The Efficency of Loan Recovery Rate in Deposit Money Banks in Nigeria

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Abstract

This study assessed the efficiency of loan recovery rate in deposit money banks in Nigeria. The main objective was to examine the effect of loans recovery rate and its effect on the performance of selected deposit money banks in Nigeria. The descriptive result for the analysis of the effect of loan recovery rate on bank performance revealed that there is a negative relationship between loan recovery rate and banks performance. The study also identified that a positive correlation exists between loan recovery rate and risk of credit default. The result further revealed that a negative and significant relationship exists between loan recovery rate and bank performance. It was discovered that a negative and significant relationship exists between loss-given default (LGD) and bank performance. The study recommended that borrowers should be adequately informed of penalties for loan default because, for any bank to survive it must have a sound credit policy that enables it achieve profitability.

Keyword: Loss-given default, Loan recovery rate, Return on capital employed

Introduction

Greater prominence have been said to be associated with banking industry in Nigeria because of the role it plays in her economic environment. The banking industry plays a great influence and in the provision of credit facilities in Nigeria. However the tendency to incur financial losses due to failure to repay loans or credit facilities by borrowers which is regarded as credit risks are most often faced bybanking institutions in the financial sector (Muhammad &Shahid, 2012).

The bank's credit function enablesinvestors exploits ventures that are considered profitable (Kargi, 2011). This function however, exposes the banks to the risk of credit default. Credit risk as defined in 2001 by the Banking Supervision of the Basel Committee as the possibility of an outstanding credit going absolutely or partially lost due to default effect (credit risk).

Default effect or credit risk is assumed an internal measurement factor of the performance of banks. The higher the level of bank's exposure to credit risk, the higher the possibility of the bank to likely experience financial crisis and so on. Credit risk is the most formidable amongst the numerous risks faced by banks and the profitability of the banks is highly affected since a greater aspect of banks' income accrues from granting credit facilities from which interest is generated. However, credit risk is found to be linked with interest rate risk by implying that interest rate increment enhances loan default possibilities. Interest rate risk and credit risk are related intrinsically to one another and not separately (Drehman, Sorensen &Stringa, 2008). According to Ahmad and Ariff (2007), the credit portfolio with greater non- performing assets limits the banks' ability in achieving its stated objectives. Therefore, loans that are non-performing are expressed as the percentage of loan values which has not been service for 90 days and above. Consequence upon the huge rate of non- performing loans, credit risk management practices is highly emphasized by Basel II Accord.

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Working in tune with the recommendations of the Accord is a sure approach to handling the risk of credit and generally the enhancement of bank performance. Through the effective management of the exposure of credit risk by banks, they end up facilitating the viability and profitability of their businesses and ultimately enhancing the systemic stability and smooth allocation of capital in the economy (Psillaki, Tsolas&Margaritis, 2010).

Banks have adopted various strategies of recovering their money, some orthodox, some unorthodox. It has been found that most borrowers are always willing to pay, but certain situation like economic recession, inflation, political instability, poor investment makes them not able to pay. According to Ojiegbe (2002), there are also the existences of bad borrowers in the banking industry whose primary assignment is to abandon their loan obligations in most banks and enter into new loan contracts with another bank. This low credit standard of borrowers along with poor management of portfolio and changes insensitivity in the economic environment by the bankers led to the banks witnessing rising non-performing credit portfolio. This ultimately causes many banks to fail and become insolvent.

It is quite unfortunate that in spite the degree of carefulness, skillful, experience or tact of a loan officer, most of the loan facilities granted to borrowers sometimes go bad. The introduction of the Prudential Guideline in 1990 for banks licensed in Nigeria enable banks to properly classify bad and doubtful debt. These guidelines made it compulsory for licensed banks to at least in a quarter, have their credit portfolios reviewed and credit classified (into non-performing loans and performing loans) appropriately (Mora, 2011).The introduction of these guidelines has assisted the banks to promptly identify the deterioration of loans held by banks. For a credit facility to be considered as non- performing, both the principal and accrued interest is unpaid for three months and more; or this interest payment must have been interest of 90 days or more may have been rescheduled, rolled-over or capitalized into a new credit facility (unless these facilities have reclassified and the borrower have made cash payment to the effect that interest payment outstanding does not exceed three months).

Over the years, bank loans and advances to the Nigerian economy has been on the increase. According to the CBN annual report in 2007, commercial banks' credit to the core private sector grew by 98 per cent which has been the highest ever. However, this incremental trend could not be sustained due to the prevailing harsh economic situation and its effects on the business sector thus leading to increased default on loan repayment. Furthermore, some bank customers misconstrue the loans and advances received from banks as national cake, hence, they deliberately shy away from repayment. Thus, the banks are left with an enormous amount of doubtful andbad loans. The task of bad debts management is becoming an issue of serious concern in the banking system.

Furthermore, the recovery agent of banks has not helped matters as most of them report on the uncompromising attitude of the debtors to repay the loan without actually carryingout proper investigation. This is probably after they have accepted some form of gratification from the debtors in question.This situation made the Nigeriangovernment to establish the Asset Management Corporation of Nigeria (AMCON). The setup of AMCON in July 2010 was basically to solve the problem of the frequent and alarming degree of non-performing loans that affected banks in Nigeria (Mora, 2011). Thus, the creation of loan recovery machineries like the AMCON became relevant as a means of alleviating the menace of increasing non-performing debt portfolio in Nigerian banks.

The main focus of this study was to examine the efficiency of loan recovery rate in deposit money banks in Nigeria. Specifically this research work sought;

1. To examine the loans recovery rate and its effect on selected deposit money banks performance in Nigeria.
2. To examine the risk of credit default and its effect on selected deposit money banks performance in Nigeria.
3. To examine the loss-given default and its effect on selected deposit money banks performance in Nigeria.

Literature Review

Theoretical framework

Credit value-at-risk models

Consultants and banks during late 90s began the development of credit risk models particularly for the measurement of potential loss with confidence level that is predetermined.

That is, making provision for the possibility of accommodating the loss of credit portfolio within a specified time frame, say twelve months. According to Williams (2004), the value-at-risk (VaR) models include KMV's Portfolio Credit Manager, Credit Suisse Financial Products' Credit Risk, JP Morgan's Credit Metrics and McKinsey's View of Credit Portfolio. Two main categories are identified with credit VaR, they include default mode (DM) models and mark-to-market (MTM) models. The DM models viewed credit risk as default risk and also adopted a binomial approach to it. It considers only two events to be possible, that includes survival and default. Survival includes every possible change of the creditworthiness of a borrower, and termed it as "credit migration". Under the DM models, the occurrence of default is the root cause of credit losses. The MTM on the other hand is multinomial, in that credit migrations bring about losses (Mora, 2011).

These approaches do not agree on what the amount of data required to feed them should be: it is limited under the DM models while the MTM model is much wider. Probability density function (PDF) of future portfolio credit losses is credit risk models main output. From such loss distribution analysis, both portfolio unexpected loss and expected loss can be estimated by financial institutions. The expected loss is viewed as the unconditional mean of loss distribution; it also defines the amount expected by banks as losses within a year. Regarding the unexpected loss, it defines the actual portfolio risk measurement and a deviation from expected loss. It is usually considered as the standard deviation measurement of loss distribution (Bikker&Metzemakers, 2007).

The model of credit risk is usually applied by financial institutions on "economic capital" evaluation to combat associated risk of credit portfolio. In such instances, credit loss provisions should take care of the expected losses while unexpected losses will be cushioned by economic capital. Credit VaR models is generally viewed as reduced form models, where recovery rate (RR) is fundamentally regarded as a stochastic variable or a constant exogenous parameter completely separate from probability of default (PD) (Gropp, Vesala&Vulpes, 2006).

Merton's one-factor structural model

This is one of the latent factor variants models that Merton structural model has specified. According to Hamerle, Liebig and Scheule (2004) and Rosch (2003), German aggregate economy was known for the application of this model. In the economy, the homogenous portfolio of firms is assumed. A standard normal distribution with a random process is presumed for the firm's standardized logarithmic return on assets. In the different sector of the economy, certain equations satisfy the discrete normal logarithmic returns.

The one-factor model generalized version is a multi-factor model that proposes that in the economy, the M factor correlates. This can be interpreted as an economy where all firms have common factor or M economies. As such, there is a correlation between these factors since the M economies are related. Cespedes (2002) and Hui, Lo and Huang (2003) discussed a two-factor model and a three-factor model respectively. This study would consider only the one-factor model due largely on the paucity of data. The sole reason for this adoption is to make room for a model allowing for bad loan expected proportion in banks total loan portfolio to be estimated in line with key macroeconomic variables evolution. This new approach facilitates the capturing of the effects different macroeconomic shocks on the quality of loan portfolio and ultimately the panel data analysis combination on selected deposit money banks performance in Nigeria. These shocks may be constructed or historic in line with basic macroeconomic forecasting model.

Bank loans recovery rates have been analyzed both by Bikker and Metzemakers (2007) and Ayuso, Perez and Saurina (2004). Dermine and Neto de Carvalho (2003) in a more recent study analyzed loss-given default rates' determinants using credit portfolio of Portuguese largest private bank, Banco Commercial Portuguese. They used 371 samples of defaulted loans SME size firms granted originally between June, 1985 and December, 2000. The recovery rate estimates are based on the recovered discounted cash flow as an aftermath of the default event. They stated three concrete empirical results that conform to previous empirical findings:thereexists a negative but statistically significant effect of loan size and recovery rate. The frequency distribution of loss-given loan default is bimodal, with some having 100 per cent recovery rate and others zero per cent. Collateral type is significant statistically in recovery determination while the relationship between bank-company ages was not.

Non-performing loans and bank failures

Undoubtedly, non-performing loans (NPLs) recently has become vital debating matter in the new frontiers of finance and management of credits.

So many factors are responsible for the accumulation of non-performing loans to include high interest rate, macroeconomic volatility, moral hazard, economic downturns, deterioration of terms of trade, insider lending and over dependent on inter-bank borrowings that is overly high-priced (Goldstoin & Turner, 1996). Just as liability, asset and interest rate management have been pronounced in the last 15 years, NPLs according to deServigny and Renault (2004) has taken a new dimension.

As a result of the deep pressure of NPLs on the balance sheet of banks and the alarming rate of bank failures, the 1990 Prudential Guidelines of the CBN and other regulatory reviews list credit facilities into guarantees, commercial papers, leases, overdrafts, discounted bills, advances, banker's acceptances, loans and various loss contingencies associated with the credit risks of banks. These credits activities in terms of repayment inability or repayment frequency have gave credence to the classification of credit facilities into non-performing and performing. Some of the root causes of non-performing loans were suggested by Kassim (2002) to include:

i. Fraudulent activities
ii. Inadequate credit analysis
iii. Political instability
iv. Documentations errors
v. Regulatory and policy inconsistencies
vi. Poor management
vii. Weak real sector
viii. Negligence of loan quality for undue profitability
ix. Unsound credit framework
x. Economic depression
xi. Social and political pressure on the operators of banks
xii. Abnormal competition

According to Elaine (2007) potential loss is encapsulates by credit risk or NPLs in the instance of a borrower's default or credit deterioration. Thus, what is critical for the creditor is the soundness of loan credit appraisal. Greene (2005) argued that, the understanding of the analytical process of credit structure and worthiness, credit standards, negotiations, resolution of problems, techniques of decision-making, follow-up must be a bank's top priority for credit risk to be managed effectively.

Empirical review

Altman (2001) posited that there exists a correlation between recovery and default rates. The Merton's models were used and its posited that, the simple link between liability responsibility and value of asset will determine when default time and probability will occur, also that, if the level of liability of an asset is closer to default, then recovery rates should be extremely high. Again, if the values of these assets are independent of the level of aggregate default, recovery rates and probabilities of default should be relatively independent.

For example Salas and Saurina (2002), Ali and Daly (2010) and Nkusu (2011) found that GDP per capita had an inverse relationship to non- performing loans in their respective studies while Beck, Demirhuc-Kunt and Levine (2013), found that there exist appositive relationship between non-performing loans and GDP.

Fama, Eugene and Kenneth (2002) assessed the effect of the economic environment on the rates of recovery. Just as any class of asset, defaulted debt is also affected by the factors affecting the economy. For instance, recovery and default rates have been correlated negatively. Other macroeconomic factors may be responsible for recovery rates and these may cause the impact of default rates on recovery rates to disappear.

Frye (2000) maintained that expected recovery rates may increase as a result of high growth rate of GDP, intuitively, Fama, Eugene and Kenneth (2002) expected expansionary economic recovery rates to be higher. Their multivariate and univariate regression results agreed together although the degree of the impacts of their estimation was reportedly smaller.

According to Bos and Kolari (2005), banks with equity-asset ratio that is relatively low would probably experience excess rates of losses. Salas and Saurina (2002) and Berger and DeYoung (1997) argued that there exist a negative relationship between NPLs and capital ratio.

Kargi (2011) in his study, examined the effect of credit risk on Nigerian banks' profitability and using financial ratios collected from the financial books of the selected banks and analyzed using regression, correlation and descriptive statistical techniques. His findings showed that there was a significant effect between credit risk management and bank profitability in Nigeria. The study concluded that the degree of loans and advances, deposits and NPLs was inversely related to bank profitability, thus, exposing the banks to the possibility of distress and illiquidity.

A similar study by Epure and Lafuente (2012) revealed that regulatory changes improves bank performance and that risk revealed NPLs and differences in banks to have affected the return on asset negatively while the ratio of capital adequacy has a positive effect on net interest margin. Kithinji (2010) who examined the impact of credit risk management on commercial banks profitability in Kenya showed that, NPLs and amount of credit does not influence the level of commercial bank profitability, therefore the recommended that variables other than NPLs and credit do affect profits.

Chen and Pan (2012) assessed the efficiency of credit risk in commercial banks in Taiwan from 2005 to 2008. They employed financial ratios in analyzing credit risk using data envelopment analysis (DEA). The parameters proxied for credit risk were credit risk cost efficiency (CR-CE), credit risk allocative efficiency (CR-AE) and credit risk technical efficiency (CR-TE). Their findings revealed that banks could be efficient in all the efficiencies categories over the periods of analysis. Generally, the DEA analysis revealed that the average efficiency levels in 2008 was relatively low in CR-CE, CR-AE and CR-TE.

According to Felix and Claudine (2008), the findings from their study on the link between credit risk management and the performance of banks revealed that ROA and ROE related inversely NPLs ratio to total loans and consequently causing a decline in performance. Ahmad and Ariff (2007) in their investigation revealed that, for banks that specialize in multi-services and products, regulation is quite critical; while the quality of management is critical for banks that are loan-dominants in an emerging market. According to them, increase in the provision for loan losses is a major factor in facilitating potential credit risk. They concluded that the credit risk in developed markets is lower than that of the emerging markets.

The study of Al-Khouri (2011) on the effect of the characteristics of bank's specific risk and the operating environment on banks performance in the Gulf Cooperation Council (GCC) used the fixed effect regression techniques and concluded that, capital risk, liquidity risk and credit risk are the dominants elements that affects the performance of banks when measured using ROA, and only liquidity risk has an effect on the performance of the banks in terms of ROE.

Ahmed, Takeda and Shawn (1998) revealed that increase in the provision for loan losses reflects increased deterioration in loan quality and credit risk, hence, adversely impacting the performance of banks.The strategies for managing credit risk are the mechanisms applied by banks to escape or reduce the negative effect of credit risk. A sound framework for managing credit risk is critical for the survival of banks and attainment of set goals.

Chen and Pan (2012) pointed out major principles in the process of managing credit risk to include: setting precise structure, responsibility allocation, disciplined and prioritized processes should be properly defined, communicated and evaluated. Credit risk hedging strategies include: i. Credit derivatives.ii. Securitization of credit. iii. Basel accord compliance. iv. Credit bureau. v. Adoption of internal sound lending policy.

According to Ojo (2008), capital adequacy is the basis for the Basel framework for managing risk, where the models for internal risk are suggested in a way of capital augmentation is to make for the penalties of taking risk. Hence, the requirement for capital adequacy is the root base of prudential supervision and regulation. Legally, capital adequacy is defined as the aggregate adequate capital of a bank in relation to risk emanating from common banking operations, asset portfolio, off-balance sheet activities, and other business associated risks.

Debt recovery or realization process is one of the important things in a bank lending activity. This is because if the processes of recovery are unruly protracted or a bank is negligent, there will be huge losses. When this happens, the level of arrears on loan portfolio of banks would very high, which will affect the capital ratios of banks in turn.

As a bank's capital diminishes, the incentives, which its owners have to preserve solvency, are reduced because with limited liability, they would have to bear only a proportion of the losses incurred to creditors. If the problem grows out of hand and regulators begin to question a bank's ability to lend, it will threaten its existence (Blaz & Schiffman, 1996).

The consequence of inordinate delays in recovering debts can be severe. Borrowers may be encouraged to disregard their payment obligations, and take advantage of the weakness in the debt recovery process. Willing defaulters may obtain loans with deliberate intention of avoiding payment, and may dispose of their assets beyond the reach of lenders because of the tedious pace of debt recovery suits. In short, delays breed a credit culture of deliberate non- payment by defaulters (Dickinso, David & Yixin, 2009).Banks have to incur substantial costs in terms of man power, legal and other administrative expenses to service and realize the problem loans. Though it is often difficult to quantify these costs, a bank with large portfolio of problem loans could be experiencing a decline in profitability arising from loss of interest, income and rising costs in terms of legal and other expenses.

The recovery process is often legal and long drawn and in the meantime, the bank is continuously deprived of the opportunity to earn from such funds. Added to this, is the question of the bank's status and reputations which could be altered with an excessive portfolio of problem loans. Excessive problem loans have been compared to a problem bank which is dying slowly from several small wounds. It has been said that: one is reminded of a form of torture and death known as "death of a thousand cuts" seen in American South- West among the Native Americans (Guo, 2007).

The bank bleeds from all these small cuts and has a very hard, slow time recovering from the problems. The very essential thing is to create a good environment for debt recovery process.Debt recovery process requires different mechanisms to be employed. Nigerian commercial banks adopt different ways of recovering non-performing loans. These methods are one or the combination of the following:

1. Settlement
2. Reschedule/Renewal
3. Foreclosure
4. Write- off
5. Litigation

There are three general ways to secure NPLs. One is for banks to handle them themselves, use courts to enforce their rights or auction them in Asset Management Companies (AMCs), which is common in countries where NPL is not widespread. This AMC in Nigeria is known as the Asset Management Corporation on Nigeria (AMCON).Every business activity is risk-possessed ranging from crop failure, inability to market an expensive new item, to non-payment of a trade debtor. However, the situation for banks is quite different because banks are exposed to business risks associated with commercial borrowers, financial market systematic failures, and the impact of economic downturn.When these risks occur, banks resort to debt recovery mechanisms.

Methodology

This study utilized the descriptive research design to empirically analyze the effect of loan recovery rate in selected money deposit banks in Nigeria from 2002 to 2014.The study has its data sourced majorly from financial accounts and reports of the banks in the study sample. The data were cross-sectional and time-series, as such, they were pooled into a set of panel data estimation using panel data regression. The criteria used in drawing up sample size are:

i. The availability of data consistency over a period of time
ii. The number of banks taken over by AMCON
iii. The banks that are major participants in the Nigerian Stock Exchange and have large customers base.

The study used the parametric and non-parametric methodologies in examining this process. Specifically, the study adopted the descriptive analysis, correlation, and panel data analysis to investigate the relationship between the variables of loan recovery rate, risk of credit default and loss-given default on the performance of the deposit money banks.

According to Rivard and Thomas (1997), profitability is measured as return on capital employed (ROCE) which is used as a proxy for the performance of the banks. This ratio is set as the dependent variable. The recovery rate of loans by banks and the risk of credit default are proxied by three ratios. These are;

1. The risk of loan (credit) default (RCD) and
2. The loan recovery rate (LRR).
3. The loss-given default.

These ratios are used as the independent variables of the research model. From the explanation above, the specified mathematical model is;

$$ROCE = a_0 + a_1 LRR + a_2 RCD + a_3 LGD + e_t$$

Discussion of findings

This section will present the interpretation of the data analyzed. The study will begin by analyzing the descriptive data for the entire banks.

Descriptive analysis of the loan recovery rate

The descriptive analysis result in appendix one reveals that Eco bank, First Bank, Diamond Bank and First City Monument Bank had a minimum loan recovery rate of 23.83 per cent, 10.85 per cent, 13.70 per cent and 42 per cent respectively, while the rest of the banks had a minimum loan recovery rate of above 50 per cent. This result furthersuggested that while other banks had a minimum loan recovery rate above 50 per cent. The result further suggested that all the banks had maximum recovery rate of about 99 per cent apart from First bank and Guaranty Trust Bank that had a maximum recovery rate of 96 and 94 per cent respectively.

A maximum recovery rate close to 100 per cent is very high suggesting that the banks exhibited a good loan recovery rate from borrowers. The value of standard deviation which is also regarded in statistical terms as the measure for risk reveals that Zenith Bank, Fidelity Bank, United Bank for Africa and IBTC had a minimum recovery risk of 5.28, 6.10, 7.07 and 9 per cents respectively, while, Eco bank First Bank and Diamond Bank all exhibited a risk recovery exposure of 22, 26 and 32 per cent respectively.

This result is further reveal that First Bank, Diamond bank and Eco bank demonstrated a minimum recovery rate of 10.35, 13 and 23.63 per cent respectively. The remaining banks had a minimum recovery rate of above 50 per cent. The result of the probability Other banks had a minimum recovery rate of above 50 per cent. The result of the probability of loan rate recovery indicates that Fidelity bank, GTB, Zenith and Access banks had a high probability of loan recovery of 77.4, 64.3, 56.2 and 57.2 per cent respectively. While Eco bank, Diamond bank and IBTC had a low probability of loan recovery of 10.7, 7.0 and 10.2 per cent respectively.

Descriptive analysis of risk of default

Appendix two presents the values for the risk of default amongst selected commercial banks in Nigeria. The result reveals that IBTC, Eco bank, GTB and Diamond bank had a Maximum default risk of 86.76, 92.27, 93.59 and 94.87 per cent respectively. While other banks exhibit maximum loan default risk of between 60 and 80 per cent. The result further revealed that Access Bank, FCMB, UBA and FBN had a minimum risk of loan default of 1.23, 1.88, 1.20, and 2.90 per cent respectively. Also IBTC and Diamond bank had minimum risk of default of 28.06 and 17.60 per cent respectively.

The standard deviation which is the overall measure of banks risk of default indicate that IBTC had the highest value for the risk of default of 42.06 per cent followed by GTB and Eco bank who both had a higher risk of default of 31.08 and 31.42 per cent respectively. FBN, Access bank and Diamond bank had an approximate risk of default of 25.52, 26.59 and 21.80 per cent respectively.

The result of the probability of loan default from customers indicated that GTB bank is likely to experience the highest probability of default of 63.4 per cent, while FBN, Access and Eco Bank experiences a probability of default of 62.70, 60.03 and 63.0 per cent respectively. However, IBTC and Diamond Bank experience a low probability of default of 11 and 10 per cent respectively.

Result of correlation analysis

The result of the correlation analysis is presented in appendix three. The result indicates that there exist a negative correlation (-0.14) between Bank performance (ROCE) and loan recovery process. Again, there is also a negative correlation (-0.43) between bank performance and Risk of credit default. The result further revealed that there also exist a negative correlation (-0.50) between macroeconomic environment and Risk of credit default. This negative correlation also extends to the correlation between macroeconomic environment and loan recovery rate (-0.21). However, a positive correlation (0.37) is seen to exist between macroeconomic environment and bank performance. A positive correlation is also observed to exist between loan recovery process and risk of credit default.

Result of panel data regression of bank performance.

The result of the fixed and random panel data regression between bank performance and other independent variable is presented below. The result reveals the existence of a significant negative relationship between the performance of banks and loan recovery rate.The result further showed that an insignificant positive relationship exists between bank performance and risk of credit default.

Furthermore, the result of the panel data analysis reveals that there exist a very strong insignificant relationship between loss-given default and bank performance. It was further revealed by the result of the regression analysis that the weighted R2 was 64per cent. This means that only 64 per cent of the deviations in the dependent variable are explained by independent variables. This means that about 36 per cent are not explained in the model. The value of the DW of 1.77 shows the existence of no positive serial correlation amongst the variables in the model.

Conclusion and Recommendations

Defaults are often caused during periods of ensuing downturns and financial crisis especially in the real corporate and financial sectors. This study examined critically, the efficiency of loan recovery rate as it affects deposit money bank performance in Nigeria. The result suggested that, the rate of recovery relied mostly on industry wide and systematic factors. It is assumed very difficult to determine precisely which factor is most suitable in the drive to recovering risk. Notwithstanding, fewer cases can be made in support of the fact that, the state of business cycle do have substantial influence on recoveries and at least, some of this transmission parts showed up through industry distress indirectly and persistence with loan defaults. Therefore, treating the rate of recovery as random or certain is inappropriate but systematically unrelated to industry-wide and aggregate factors. If done that way, there is that possibility of bias estimation of loss measures and specific risk may be neglected altogether.

Hence, the study proposed the following recommendations from its findings:

1. Banks should ensure that credit defaults are successfully documented in a robust recovery database.
2. Banks should set in motion a recovery rate model that uses inputs that can be reasonably estimated.
3. Banks should use internal loss-given default estimates as well as regulatory version in estimating losses as well as projected risk and regulatory requirements.
5. The standards for credit policies should be established and must also conform with bank's overall objectives and regulatory requirements so as to minimize the degree of exposure to credit risk.

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Dependent Variable: ROCE				
Method: Panel EGLS (Period random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.223009	0.112641	-4.564365	0.0004
LGD	-0.366536	0.073525	5.754859	0.0001
RCD	0.163214	0.018929	-7.357243	0.0001
LRR	-0.146859	0.108891	-4.058953	0.0009
	Effects Specification			
			S.D.	Rho
Period random			0.000000	0.0000
Idiosyncratic random			0.181949	1.0000
	Weighted Statistics			
R-squared	0.594061	Mean dependent var		0.099850
Adjusted R-squared	0.468421	S.D. dependent var		0.183165
S.E. of regression	0.176788	Sum squared resid		3.312923
F-statistic	33.668547	Durbin-Watson stat		1.621093
Prob(F-statistic)	0.014627			
	Unweighted Statistics			
R-squared	0.094061	Mean dependent var		0.099850
Sum squared resid	3.312923	Durbin-Watson stat		0.621093