

**EFFECT OF ASSET QUALITY AND OTHER DETERMINANTS ON PERFORMANCE
OF LISTED AND UNLISTED BANKS IN MALAWI**

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ABSTRACT

The objective of the study was to investigate the effect of the determinants of asset quality and other determinants on the financial performance of listed and unlisted banks in the Malawian banking sector. The study covered a seven-year period from 2008 to 2014 and used secondary data. The study used mixed research design correlational research techniques. Ordinary Least Squares was used for the quantitative analysis. The study found that non-performing loan ratio and cost efficiency ratios had a significant effect on the performance of both listed and unlisted banks. However, the cash reserve ratio variable was negatively related to performance in regard to listed banks, but had a positive relationship with respect to unlisted banks; but was significant in both cases. The average lending rate had a significant effect on performance of listed banks whilst it was insignificant for the unlisted banks. The paper also provides policy recommendations.

Keywords: Return on assets, asset quality, non-performing loan, listed bank, generalized least squares.

1.0 INTRODUCTION

1.1 Asset quality and non-performing loans (NPL)

Asset quality is a key terminology in banking and refers to the overall risk attached to the various assets held by an individual or institution and it is an important aspect of the evaluation of a bank's performance (Yike and Chiu, 2011). Asset quality is commonly used by banks determine the proportion of their assets which are at financial risk and the level of provision for potential losses that they must make. According to Chisti (2012), asset quality is critical in determining the overall condition of a bank. Loans are usually the largest of the bank's asset items and can also carry the greatest potential risk to the bank. Dang (2011) clarifies that the highest risk facing a bank pertains to the possible loss associated with delinquent loans. Kargi (2011) and Kwambai and Wandera (2013) concur that lending is the main business of financial institutions and loans are naturally the main asset and the major source of revenue for banks. Ongore and Kusa (2013) explain that quality of a bank's assets affects its profitability. The same understanding is elucidated by Athanasoglou, Sophocles and Matthaïos, 2005 who clarify that bank assets include, among others, current asset, loans, fixed assets, and investments. Commercial banks generate interest income from loans and hence, the quality of loan portfolio determines the profitability of banks. The main objective for measuring the asset quality is to ascertain the component of NPL ratio.

NPL ratio is defined as the percentage of loan portfolio that has not been serviced for at least three months and above (Ahmad and Ariff, 2007). NPLs are not desirable by banks for a number

of reasons. Balasubramaniam (2013) argues that there are several implications that NPLs entail on the operations of banks. First, NPLs imply that the bank will stop earning interest from the bad assets. It is normal international practice for banks not to accrue interest income from NPLs. Due to the truncated income stream, the resources of bank are constrained not only by the amount of income that could have been generated by the NPLs but also due to the unrealised potential of the opportunity cost of investing in some return-earning investment. In this light therefore, NPLs stifle future stream of profits and financial opportunities. Second, due to the unrealised interest income on account of the NPLs, a bank may face liquidity challenge which may force it to borrow funds at a cost which would otherwise have not been incurred. Third, NPLs tend to consume significant time and efforts of management, which is an indirect cost which bank has to bear as the bank attempts to turn-around the NPLs. The time and efforts of management in handling NPLs would be applied to some fruitful activities, which would provide meaningful returns to the bank. Most modern banks have special units and employees to deal with NPLs and this constitutes an additional cost to the bank. Fourth, NPLs entail a reputational risk to the bank. A bank that faces NPL problems is unlikely to improve its credit rating.

1.2 NPLs and bank performance

The consequence of large amount of NPLs in the banking system is bank failure as well as economic slowdown (Lata, 2014). Saba, Kouser and Azeem (2012) comment that the link between the NPLs and financial performance of banks is regarded a fact in the literature of banking. NPLs are important because they affect the financial intermediation role of commercial banks which constitutes the banks' main source of their income, and ultimately, the financial

stability of an economy (Klein, 2013). The occurrence of banking crises have historically often been associated with a massive accumulation of NPLs which can account for a sizable share of total assets of insolvent banks and financial institutions (Fofack, 2005). More importantly, NPLs have a direct impact on the profitability of banks because, whilst not being allowed to book income on the non performing accounts, the banks are forced to make provisions on the NPLs. The provisions further reduce the level of the reported profit or bottom line (Balasubramaniam, 2013).

1.3 RBM's definition of NPLs

The monetary authorities in Malawi, the Reserve Bank of Malawi, reported an increasing level of non-performing assets in the banking sector in Malawi (RBM, 2012). The asset quality deteriorated and the problem was reflected in the position of the percentage of NPLs to gross loans (RBM, 2014). Based on the RBM directive referenced as NO.DO1-06/ASCL (RBM Directive, 2006), loans extended by the commercial banks in Malawi are classified as 'Standard' (or 'Acceptable'), 'Special mention', 'Substandard', 'Doubtful' and 'Loss'. An asset is classified as Standard or Acceptable if it is current, that is, there are no outstanding arrears; the obligor is complying, and is expected to continue to comply, with all terms of the loan contract; and there is no reason to believe that the licensed institution is now, or will be, subject to risk of loss.

An asset is classified as Special Mention if potential weaknesses exist in the obligor's financial position and/or the collateral pledged. An asset should be classified as Substandard if it has one or more well-defined weaknesses that make the full collection of the principal and interest

questionable, especially when the obligor's financial condition, including net worth and/or repayment capacity, is unfavourable and is deteriorating; the pledged collateral, if any, is insufficient or is deteriorating; and/or if an actual breach of contract has occurred. At a minimum, credits that are 90 days or more past-due shall be classified as Substandard. An asset is classified as Doubtful if there exists weaknesses which make collection or repayment in full highly questionable and improbable based upon currently existing circumstances, conditions, and the estimated recoverable amount of the pledged collateral, if any. At a minimum, credits that are 180 days or more past-due shall be classified as Doubtful. At the time of classification, the asset is deemed Loss if it is uncollectible and of such little value that it should not be included on the books of account and financial statements of the licensed institution. An earlier prudential guideline, directive referenced as NO.DO1-93/AQ (RBM, 1993) clarifies that all loans classified as substandard, doubtful and loss are categorized as NPLs.

1.4 The Malawi banking sector

According to the RBM, the financial sector in Malawi is relatively shallow and is largely not integrated into the global financial system (RBM, 2013). However, relative to the development and size of the economy the Malawi banking industry is fairly developed with assets representing thirty seven percent of GDP (Kaluba and Chirwa, 2015). The banking sector in Malawi is still the primary form of financial intermediation and, as such, it is the largest conduit for the mobilization of domestic savings, the main source of external capital to firms and the key player in the payment system. The banking sector comprises the RBM, eleven commercial banks, one leasing company and two discount houses. Compared to countries within the region, Malawi's

banking industry is small yet growing in terms of product range and coverage (RBM, 2010). Of the licensed commercial banks, four are listed on the Malawi Stock Exchange; whilst the rest are unlisted.

2.0 PROBLEM STATEMENT

The RBM reported deterioration in the banking sector asset quality which was manifested in the rise and worsening of the NPLs (RBM, 2012) position. The RBM (2014) explained that NPLs as a percentage of gross loans had worsened from 6.5 percent recorded in September 2012 to 11.6 percent in March 2013, to 13.6 percent in September 2013 and to 15.4 percent in December, 2013. The ratio deteriorated further to 15.7 percent in March, 2014. The situation, however, started to improve by the close of 2014.

3.0 OBJECTIVE

The objective of this study is to investigate the effect of the asset quality as measured by the NPLs and other determinants on the financial performance of listed and unlisted banks in Malawi in light of the problem that was noted by the RBM.

4.0 CHOICE AND MEASUREMENT OF VARIABLES

A common measure of financial performance of commercial banks is the return on assets (ROA). ROA is generally preferred as performance measure because it reflects the ability of bank management to generate profits from the available assets. Moreover, it is considered to be an important performance indicator used in the most of the studies (Athanasoglou, Brissimis and

Delis, 2008). ROA is a useful measure of how well a bank's assets are being used to generate profits. ROA represents the income earned on each unit of asset usually expressed as percentage. It is computed by dividing net income by total assets of the bank. A number of studies including those which were carried out by Golin (2001) and Rose and Hudgins (2008) have submitted that ROA is an important measure of profitability in banking literature. Additionally, the studies carried out by Haron (2004) who studied determinants of Islamic bank profitability, Demircuc-Kunt and Huizinga, (1999) and Bashir (2003) who carried out a study on the determinants of commercial bank interest margins; and Naceur (2003) who studied the determinants of the profitability of the Tunisian banking industry; used ROA as a measure of performance and profitability.

To measure the asset quality, the study used the NPL ratio. Gross NPLs are measured as a percentage of Gross Loans i.e. $\text{Gross NPLs to Gross Loans} = \text{Gross NPLs} / \text{Gross Loans}$. A lower ratio indicates better quality of loans and advances. It is expected that the non-performing loans will have negative effect on financial performance of banks. According to Achou and Tenguh (2008), non-performing loans (NPL) has an inverse relationship with banks' profitability.

The study also includes cost efficiency. Ahmad and Bashir (2013) argue that low efficiency (high inefficiency) is a signal of bad performance of senior management in running day-to-day activities and loan portfolio. Louzis, Vouldis and Metaxas (2012) submit that if a bank has "bad" management with poor skills in credit scoring, appraisal of pledged collaterals and monitoring borrowers, it is likely to experience an accumulation of NPLs, and adversely affect its

profitability. Banks which devote less effort to ensure higher loan quality are likely to be more cost-efficient (Berger and DeYoung, 1997). This reasoning suggests negative relationship because improved management of operating expenses (lower cost to asset ratio) improves efficiency and eventually leads to higher profits. To measure cost efficiency, the study followed the reasoning of Athanasoglou et al (2008) who argued that efficient cost (expenses) management was an important determinant of bank profitability. Cost efficiency is usually measured by the ratio of total operating costs to total revenue because only operating expenses can be viewed as the outcome of bank's management. i.e. Cost efficiency ratio = Total operating costs/Total revenue.

The study also includes cash reserve requirement (CRR) as an independent variable. According to Dornbusch and Fischer (1990), CRR is the specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank. There is a variety of views regarding the significance of CRR. Some researchers are of the view that such requirements promote disintermediation of commercial bank credit, hence adversely affect bank profitability. These include Montoro and Moreno (2011). Other researchers, however, including Friedman and Schwartz (1963), claim that a raise in CRR tends to increase the banks' credit creation ability. In support of this view, Olusanya, Oluwatosin, and Chukwuemeka (2012) also argue that, CRR has positive impact on commercial bank loans and advances in that banks raise credit when CRR increases. In an alternative argument, Meltzer (2003) contends that a rise in reserve requirements would have little or no impact on bank's capacity to create loans. Similarly, Chandler (1971) also supports by indicating that an increment in reserve requirements does not encourage banks to hold back their lending or sell securities or

cause interest rates to rise. On his part, Wilcox (2012) found that changes in reserve requirements had only small and statistically insignificant impacts on bank loans and investments. CRR is measured as cash reserves as a percentage of total deposits.

Average lending interest rate (ALIR) is also included as a macro-level factor and is a center-piece of commercial banks' core business of financial intermediation. As argued by Davies and Vaught (2012), ALIR represents the price in the financial sector, the main transmission mechanism of monetary policy, the main vehicle for matching supply and demand and, normally, the key determinant of profitability. According to Dornbush and Fisher (1990), ALIR represents the payment per dollar per year that someone who borrows from a bank or any financial institution pays. It is therefore a cost of borrowing. Flannery (1980) explains that an increase in lending rate raises the amount of income that a commercial bank can earn on its loan portfolio and therefore increases the return on its assets. Georgievska, Kabashi, Trajkovsca, Mitreska and Vaskov (2011) argue that banks can increase lending rate as a tool for tightening of banks' credit policy. To measure the average lending interest rate, the study uses the average base lending rate which was guided by the RBM.

5.0 LITERATURE REVIEW

This section reviews empirical studies which have been classified into two broad categories. The first group consists of those studies which were carried out in Malawi. The second set of studies were carried out elsewhere. Chirwa (1999) carried out a study using cointegration and error correction model on banks in Malawi over the period 1970-94. The study found that there existed

a long-run relationship between profitability and market structure. In another study, Chirwa (2001), found a significant relationship between monopoly power and commercial bank profitability, but rejected the efficient market hypothesis. Kanyoma (2006) concluded that bank privatization in Malawi was associated with low profitability and that other factors which included state ownership and market share, significantly impacted on bank profitability. In yet another study, Mlachila and Chirwa, (2002) found that interest rate spreads increased significantly following liberalization and this was attributable to high monopoly power, high reserve requirements, high central bank discount rate and high inflation. On his part, Lipunga (2014) found that bank size, liquidity and management efficiency had a statistically significant impact on ROA but capital adequacy was not significant.

Khalid (2012) carried out a study on the impact of asset quality on profitability of private banks in India and found that asset quality had a positive significant effect on financial performance of banks. Olweny and Shiphoh, (2011), studied the effects of banking sectoral factors on the profitability of commercial banks in Kenya and found that all the bank specific factors had a statistically significant impact on profitability. In East Africa, Qin and Pastory (2012) carried out a study with the objective of examining the determinants of commercial banks' performance in Tanzania. The findings revealed that liquidity and asset quality had positive impact, whilst NPLs had a negative influence on profitability. In a related study, Flamini, McDonald and Schumacher, (2009) investigated the determinants of commercial bank profitability and results were that apart from asset quality, higher returns on assets are associated with larger bank size, activity diversification, and private ownership. Jiang, Tang, Law and Sze (2003) carried out studies on

cost efficiency on the profitability of the banking sector in Hong Kong and found that both bank-specific as well as macroeconomic factors were important determinants in the profitability of banks. Specifically, operational efficiency and business diversification were found to contribute to higher returns on assets.

In his study, Davydenko (2010) found that operating costs of a bank, as percentage of its profits, have a negative correlation with profitability. In support of this view point are Abreu and Mendes (2001) who, in their study of several European countries, concluded that operating costs have a negative effect on profit measures despite their positive effect on net interest margins. Other studies including those which were carried out by Bourke (1989) and Molyneux and Thornton (1992) found a significant relationship between bank profitability and expense management. In another study, Karim, Chan and Hassan (2010), investigated the relationship between NPLs and bank efficiency in Malaysia and Singapore. The results showed that higher NPLs reduced cost efficiency. Likewise, lower cost efficiency increased NPLs. The result also supports the hypothesis of bad management proposed by Berger and DeYoung (1997) that poor management in the banking institutions results in bad quality loans, and therefore, escalates the level of NPLs. In examining the significance of cash reserve requirement, Olokoyo (2011) carried out a study on the determinants of commercial banks' lending behavior in Nigeria. The study found that lending interest rate, cash reserve ratio and liquidity ratio were significant variables with a positive relationship to credit.

A related study by Olusanya et al (2012) researched on the determinants of lending behaviour of commercial banks in Nigeria and included the cash reserve ratio among the independent variables. The results of the study showed that there is a direct or positive relationship between commercial bank loan and advances and the cash reserve requirement ratio. In yet another study, Malede (2012) examined the role of cash reserve ratio in his study on determinants of commercial banks' lending in Ethiopia. The results showed that there is significant relationship between commercial bank lending and its size, credit risk, gross domestic product and liquidity ratio. Okoye and Onyekachi (2013) examined the impact of bank lending rate on the performance of Nigerian deposit money banks between 2000 and 2010. The study concluded that lending rates and monetary policy rate are true parameters of measuring bank performance. In another study, Flannery (1980) carried out a study on banks in the USA and found out that lending rates had a significant positive impact on the financial performance of the banks. Chepchirchir (2011) in Kenya carried out a study and found that the coefficients for liquidity, capital, expense management (cost efficiency), bank size, market share, inflation and loan loss provisions (asset quality) were the most significant in determining profitability in the Kenyan banking sector.

6.0 DATA AND METHODOLOGY

The population was based on census sampling under which data was collected in respect to ten commercial banks in Malawi. The eleventh bank was left out considering that it had been in operation for only three years at the time of the study. The study covered a seven-year period from 2008 to 2014. The choice of variables, the number of banks and the time period was determined largely by completeness of data. The data used in this study was obtained from the

audited financial statements of the individual banks, where available, and from Bankscope database. The study used a mixed research design encompassing both descriptive and correlational research techniques. Descriptive research design encompasses the analysis of descriptive statistics (Holland and Campbell, 2005). Under the correlational research technique, multiple linear regression was employed in line with similar studies including those carried out by Khalid (2012), Olweny and Sipho (2011), Olokoyo (2011), Malede (2012), Chepchirchir (2011) and Ngugi (2013). The multiple linear regression model used in the study is as follows: $P = \beta_0 + \beta_1 NPLR_i + \beta_2 CER_i + \beta_3 CRR_i + \beta_4 ALIR_i + \varepsilon$; where:

P is Performance of commercial banks in the Malawian banking sector; NPLR is non-performing loan ratio for bank i; CER is Cost efficiency ratio for bank i; CRR is Cash Reserve Requirement for bank i; ALIR is Average Lending Interest Rate for bank i; ε is the error component; β_0 is the y-intercept (constant); and β_i ; $i = 1, 2, 3$ and 4 represents the independent variable coefficients to be estimated.

7.0 CORRELATION AND PRE-REGRESSION TESTS

The Pearson's Correlation matrices for both listed and unlisted banks are provided in the two tables below.

Table 7.1 : Pearson's Correlation Matrix of Listed Banks

		ROA	NPLR	CER	CRR	ALIR
ROA	Pearson Correlation	1				
	Sig. (2-tailed)					
NPLR	Pearson Correlation	.408	1			
	Sig. (2-tailed)	.131				
CER	Pearson Correlation	-.490	-.664**	1		
	Sig. (2-tailed)	.064	.007			

CRR	Pearson Correlation	.667**	.485	-.114	1	
	Sig. (2-tailed)	.007	.067	.685		
ALIR	Pearson Correlation	.256	.391	-.309	-.116	1
	Sig. (2-tailed)	.357	.150	.263	.681	

Based on the output as contained in the above table, Correlations obtained sig. (2-tailed) of 0.007 <0.01, it can be concluded that there is a significant relationship between CER and NPLR as well CRR and ROA. In addition, Pearson correlation values were -0.664 and 0.667 respectively, it can be said that CER correlated negatively with high NPLR. It can also be said that CRR correlated positively with ROA. The correlations were used to test the existence of the problem of multicollinearity. Correlation above 0.8 between independent variables indicates the existence of the problem of multicollinearity (Gujarati, 2004.) The above correlation results indicate that there is no multicollinearity problem noting that all the correlation coefficients among the independent variables were less than 0.8.

Table 7.2 : Pearson's Correlation Matrix of Unlisted Banks

		ROA	NPLR	CER	CRR	ALIR
ROA	Pearson Correlation	1				
	Sig. (2-tailed)					
NPLR	Pearson Correlation	-.508	1			
	Sig. (2-tailed)	.053				
CER	Pearson Correlation	-.443	-.129	1		
	Sig. (2-tailed)	.098	.646			
CRR	Pearson Correlation	-.816**	.485	.194	1	
	Sig. (2-tailed)	.000	.067	.489		
ALIR	Pearson Correlation	.031	.605*	-.262	.103	1
	Sig. (2-tailed)	.914	.017	.345	.715	

The above table shows that there is a significant, but negative relationship between ROA and CRR.

There is, however, a significant and positive relationship between NPL Ratio and ALIR. The

Pearson correlation values obtained were -0.816 and 0.605, respectively. The above correlation results also indicate that there is no multicollinearity problem since the correlation coefficients among the independent variables were all less than 0.8. The study undertook a test for heteroscedasticity and used Test Glejser which is conducted by regressing absolute residual value of the independent variable with regression equation. It was found that indeed heteroscedasticity problem existed. Therefore, the study used the Generalized Least squares (GLS) model to estimate the equation since GLS yields estimators which are best, linear and unbiased when either heteroscedasticity or serial correlation is present.

8.0 REGRESSION ANALYSIS

Table 8.0 : Outcome of the regression analysis

	Model 1: Listed banks				Model 2: Unlisted banks			
	Unstandardized coefficients				Unstandardized coefficients			
	Coef.	Std. Err.	z	P > z	Coef.	Std. Err.	z	P > z
NPL	-0.252	0.1003	-2.51	0.012	-0.057	0.0320	-1.78	0.045
CER	-0.286	0.0251	-11.37	0.000	-0.165	0.0181	-9.12	0.000
CRR	-0.221	0.0756	-2.93	0.003	-0.075	0.0618	-1.22	0.222
ALIR	0.145	0.0565	2.57	0.010	0.037	0.0494	0.76	0.447
Const.	0.204	0.0201	10.15	0.000	0.131	0.0186	7.04	0.000
R-square	0.823				0.736			
F	11.607				12.746			
Sig. prob (P-value)	0.001				0.001			

The results for the listed and unlisted banks above indicate that the explanatory power of the two models, the R-square, is at the satisfactory levels of 0.823 and 0.736, respectively. The coefficients of determination indicate that this was a good fit for both models as at least 82.3% of

the variation in the dependent variable (ROA) for the listed banks is explained by the independent variables in the model; and at the same time, the independent variables for the unlisted banks explain 73.6% of the variations in the dependent variable. The results also show a low P-value which means that the respective overall models are statistically significant at the 1% level.

8.1 Regression analysis results for listed banks

The NPLR had a coefficient of -0.252 which means that there was a negative relationship between ROA and the NPLR and this variable is statistically significant at the 5% level. The outcome agrees with various studies which examined the significance of asset quality, as measured by NPLs, on profitability and found that there existed a significant but negative relationship between NPLR and bank performance. Such studies include those done by Chepchirchir (2011), Roy (2015), Lata (2014), Muasya (2008), Li and Zou (2014), among several others.

CER had a coefficient of -0.286 implying that there was a negative relationship between ROA and the CER for listed banks. This variable is highly statistically significant at the 1% level. The result agrees with studies which examined the relationship of cost efficiency on bank performance including those done by Lipunga (2014), Karim et al (2010), Munyambonera (2013), Berger and DeYoung (1997), Olweny and Shipho, (2011), Jiang et al (2003), Davydenko (2010), Abreu and Mendes (2001) and Gyamerah and Amoah (2015).

The CRR had a coefficient of -0.221 implying a negative relationship with ROA. This variable is highly statistically significant at the 1% level. The result concurs with the findings of a study by Montoro and Moreno (2011) who found that an increase in reserve requirement tend to decrease bank credit, hence, affect bank profitability. The result, however, does not agree with studies of Olusanya, et al (2012) and Friedman and Schwartz (1963) who found that a raise in commercial bank CRR tend to increase the banks' financial performance through enhancement of credit-creation ability.

The ALIR had a coefficient of 0.145 implying that there exists a positive relationship between this variable and ROA. This variable is statistically significant at the 1% level. This result concurs with various studies which have that lending rates had a significant impact on the financial performance of the banks. Such studies include those done by Flannery (1980), Okoye and Onyekachi, (2013), Haron (2004) and Borio et al (2015).

8.2 Regression analysis results for unlisted banks

The coefficients for the unlisted banks indicate that the NPLR had a coefficient of -0.057 implying that there is a negative relationship between ROA and the NPLR. This variable is statistically significant at the 5% level. The outcome is similar to that obtained under 'listed banks'. The CER had a coefficient of -0.165 implying that there was a negative relationship between ROA and the CER for listed banks. This variable is sig. = 0.000 meaning that it is highly statistically significant at the 1% level. This result is also similar to the outcome for 'listed banks'.

The CRR had a coefficient of -0.075 implying a negative relationship with ROA but it was not statistically significant. This result contradicts the outcome under 'listed banks' but concurs with findings by Meltzer (2003), Chandler (1971) and Wilcox (2012) who found that changes in reserve requirements had only small and statistically insignificant impact on bank loans and investments, hence, bank performance. The result does also not agree with studies of Montoro and Moreno (2011).

The ALIR had a coefficient of 0.037 implying that there existed a positive relationship between this variable and ROA, but this variable was not statistically significant. This implies that ALIR did not have a significant effect performance of unlisted banks in Malawi. This result differs from the outcome under 'listed banks' and disagrees with Okoye and Onyekachi, (2013) and Borio et al (2015) and Khan (2014) who found a strong and positive correlation between lending interest rate and commercial banks' performance.

8.3 Summary and comparison of the results

It can be concluded from the results in Table 8.0 above that NPLR and CER had a negative relationship but had significant effect on the performance of both listed and unlisted banks in Malawi. However, the results also indicate that for listed banks, the CRR is significant and negatively related to performance but in regard to unlisted banks, the CRR had a negative relationship with performance but was not statistically significant. It can be concluded from this outcome that the performance of listed banks in Malawi is sensitive to policy changes in the

CRR. However, in regard to unlisted banks, they appear to have the capacity to comply with movements in CRR without much difficulty and continue to pursue their credit creation activities. This also signifies that the unlisted banks have a more diversified source of funds which enables them to comply with policy changes pertaining to the CRR.

ALIR had a positive sign for both listed and unlisted banks, but was statistically significant for listed banks whilst it not significant in respect to unlisted banks. This result implies that the ALIR was one of the drivers for the performance of listed banks but did not have an effect on the performance of the unlisted banks. More importantly, this outcome suggests that listed banks are more reliant on products that yield interest income. The unlisted banks appear to be more diversified.

9.0 POLICY RECOMMENDATIONS

9.1 Policy recommendations for both listed and unlisted banks

In regard to asset quality, the regulatory framework in Malawi should support and ensure that both listed and unlisted banks put in place strong credit risk management practices. This may be achieved by ensuring that the commercial banks are encouraged to strengthen their overall internal risk management systems to ensure timely identification, measurement and monitoring of credit risk. Additionally, the bank regulation activities of the RBM should have a focus towards credit risk control. The regulatory authorities should also put in place appropriate prudential regulations that would reduce the risk of accumulation of NPLs. Such regulations may include limits on loan concentrations, single obligor limits, sector limits, and guidance on

appropriate loan-to-asset ratios and other bank performance benchmarks. On their part, the bank managers and supervisors should enhance their banks' internal credit control procedures (e.g., periodic loan and collateral reviews). The banks should also put in place and efficient due-diligence and credit risk management systems to minimize the incidence of NPLs on their books.

In regard to cost efficiency, the regulatory authorities should ensure commercial banks are prudent in their expenditure by imposing appropriate industry cost efficiency ratio which all commercial banks should comply with. The authorities should also introduce suitable penalties for non-compliance. The commercial banks themselves should be innovative and institute cost control activities such as introducing technology based banking services and limiting the rate of branch expansions which potentially reduce costs without compromising the future growth motives of banks. Another way of cost control is ensuring that the banks employ competent and skilled staff in order to minimize hiring of consultants and outsourcing of services which can be handled by the bank staff.

9.2 Policy recommendations in respect to each category of the listed and unlisted banks

In regard to listed banks, the results indicate that they posted and negative and significant relationship between the CRR and ROA. Accordingly, the study recommends that the listed banks should come up with innovative ways of ensuring that they should increase their financial capacity to enable them smoothly handle any possible policy movements in CRR. One way of achieving this is to attract a financially strong equity partner who could inject funds in the banks

at call whenever the monetary authorities institute a policy change resulting in an upward adjustment in CRR. Although movement in CRR would currently not have a significant effect on performance of unlisted banks, it is recommended that they should be innovative and enhance their financial strength so as to cater for their credit growth strategies. The fact that the unlisted banks are not affected by the movement in CRR may imply that they have not created adequate demand for credit which is an aspect that they need to promote to achieve long-run sustainability.

For listed banks in Malawi, the study has found that ALIR had a significant effect on their performance. Accordingly, it is recommended that the monetary authorities should come up with an appropriate monetary policy that will ensure that interest rates are set at levels that sustain the profitability of the listed banks. Additionally, the monetary authorities should put in place policies aimed at protecting the borrowers from unjustifiably high interest rates which the listed banks may be tempted to charge to maximise profits. On their part, the listed banks themselves should lend at favorable interest rates such that as the demand for the loans increases, the increasing demand for the loans should not adversely affect the banks' credit management policies and the banks should also ensure that the borrowers are adequately screened to eliminate those who may not have the capacity to repay the loans. More importantly, the listed banks employ innovative ways of ensuring that profitability remains unaffected through the diversification of their revenue sources, including an appropriate mix of interest and non-interest bearing assets which would generate fee incomes on their loan exposures. This way, they would have a relief from significant dependence on interest-based income.

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