

# The Strategic Decisions that Influenced Post Consolidation Performance of Banks in Nigeria

AJALA, Oladayo Ayorinde Department of Management and Accounting, Ladoke Akintola University of Technology, Ogbomoso

AWOREMI, Joshua Remi Department of Economics, Ladoke Akintola University of Technology, Ogbomoso E-mail:willis2k9@gmail.com

#### **Abstract**

The study examined the effect of strategic decisions on post consolidation performance of banks in Nigeria. Data for this study were sourced from secondary data and these were extracted from published audited financial reports of the 15 quoted Nigerian money deposit banks. Both descriptive and inferential statistics were used to analyze the data collected. The hypotheses formulated for the purpose of accomplishing the objectives of the study were tested with the use of Pearson Product Moment Correlation coefficient and panel data analysis that involves both the fixed and random effects analysis. Findings revealed that strategic decisions (capital structure and credit risk) positively influenced banks' performance (return on equity) while strategic decisions (asset profile, operating efficiency and liquidity risk) negatively influenced banks' performance. The findings also showed positive relationship (0.496 and 0.804 respectively) between strategic decisions (capital structure and credit risk) and banks' performance while there was negative relationship (-0.831, -0.533 and -0.546 respectively) between strategic decisions (asset profile, operating efficiency and liquidity risk) and banks' performance which was significant at P value < 0.01. The overall banks' performance indicates a strong relationship (0.898) with the merger and acquisition embarked upon by the banks. The findings also revealed that the strategic decisions (capital structure and credit risk) designed to capture the effects of merger and acquisition on banks' performance are statistically positive (0.120 and 0.262 respectively) while that of asset profile, operating efficiency and liquidity risk are statistically negative (-0.008, -0.196 and -0.170 respectively) which were significant at P value < 0.05. This implies that these five variables (asset profile, capital structure, operating efficiency, liquidity risk and credit risk) have significant effects on banks' performance. We recommended that bank consolidation in the financial market must be market driven to allow for efficient process.

Keywords: Consolidation, Synergies, Strategic Decisions, Banks Performance.

## 1. Introduction

Considering the inability of most Nigerian banks to perform well due to operational hardship, expansion bottlenecks as a result of heavy fixed and operating costs coupled with volatility between deposits and lending rates, low capital base, dominance of a very few banks, insolvency and illiquidity, overdependence on public sector deposits and foreign exchange trading, poor assets quality and weak corporate governance, low depositors' confidence, the present banking sector reforms in Nigeria was announced by Professor Chukwuma Soludo, the then CBN governor on July 6<sup>th</sup>, 2004 with the objective of creating a sound and more secure banking system that depositors can trust through mergers and acquisition which enhanced operational capital base. The recapitalization and consolidation exercise in the banking industry by the former Central Bank of Nigeria Governor, Professor Charles Soludo has necessitated the need for different organization to engage in corporate consolidation (mergers and acquisition). This has sent some of commercial banks on the move to consider Merger and Acquisition as survival strategy.

Ajayi (2005), Garba (2006) and Augustine (2007) stated that, other programmes in the Nigerian banking sector reforms agenda includes: ensuring exchange rate and price stability, managing interest rate for stability and development, macro economic coordination, improvements of the payment system and financial sector diversification to avoid a situation of boom that can result to bank distress. This, Walter and Uche (2005) supported. The current reforms framework anchored on against systemic financial crises in the interest of the depositors and secondly, to fast track the growth and development of the national economy.

The incidence of distressed and technically insolvent banking institutions has been with us for quite some time. Umoh (2004) noted that the unprecedented liquidation of 26 Nigerian banks in 1998, in addition to the earlier closure of five banks in 1994/95 did not put an end to the distress syndrome. This, recently manifested when in August 14<sup>th</sup>, 2009, the CBN declared five Nigerian banks illiquid as a result of inadequate capital ratio due to reckless lending, followed by two others on 2<sup>nd</sup> October, 2009 which resulted to the immediate sacking of the affected banks' Managing Directors. According to Umoh (2004), mergers and acquisitions are expected to address the problem of distress among insolvent banks without an initial resort to liquidation. The new capitalization policy of the Nigerian government on banking sector reform has forced many banks to merge or be



acquired which resulted to the formation of mega banks through some strategic decisions. The researcher now attempts to assess the effects of these on the performance of selected commercial banks in Nigeria with greater emphasis on return on equity.

#### 2. Literature Review

Consolidation is view as the reduction in the number of banks and other deposit taking institution with a simultaneous increase in the size and concentration of the consolidation entities in the sector. It is mostly motivated by technology innovation, deregulation of financial services, enhancing, intermediation and increased emphasis on shareholder value, privatization and international competition (De Nicolo, 2003).

The process of consolidation has been argued to enhance bank efficiency through cost reduction revenue in the long run. It also reduces industry's risk by eliminating weaker banks and acquiring the smaller ones by bigger and stronger banks as well as creates opportunities for greater diversification and financial intermediation.

The pattern of banking system consolidation could be viewed in two different perspectives, namely, market-driven and government-led consolidation. The market-driven consolidation which is more pronounced in the developed countries see consolidation as a way of broadening competitiveness with added comparative advantage in the global context and eliminating excess capacity more efficiency than bankruptcy or other means of exit.

On the other hand, government-led consolidation stems from the need to resolve problem of financial distress in order to avoid systematic crises as well as to restrict inefficient banks (Ajayi, 2005). One of the general effects of consolidation is to the reduction in the number of players moving the industry more toward an oligopolistic market (Sanni, 2009).

Consolidation is achieved through merger and acquisition. A merger is the combination of two or more separate firms into a single firm. The firm that results from the process could take any of the following identities; acquirer target or new identify.

Acquisition on the other hand, takes place where a company takes over the controlling shareholding interest of another company. Usually, at the end of the process, there exist two separate entities or companies. The target company becomes either a division or a subsidiary of the acquiring company (Straub, 2007).

While consolidation involves merger and acquisition of banks, convergence involves the consolidation of banking and other types of financial services like Securities and Insurance.

Anecdotal evidence indicates that the commonest form of mergers and acquisitions found in the financial services industry involves domestic firms competing in the save segment (for instance, bank to bank). The second most common type of merger and acquisition segments (e.g. bank-insurance firms). Cross-border merger and acquisition are less frequents, particularly those involving firms in different industry segments (Roger, 2002).

Umunnaehila (2001) states that a merger is basically a combination of two or more companies in which all but only one of the combining companies legally exist and the surviving company continues to operate in its original name. The Merged Company goes out of business leaving it assets and liabilities to the acquiring company. The terms merger and take over are often used synonymously in discussing acquisition. In general use a merger or an amalgamation is viewed as the situation where two or more companies combine together to form a larger business organization.

On the other hand, a takeover or an acquisition involves the purchase of controlling shares in another company. A merger or an acquisition is usually a scheme that is carefully planned to achieve a synergistic effect. Umoren, et al (2007) defines merger as the pooling together the resources of two or more corporate bodies, resulting in one surviving company while the other is absorbed and ceases to exist as a legal entity or remains a subsidiary if it survives. Owokolade (2006) observes that the companies and Allied Matters Act 1990 defines merger as any amalgamation of the undertakings or any part of the undertakings or interest of two or more companies or the undertakings or part of the undertakings of one or more companies and one or more bodies corporate. The author further stressed that, a merger is a form of business combination whereby two or more companies join together to one, being voluntarily liquidated by having its interest taken over by the other and its shareholders becoming shareholders in the other enlarged surviving company.

Similarly, Kwan (2002) states that a merger is technically an integration of two or more companies that decode to combine and chose either the name of one of the companies or completely takes a new name. According to the author, amalgamation is another term used for merger.

Sanni (2009) says that the phrase merger and acquisition (abbreviated M&A) refers to the aspect of corporate strategy, corporate finance and management dealing with the buying, selling and combining of different

Companies that can aid, finance or help a growing company in a given industry grows rapidly without having to create another business entity.



A merger can resemble a take over but result in a new company's name (often combining the name of the original companies) and in new branding, in some cases, terming the combination a "merger" rather than an acquisition is done purely for political or marketing reasons.

An acquisition, also known as a take over, is the buying of one company (the target) by another. An acquisition may be friendly or hostile. In the former case, the companies co-operate in negotiations, in the latter case, the takeover target is unwilling to be bought or the target's board has no prior knowledge of the offer. Acquisition usually refers to a purchase of a smaller firm by a larger one. Sometimes, however, a smaller firm will acquire management control of a larger or longer established company and keep its name for the combined entity.

# 2.1 Development of the Conceptual Model of Strategic Decisions

In order to guide the researcher, the model consisting of the variables was developed. This framework consisted of both independent and dependent variables. Its diagram is as represented below. The independent variables were asset profile, capital structure, operating efficiency, liquidity risk and credit risk. The dependent variable was return on equity.

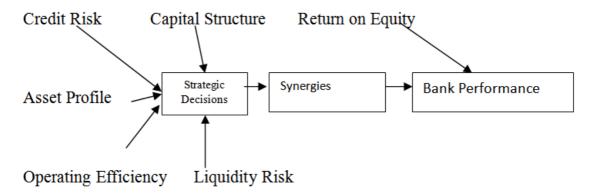


Fig 2.1: A framework for determining the strategic Decisions that influenced the Performance of Banks in Nigeria.

Source: Researcher's Conceptualization (2013).

#### 3. Methodology

The population of this research study is Nigerian banking industry. The entire banking industry in Nigeria had 89 banks as at end of 2005. After the consolidation exercise the number of banks in Nigeria came to 25 in January 2006. As at October 2011, the reform agenda had reduced the number of the banks to 21 mega banks, this therefore constitutes the population for this study,

The judgmental sampling technique was used in selecting the 15 listed banks out of the 21 banks that are in operation as at 2011. These banks were considered because they are listed in the Nigerian Stock Exchange market which therefore enabled us to have easy accessibility to their annual reports which is the major source of our secondary data.

Bank performance is the dependent variable. The proxy used for this is accounting measure of performance; return on equity (ROE). Return on equity is how well a company used reinvested earning to generate additional earning. This was measured as profit before tax divided by total equity. The independent variables (Assets profile, capital structure, operating efficiency, liquidity risk and credit risk) are the strategic decisions that influence bank performance. Asset profile considered the banks' balance sheet loan composition and was measured by the ratio of total loan to total asset. Capital structure shows banks strategy regarding their capital structure, measured as the ratio of total equity to total asset.

Operating efficiency otherwise known as cost controlling strategy shows the emphasis to minimize cost by relating expenditure to returns and it was measured by total operating expenses divided by total operating income. Liquidity risk referred to bank's strategy towards managing liquidity risk and was measured by liquid asset to total deposit while credit risk which referred to bank's asset quality was measured as the level of loan loss provisions divided by total loan.

The data used for this study were secondary data derived from the audited financial statements of the banks listed in the Nigerian Stock Exchange (NSE) between the 10 years period of 2001 and 2010 (comprising five-year financial record before the recapitalization/consolidation exercise and five-year financial record after the merger and acquisition strategy has been consummated). This study also made use of books and other related materials especially the Central Bank of Nigeria bulleting and the Nigerian Stock Exchange Fact Book (2010).



Some of the annual reports that were not available in the NSE fact book were either collected from the corporate offices of concerned banks or downloaded from the banks' corporate websites.

Descriptive statistical tools were used for the analysis of the data gathered from the annual reports of the sampled banks which include tables, percentages and ratios. All these were used to present the performance variables. However, the Pearson correlation was also used to measure the degree of association between variables under consideration. We adopted panel data analysis and multiple regression analysis in analyzing the effect of the merger and acquisition (strategic decisions). The mathematical function to determine this is stated thus;

ROE= f (AP, CS, OE, LR, CR).  
ROE = 
$$\beta_0 + \beta_1 AP_{it} + \beta_2 CS_{it} + \beta_3 OE_{it} + \beta_4 LR_{it} + \beta_4 LR_{it} + \beta_5 CR_{it} + \mu$$
---- (1)

#### Where:

ROE represents bank performance variable which is Return on Equity (ROE). AP, CS, OE LR and CR represent Asset Profile, Capital Structure, Operating Efficiency, Liquidity Risk and Credit Risk respectively while  $\mu$  represents the error term which accounts for other possible factors that could influence ROE that are not captured in the model.

The a priori is such that:

 $\beta_1 AP$ ,  $\beta_2 CS$ ,  $\beta_3 OE$ ,  $\beta_4 LR$ ,  $\beta_5 CR > 0$ . The implication of this is that a positive relationship is expected between explanatory variables ( $\beta_1 AP$ ,  $\beta_2 CS$ ,  $\beta_3 OE$ ,  $\beta_4 LR$ ,  $\beta_5 CR$ ) and the dependent variables. The size of the coefficient of correlation will help us explain various levels of relationship between the explanatory variables.

## 4. Results And Discussion

Table 1 measured the degree of association between our merger and acquisition (Strategic decisions) variables and performance variable i.e. if the strategic decision proxies (asset profile, capital structure, operating efficiency, liquidity risk and credit risk) will increase performance. From the correlation results in table 1 it was revealed that assets profile variable recorded a negative correlation coefficient of -0.831 with return on equity with a p – value of .000 which is significant at 1%. This invariably means that the decrease in asset profile will enhance the performance of the banks. This is in consistent with Ponce (2011) in his study where he found that decrease in asset profile of banks will increase their performance and that the banks were able to manage their asset profile in relation to total loans.

Operating efficiency which is cost controlling strategy also has negative correlation coefficient of -0.533 with return on equity with a p-value of .000 which is significant at 1%. This means that increases in operating efficiency will lead to a decrease in performance. In addition a decrease in operating efficiency will lead to an increase in performance. This is consistent with Yener and David (2004). They found a negative correlation between operating efficiency and overall performance. The results as revealed in table 1, liquidity risk has a negative correlation of -0.546 with return on equity which is significant at 1%. This implies that increased in liquidity risk does not have a positive effect on the level of performance in Nigerian banks but a negative effect. This also implies that a decrease in the liquidly risk will lead to increase in performance of Nigerian banking sector. The outcome from these is consistent with earlier study by Umoren and Olokoyo (2007). They argued that a better liquidity management of the merged banks would imply better performance.

However, capital structure is positively correlated at 0.496 with return on equity. This is also seen to be significant at 1%. This further indicates that banks that are having more capital structure are likely to be performing better. This is in consistent with Berger (2010), Ramrall (2009), Yener and David (2004) where they found a positive correlation between capital structure and performance. The implication of this is that an increase in capital structure will lead to an increase in performance. The result further showed that at 1% level of significance credit risk has a positive correlation of 0.804 with return on equity. This indicates that an increase in credit risk otherwise known as asset quality will lead to increase in performance. This is also seen in Umoren and Olokoyo (2007) and Mesut (2012). They argued that a positive correlation has been detected between capital adequacy and performance of the banks. Generally, on the entire relationship between merger and acquisition (strategic Decisions) and banks performance the result reflected a very strong association between the variables. This is evidence by high R value of 0.898 and F values of 33.47 for the dependent variable which is statistically significant at p-value of 0.000. Conclusively it can be inferred that their exist a connection between dependent variable ( return on equity) and the five independent variables of asset profile, capital structure, operating efficiency, liquidity risk and credit risk. This is in line with the study of Onikoyi (2012).

The fixed effect and random effects regression of strategic decisions on banks' performance was shown in table 2. The t,  $\neq$  and sig (p) values give an indication of the effect of each predictor variable. P value < 0.05 suggests that a predictor variable is having a large effect on the criterion or dependent variable. On the basis of this, table 4.2 revealed that capital structure, credit risk has a positive relationship with return on equity and as



such have a large effect on the performance of banks. This result is confirmed by the predictor variables t = 2.60 and 6.99 and z = 2.68 and 8.66 for capital structure and credit risk respectively which are all statistically significant. This result is further strengthened by their (p-value) sig < 0.05. While, asset profile, operating efficiency and liquidity risk are statistically significant with t = -6.15, -3.71 and -2.76 and z = -9.17, -2.76 and -5.79 respectively and also significant as their p-value<0.05 but they have a negative relationship with return on equity.

The coefficient of determination ( $R^2$  is 0.806) indicating that assets profile, capital structure, operating efficiency, liquidity risk and credit risk account for 80.6% of variation in the performance (return on equity) of banks in Nigeria. The remaining 19.4% unexplained variable is largely due to variation in other variables outside the regression model which are otherwise included in the stochastic error term. The overall regression model is statistically significant in terms of its overall goodness of fit (f = 33.47, P < 0.05). These results seem coherent with prior academic literature of Elena (2008) who argued that merger and acquisition (strategic operations have significant influence on performance of banking sector.

As indicated by Table 2, the effect of individual variables of strategic decisions on banks performance (return on equity) can be expressed thus.

```
\begin{aligned} ROE &= \beta_0 + \beta_1 A P_{it} + \beta_2 C S_{it} + \beta_3 O E_{it} + \beta_4 L R_{it} + \beta_4 L R_{it} + \beta_5 C R_{it} + \mu \\ ROE &= 0.063 - 0.008 A P + 0.120 C S - 0.196 O E - 0.170 L R + 0.262 C R \end{aligned}
```

Where

ROE = Return on Equity

 $\beta_o$  = Constant Factor

 $\beta_1 - \beta_5$  = Parameter estimates of the respective independent variables

AP = Asset Profile

CS = Capital Structure

OE = Operating Efficiency

LR = Liquidity Risk

CR = Credit Risk

i = Cross Section indicator

t = time indicator

This model measures the contributory effect of each of the independent variables on the banks performance (return on equity) in Nigeria.

# 5. Conclusion and Recommendations

The study brought into focus the relevant strategic decisions such as asset profile, capital structure, operating efficiency, liquidity risk and credit risk, capable of predicting banks' financial performance, thus affirming that to be useful, performance indicators must be measurable, relevant and important to organization performance.

The study has further supplied the captain of banking industry saddle with the management of the banks reasonable justification to also renew their focus on strategic decisions such as asset profile, capital structure, operating efficiency, liquidity risk and credit risk in their quest for growing profit, sustaining the banks performance and creating value for investment. In addition to that, the study revealed the significant of correlation and regression model in identifying and evaluating relevant strategic decisions on financial success in the study.

The study also revealed that the strategic decisions variables of capital structure, credit risk have strong positive relationship with banks performance while asset profile, operating efficiency and liquidity risk have negative relationship with banks performance. This means that as both capital structure and credit risk increase banks performance will be increasing as well while the decrease in asset profile, operating efficiency and liquidity risk will lead to increase in banks performance.

Conclusively, the study revealed the significance effect of merger and acquisition (strategic decisions) to the modern day manager or management of banks stressing areas capable of sustaining and boosting the banks profit and growth.

Arising from these, the study recommended that the banks management should embrace broad product strategy, which should help in generating more income for the banks. They should also embrace diversification and financial innovation from producing new products and services. We recommend that bank consolidation in the financial market must be market driven to allow for efficient process.

Management should learn the act of outsourcing the banks' surplus total assets in such a way that earnings on total assets can be maximized. They should take cognizance of retaining cost controlling strategies on the long run, by implementing these individual low cost strategies, the merged banks can achieve synergistic advantages. Banks should ensure they take into cognizance the prominence of tradition and normally unhedged loan lending, in terms of its weight on the overall portfolio. In general, when banks with different asset quality



and overall portfolio strategies merge it is expected that the post merger performance will worsen hence merged banks need to align their asset quality and portfolio strategies to achieve better performance.

#### References

Ajayi, M. (2005): "Banking Sector Reforms and Banking Consolidation": CBN.Bullion Abuja Vol. 29, No. 3 April/June

Annual Reports of Banks (2001-2005)

Annual Reports of Banks (2006-2010)

Augustine, N.K. (2007): *Impact of Nigeria's Bank Consolidation of Shareholders Return*. African Institute for Economic Development and Planning.

Berger, N.A., Hasan I. & Ziou, M.(2010): *The Effects of Focus versus diversification on bank performance: Evidence from Chinese banks.* Journal of Banking and Finance, Vol.34 p: 1417-1435.

David, M. I. Yener, A. (2004): "Merger and Acquisitions and Banks Performance in Europe": The Role of Strategic Similarities, Eur. Central Bank Work. Pap. Ser., (398), October.

De-Nicolo, G. (2003): "Bank Consolidation, Internationalization and Conglomeration": Trends and Implications for Financial Risks. IMF Working Paper 03/158.

Elena, B. (2008): *Merger and Acquisitions Operations and Performance in Banking*. London School of Economics and Political Science, Houghton Street, London.

Garba, A. A. (2006): "Recent Reforms in the Nigerian Banking Industry. Issues and Challenges". The Financier, ABU Zaria.

Kwan, S.H. (2002): "Operational Performance of Banks among Asian Economies": An International and Time Series Comparison. HKIMR Work. Pap. 13, June.

Mesut, D. (2012): Comparison of Financial Performance of Domestic and Foreign Banks: The Case of Turkey: International Journal of Business and Social Science, Vol 4. No 1 December, 2012.

NSE (2011): Nigerian Stock Exchange Daily Market Summary

Onikoyi, I. A. (2012): Merger and Acquisitions and Banks Performance in Nigeria. Transcampus Journal 10(2) 338-347.

Owokolade, T.O. (2006): "Corporate Restructuring Post Consolidation Strategies and Challenges": Journal of the Chartered Secretary and Administration, August.

Ponce, A. T. (2011): What Determines the Profitability of Banks? Evidence from Spain. Accounting & Finance, Early View.

Ramlall, I. (2009): Bank-Specific, Industry-Specific and Macroeconomic Determinants of profitability in Taiwanese Banking System: Under Panel Data Estimation International Research Journal of Finance and Economics. Issue 34.

Roger, A. (2002): Mergers and Acquisitions: A critical Redemption London Routledge Publication P3 – 106.

Sanni, M.R (2009): "Short term Effect of the 2006 Consolidation on Profitability of Nigerian Banks". Nig. Res. J. Accountancy. Inst. Chartered Account. Nig. 1 (1) October.

Straub, T. (2007): Reasons for Frequent Failure in Mergers and Acquisitions. A Comparative Analysis. Deutscher University Verlag, Wresbaden.

Uchendu, O.A. (2005): "Banking Sector Reforms and (6) Bank Consolidation": The Malaysian Experience, Bullion, Central Bank of Nigeria, Abuja, 29(2), April/June.

Umoh, P.N. (2004): Capital Restructuring of Banks: Central Bank of Nigeria, Abuja

Umoren, A.O., Olokoyo. F.O. (2007): Merger and Acquisition in Nigeria: An Analysis of Performance Pre-and-Post Consolidation. Lagos Journal of Banking Finance & Economic Issues, Vol 1, No 1, July, 2007.

# **APPENDIX**

## List of Banks used for the Study

- 1. Access Bank Plc
- 2. Diamond Bank Plc
- 3. Eco Bank Plc
- 4. Fidelity Bank Plc
- 5. First Bank of Nig Plc
- 6. FCMB Plc
- 7. GTB Plc
- 8. Skye Bank Plc
- 9. Stanbic Bank Plc
- 10. Sterling Bank Plc
- 11. Union Bank Plc
- 12. UBA Plc



- 13. Unity Bank Plc
- 14. Wema Bank Plc
- 15. Zenith Bank Plc

Table 1: Correlation results Showing the relationship between Strategic Decisions and Banks Performance (Return on Equity)

|     | 1 1      | ,        |          |          |          |        |  |
|-----|----------|----------|----------|----------|----------|--------|--|
|     | roe      | ap       | cs       | oe       | lr       | cr     |  |
| roe | 1.0000   |          |          |          |          |        |  |
| ap  | -0.8306* | 1.0000   |          |          |          |        |  |
| cs  | 0.4959*  | -0.5308* | 1.0000   |          |          |        |  |
| oe  | -0.5330* | 0.4364*  | -0.2301* | 1.0000   |          |        |  |
| lr  | -0.5460* | 0.4782*  | 0.1863*  | 0.9594*  | 1.0000   |        |  |
| cr  | 0.8041*  | -0.7483* | 0.2537*  | -0.5312* | -0.5914* | 1.0000 |  |

<sup>\*</sup>Correlation is Significant at 0.01 level.

Source: Data Analysis, 2013.

Table 2: Regression Results showing the effect of Strategic Decisions on Banks Performance (Return on Equity)

| Variables   |        | Fixed Effect |         |        | Random Effect |                  |  |  |
|-------------|--------|--------------|---------|--------|---------------|------------------|--|--|
| Roe         | Coef   | Т            | P> t    | Coef   | Z             | P>  <del>z</del> |  |  |
| Ap          | -0.008 | -6.15        | 0.000*  | -0.007 | -9.17         | 0.000*           |  |  |
| cs          | 0.120  | 2.60         | 0.021** | 0.068  | 2.68          | 0.007*           |  |  |
| oe          | -0.196 | -3.71        | 0.002*  | -0.170 | -2.76         | 0.006*           |  |  |
| lr          | -0.170 | -2.76        | 0.015** | -0.034 | -5.79         | 0.000*           |  |  |
| cr          | 0.262  | 6.99         | 0.000*  | 0.245  | 8.66          | 0.000*           |  |  |
| _cons       | 0.063  | 1.42         | 0.176   | 0.101  | 4.35          | 0.000*           |  |  |
| Goodness of | fit:   |              |         |        |               |                  |  |  |
| R           | 0.898  |              |         |        |               |                  |  |  |
| $R^2$       | 0.806  |              |         |        |               |                  |  |  |
| F-Value     | 33.47  |              |         |        |               |                  |  |  |

<sup>\*</sup>Significant at 0.01 level

Source: Data Analysis, 2013.

<sup>\*\*</sup>Significant at 0.05 level.