quality and Efficiency Ratio.

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND EFFICIENCY RATIO							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and Net Interest Margin	3.577878	US	0.022294	0.21476	11.36918	1.331758	0.183978
		CRIMP	0.015576			0.729589	0.466226
		R. ID	-0.00834			-0.27586	0.782853
		DOP	0.115107			3.109039	0.002062
		IPPP	-0.00397			-0.31502	0.752969
		ICMIS	0.092107			2.533196	0.011826
		OME	0.037192			0.929951	0.353165

The regression equation

$$\text{ER} = 3.577878 + 0.115107 \text{ DOP} + 0.092107 \text{ ICMIS} + u$$

Where ER = Efficiency ratio;

DOP = Diversification of Portfolio,

ICMIS = Internal Controls and Management Information Systems

The independent variables Diversification of Portfolio and Internal Controls and Management Information Systems significantly predicted $F(7, 292) = 11.3698$, $p < 0.05$ indicating significant impact of Diversification of Portfolio and Internal Control and Management Information Systems on Efficiency ratio The $R^2 = 0.214176$ demonstrate that the model

interprets a 21.41 % variance in Efficiency ratio is explained by the Diversification of Portfolio and Internal Controls and Management Information Systems.

Thus, diversification of Portfolio and Internal Controls and Management Information Systems are the significant predictors of the Efficiency ratio. The Underwriting Standards, Credit Risk Management Policy and Procedures, Investment Policies, Procedures and Practices and Operating and Managerial Efficiency were found insignificant predictors efficiency ratio of a bank.

7. Impact Of Asset Quality On Return On Equity

The Multiple Regression Analysis was performed on the data of Asset Quality Measurement and Return on Equity.

RESULTS OF MULTIPLE REGRESSION ANALYSIS ASSET QUALITY AND RETURN ON EQUITY							
Regression Weights	Intercept	Beta Coefficients		R ²	F	t-value	p-values
Assets Quality and Net Interest Margin	0.19875	US	0.069936	0.443946	33.30418	3.373331	0.000843
		CRIMP	0.028463			1.07654	0.282575
		R. ID	0.124781			3.332817	0.00097
		DOP	0.093393			2.036825	0.042569
		IPPP	0.020299			1.30009	0.194595
		ICMIS	0.081449			1.80874	0.07152
		OME	0.011856			0.239377	0.810981

The regression equation

$$ROE = 0.19875 + 0.069936 Us + 0.124781 RI + 0.093393 DOP + u$$

Where, ROE = Return on Equity; RI = Risk Identification, DOP= Diversification of Portfolio. The independent variables Return on equity, Risk Identification and Diversification of Portfolio significantly predicted $F(7, 292) = 33.30418$, p lesser than 0.05 indicating significant impact of Return on Equity, Risk Identification and Diversification of Portfolio on return on equity. The $R^2 = 0.443946$ demonstrate that the model interprets a 44.39 % variance in return on equity is explained by the Underwriting Standards, Diversification of Portfolio and Risk Identification. Additionally, coefficient was further assessed to ascertain the impact of explanatory variables on Efficiency ratio.

Thus, underwriting standards, risk identification and diversification of portfolio are the significant predictors of the Return on Equity. The Credit Risk Management Policy and Procedures, Investment Policies, Procedures and Practices, Internal Controls and Management Information Systems and Operating and Managerial Efficiency were found insignificant predictors of return on equity of a bank.

3. RESULTS

The results of the study revealed that underwriting standards is the significant predictor of return on assets, net income to total assets and return on equity. Credit risk management policies, and procedures is the significant predictor of net income to total assets ratio. Risk identification is the significant predictor of non-performing assets, net income to total assets ratio, interest margin, efficiency ratio and return on equity. Diversification of Portfolio is the significant predictor of capital adequacy and return on equity. Internal control and management information system is the significant predictor of non-performing assets, return on assets, net income to total assets ratio, interest margin, and efficiency ratio. Investment policies, procedures and practices is the significant predictor of return on assets and capital adequacy. Lastly, operational management efficiency is the significant predictor of non-performing assets.

There is no significant impact of underwriting standards on NPAs, capital adequacy, interest margin and efficiency ratio. Credit risk management policies, and procedures is the insignificant predictor of NPAs, return on assets, capital adequacy, interest margin, efficiency ratio and return on equity. Risk identification is not the significant predictor of return on assets. Diversification of Portfolio is an insignificant predictor of NPAs, return on assets, net income to total assets ratio, interest margin and efficiency ratio. Internal control and management information system is not the significant predictor of capital adequacy and efficiency ratio. Investment policies, procedures and practices is not the significant predictor of NPAs, net income to total assets, interest margin, efficiency ratio and return on equity. Lastly, operational management efficiency does not significantly predict return on assets, net income to total assets ratio, capital adequacy, interest margin, efficiency ratio and return on equity.

Social Relevance of Research

The research will be useful for bank personnel responsible for making policies and decisions for the conduct of the bank's business. The research will also be helpful to research scholars for reference and use in their research.

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