

## **The Effect of Credit Risk on Corporate Liquidity of Deposit Taking Microfinance Institutions**

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### **Abstract**

*The objective of this study was to determine the effect of credit risk on corporate liquidity of Deposit Taking Microfinance Institutions (DTMs) in Kenya. The population of the study comprised all the nine DTMs in Kenya. The data for the study was collected from secondary sources for the period between 2011 and 2013. Regression analysis was used to determine the strength of the relationship between the variables. The findings of the study indicated that credit risk has a strong and a statistically significant effect on corporate liquidity of deposit taking microfinance institutions in Kenya.*

**Keywords:** Credit risk, Corporate Liquidity, Deposit Taking Microfinance Institutions.

### **Introduction**

Financial institutions in developing countries are developing and enhancing methods to measure and manage credit risk which is their main risk inherent in their operations. The specific direction that these efforts have taken is to draw on advances in finance, engineering and statistics to create computer simulations and analytical methods that help in measuring and managing credit risk. These techniques provide a more accurate measurement of risk, which can then be used in bank management (Ericsson and Renault, 2000). Credit risk assessment models often consider the impact of changes to borrower and loan-related variables such as the probability of default, loss given default, exposure amounts, collateral values, rating migration probabilities and internal borrower ratings. As credit risk assessment models involve extensive judgment, effective model validation procedures are crucial (Hunt, 2005). Djankov et al (2007) notes that financial institutions are obligated to periodically employ stress testing and back testing in order to evaluate the quality of their credit risk assessment models and to establish internal tolerance limits for differences between expected and actual outcomes and processes for updating limits as conditions warrant.

Credit risk is the risk of loss due to non-payment of debts owed by an entity (Mbole, 2004). It refers to the probability that a borrower may default on any type of debt by failing to make required payments. The risk is primarily that of the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs (Rajan, 1995). Credit risk arises whenever borrowers expect to use future cash flows to pay current debt. Investors are compensated for assuming credit risk by way of interest payments from the borrower or issuer of a debt obligation. Credit risk is closely tied to the potential return of an investment, the most notable being that the yields on bonds correlate strongly to their perceived credit risk (Jappelli and Pagano, 2002).

Nonetheless, the use of credit risk models can assist financial institutions to predict and deal with default events. According to Agenor et al (2004), when a financial institution has credit exposures, simulations for credit risk management require enormous calculation loads.

Corporate liquidity refers to the degree to which the assets or securities of a corporation can be sold or bought in the market without affecting the asset's price. Corporate liquidity measures the amount of cash that a company has and how easily it can easily pay its obligations. Maintaining high levels of liquidity enables the firm to meet its short term financial obligations. High liquidity makes it easy for the firm to invest in profitable investments and diversify its portfolios to mitigate risks of financial losses. Financial institutions raise debts which have to be rolled over constantly and which are used to finance assets and as such more debt in the banking system yields a higher risk. Liquidity problems arise when assets prices deteriorate and this makes financial institutions to experience difficulties when rolling over their debts. According to Imbierowicz and Rauch (2014), financial institutions can employ credit control techniques in order to reduce credit risk and liquidity risk. Credit control aims at maximizing the value of the firm by achieving a trade-off between maximizing sale of loans and minimizing the risk of bad debt. In fact, a firm should manage its costs in such a way that its sales are expanded to the extent at which its risks remain within an acceptable limit. These costs include the credit administration expenses, bad debt losses and opportunity cost of the fund tied up in receivables. The aim of liquidity management should be to regulate and control these costs that cannot be eliminated together (Cantor and Frank, 1996).

## 1.2 Research Problem

Corporate liquidity enables the firm to meet both its short term and long-term obligations as they fall due. Proper management of credit risk will enable a financial institution to meet its financial obligations and take advantage of profitable investments that are likely to yield higher returns in future. Firms that exhibit a proper balance of their corporate liquidity and credit risk are able to channel their finances into profitable investments. The optimal amount of liquidity is determined by the credit management practices implemented by a financial institution in order to mitigate exposure to credit risk (Myers and Majluf, 2004). Conversely, credit risk is the potential that a bank borrower or counterparty will fail to meet their obligations in accordance with agreed terms (Ngugi, 2012). A number of studies have been conducted on credit risk and corporate liquidity both internationally and locally (Xiong, 2012; Ericsson and Renault, 2000; Gaitho, 2010; Muasya, 2013). However, none of these studies has investigated the link between credit risk and corporate liquidity. Financial institutions need to ensure adequate levels of liquidity so as to be able to meet their operational costs, financing costs and depositors' demands as and when they fall due without creating a panic in the market. One way of ensuring adequate liquidity levels is through the appropriate measurement and management credit risk. Consequently, there is a need to investigate the extent to which credit risk affects corporate liquidity. This paper narrows down to deposit taking microfinance institutions in Kenya.

## 1.3 Objective of the Study

To determine the effect of credit risk on the level of corporate liquidity in deposit taking microfinance institutions in Kenya.

## 1.4 Specific Objectives

- i. To determine the effect of debt to equity ratio on corporate liquidity in deposit taking microfinance institutions in Kenya.
- ii. To determine the effect of portfolio to assets ratio on corporate liquidity in deposit taking microfinance institutions in Kenya.
- iii. To determine the effect of operating expense ratio on corporate liquidity in deposit taking microfinance institutions in Kenya.
- iv. To determine the effect of credit risk on corporate liquidity in deposit taking microfinance institutions in Kenya.
- v. To determine the effect of portfolio at risk ratio on corporate liquidity in deposit taking microfinance institutions in Kenya.
- vi. To determine the effect of credit risk on corporate liquidity in deposit taking microfinance institutions in Kenya.

### 1.5 Hypothesis of the study

H<sub>01</sub>: Debt to equity ratio has no statistical significant effect on corporate liquidity in deposit taking microfinance institutions in Kenya.

H<sub>02</sub>: Portfolio to assets ratio has no statistical significant effect on liquidity in deposit taking microfinance institutions in Kenya.

H<sub>03</sub>: Operating expense ratio has no statistical significant effect on corporate liquidity in deposit taking microfinance institutions in Kenya.

H<sub>04</sub>: Credit risk has no statistical significant effect on corporate liquidity in deposit taking microfinance institutions in Kenya.

H<sub>05</sub>: Portfolio at risk ratio has no statistical significant effect on corporate liquidity in deposit taking microfinance institutions in Kenya.

H<sub>06</sub>: Credit risk has no statistical significant effect on corporate liquidity in deposit taking microfinance institutions in Kenya.

## 2.0 Literature Review

### 2.1 Deposit Taking Microfinance Institutions in Kenya

The establishment of the microfinance Act on 2<sup>nd</sup> May, 2008 enabled a number of micro-finance institutions to apply for licenses in order to allow them to take deposits from members and the general public. The main objective of the Microfinance Act was to regulate the establishment, business and operations of microfinance institutions in Kenya through licensing and supervision. According to CBK (2013), there are currently nine Deposit-taking MFIs operating in Kenya. Nonetheless, there has been a tremendous increase in nonperforming loans in deposit taking microfinance institutions over the last few years and this has led to an increase in credit risk which has a negative effect on the level of corporate liquidity of the firms (Ngugi, 2003). Deposit Taking Microfinance institutions (DTM) offer credit services to customers to develop and grow their businesses with the objective of making profits. However, these firms should ensure that they maintain proper levels of liquidity in order to be able to meet their short term financial obligations that are essential for the normal running of their business. In Kenya, DTMs face an apparent tension between achieving financial growth and contributing towards poverty reduction and this may expose these firms to credit risk.

### 2.2 Credit Risk

Credit risk is the risk of loss due to non-payment of debts owed by an entity and may be compounded by liquidity risk. Credit risk refers to the risk that a borrower will default on any type of debt by failing to make required payments (Rajan, 1995). The risk is primarily that of the lender and includes lost principal and interest, disruption to cash flows and increased collection costs. The loss may be complete or partial and can arise in a number of circumstances which include the risk of loss of principal or loss of a financial reward stemming from a borrower's failure to repay a loan or otherwise meet a contractual obligation. Credit risk arises whenever a borrower is expecting to use future cash flows to pay a current debt. Investors are compensated for assuming credit risk by way of interest payments from the borrower or issuer of a debt obligation. Credit risk is closely tied to the potential return of an investment, the most notable being on the yields on bonds which correlate to their perceived credit risk (Jappelli and Pagano, 2002). According to Agenor et al (2004), credit risk can be measured using debt to equity ratio, portfolio to assets ratio, operating expense ratio, credit risk ratio and portfolio at risk ratio.

### 2.3 Corporate Liquidity

Corporate liquidity measures how much cash a company has and how easily it is able to pay its debt. Assets in any firm are categorized into various classes. Liquid assets such as cash, cash equivalents and marketable securities constitute liquid assets (Eljelly, 2004). Liquid assets constitute a significant portion of a firm's total assets. Consequently, failure to ensure good management of corporate liquidity may make a firm be unable to meet its short and medium term obligations as they become due hence financial distress (Investment Technology Group, 2010). The optimal amount of liquidity is determined by a tradeoff between the low return earned on liquid assets and the benefit of minimizing the need for costly external financing (Bhunja, 2010). The optimal investment in liquidity increases with increase in the cost of external financing, the variance of the future cash flows and the return on future investment opportunities (Hutchison et al, 2007).

### **2.3 Credit Risk and Corporate Liquidity**

Liquidity and credit risk are closely linked, the industrial organization models of banking such as the Monti-Klein framework and the financial intermediation perspective in Harford and Maxwell (2005), Diamond and Dybig (1983), suggest that a financial institution's credit risk and liquidity structure are closely connected, especially with regards to borrowers default and fund withdrawals. The industrial organization model indicates there is a relationship between liquidity and credit risk. A liquidity risk is seen as a profit lowering cost, a loan default increases this liquidity risk because of the lowered cash inflow (Hooks and Linda, 2003). This model is based on the premise that banks obtain money from unskilled depositors which is used for lending. Problems arise if too many economic projects funded with loans yield insufficient funds or even defaults and the bank cannot meet depositors' demands. Due to this asset deterioration, depositors may claim back their money. This may in turn oblige the banks to recall their loans and thereby reduce aggregate liquidity. Therefore, higher credit risk may be accompanied by higher liquidity risk through depositors demand (Harvey and Roper, 2004).

### **2.4 Theoretical Framework**

#### **2.4.1 Credit Risk Theory**

Cantor and Frank (1996) posit that credit risk theory is the first and foremost readily available portfolio model for evaluating credit risk. The credit risk approach enables a company to consolidate credit risk across its entire organization and provides a statement of value-at-risk (VaR) due to credit caused by upgrades, downgrades and defaults. Credit risk model is useful to all firms that are exposed to credit risk in the course of their business. According to this theory, a firm should develop a methodology to quantify credit risk across a broad range of instruments, including traditional loans, commitments and letters of credit; fixed income instruments; commercial contracts such as trade credits and receivables; and market-driven instruments such as swaps, forwards and other derivatives (Padilla and Pagano 2000).

#### **2.4.2 Liquidity Preference Theory**

This theory suggests that the premium demanded for parting with cash raises as the term for getting the cash decreases. The rate in the increase of this premium amount slows down with increase in the term (Moore, 1991). Liquidity preference theory intimates the idea that investors demand a premium for securities with longer maturities which involve greater risk because they would prefer to hold cash which entails less risk. The more liquid an investment is the easier it is to sell quickly at its full value (Mbole, 2004). According to this theory, the demand for liquidity is determined by three motives; the transactions motive, the precautionary motive and the speculative motive (Pasinetti, 1997). A financial institution that lends out credit to borrowers may face liquidity problem especially if the borrowers are not able to pay the loans on time. This may prevent the firms from investing in profitable projects that promises higher returns in future. As a result, this theory argues that a firm should hold more cash for investment.

### **2.5 Credit Risk Modeling**

Credit risk models are used by firms to measure and manage credit risk. Walsh (2010) states that these models serve three main functions; estimating the likelihood a counterparty will default payments, measuring the dollar amount that might be lost if a counterparty defaults payments and measuring the correlation of default risk across an entire credit exposure portfolio. Jose and Riestra (2002) emphasize that the models are intended at aiding the microfinance institutions in quantifying, aggregating and managing risk across geographical and product lines. The outputs of these models also play increasingly important roles in risk management and performance measurement processes of microfinance institutions including performance-based compensation, customer profitability analysis, risk-based pricing, portfolio management and capital structure decisions. According to Robinson (2001), credit risk modeling can provide better internal risk management and may have the potential to be used in the supervisory oversight of microfinance institutions

### **2.6 Empirical Studies**

Mokaya (2011) did a study on the Relationship between Credit Card Default Risk and Cardholders Characteristics, Credit Card Characteristics and Behavioral Scoring Process among Commercial Banks in Kenya. A descriptive survey of sampled commercial banks was conducted and data for the study was analyzed using descriptive statistics. The study results indicated that commercial banks that had implemented credit risk assessment had lesser loan defaults.

Furthermore, Philip (2012) investigated the effect of Liquidity Risk and Credit in the Financial Crisis in San Francisco. Data for the study was collected from a sample of 55 banks between 2007 and 2008. According to the results of the study, credit risk reduced with banks experiencing liquidity pressures.

Ngugi (2012) conducted a study on the impact of credit information sharing on credit risk for commercial banks in Kenya. The study used non-performing loans as a measure of credit risk. The population of this study consisted of all 44 banking institutions registered and operational in Kenya under the banking Act. The study utilized both secondary and primary data. Quantitative data on credit risk for commercial banks was extracted from annual financial reports of the banks. Data on credit information sharing was obtained through the use of questionnaires. Chi-Square test was used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. According to the findings of the study, credit information sharing has a positive but not statistically significant impact on credit risk.

Muasya (2013) investigated the relationship between credit risk management practices and loans losses on commercial banks in Kenya. The study used descriptive research design and the data for the study was obtained from primary sources. The study results indicated that there is a negative and a statistically significant relationship between credit risk management practices and loans losses among commercial banks in Kenya. Furthermore, Harvey et al., (2014) conducted a study on the effect of credit risk on corporate liquidity among commercial banks in Netherlands. The data for the study was collected from a sample of 65 banks for a period of five years ranging from 2008-2012. According to the results of the study there is an inverse relationship between the credit risk and corporate liquidity among commercial banks.

### **3.0 Research Methodology**

#### **3.1 Research Design and Target population**

The study used a descriptive research design. A descriptive survey is usually concerned with describing a population with respect to important variables with major emphasis being on establishing the relationship between the variables (Morgan, 2007). The population of the study comprised nine (9) DTMs licensed under the Central Bank of Kenya (CBK, 2013). However, due to incomplete information from the nine DTMs, five DTMs were analyzed for the period ranging from 2011 to 2013.

#### **3.2 Data Collection**

The study used secondary data which was obtained from the financial reports of Microfinance Institutions in Kenya. The data was collected for a period of 3 years (2010-2013) based on the availability and accessibility of data.

#### **3.5 Data Analysis**

The data collected was organized and captured using Statistical Packages for Social Sciences (SPSS) for analysis. Descriptive statistics was used to analyze the collected data. Correlation and regression analysis were used to test the relationship between the variables. Coefficient of determination value greater than 0.5 indicated a strong relationship between the variables. Independent one-way ANOVA and independent one tailed t-test were used to determine the level of significance of the regression co-efficient at 95% degree of confidence. The regression model that was employed in the study can be specified as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where;

$\alpha$  = Constant Term

Y = Corporate liquidity (dependent variable) which was measured using cash and cash equivalents divided by the total assets held by the DTMs

$X_1$  = Credit Risk which was measured using risk coverage ratio measured as loan loss reserve divided by portfolio at risk

$X_2$  = portfolio to assets ratio which was measured using gross loan portfolio/total assets

$X_3$  = Operating expense ratio which was measured using operating expense/Revenue

$X_4$  = Debt to equity ratio which was measured using total liabilities/Total assets

$X_5$  = Portfolio at risk which was measured using outstanding loans (loans in arrears over a period of 30 days) divided by gross loans.

$\beta$  = is a regression constant

$\varepsilon$  = Error term within a confidence interval of 5% will be used

## **4.0 Study Results**

### **4.1 Descriptive Statistics**

According to the results in table 4.1, corporate liquidity had a mean of 0.2683 with standard deviation of 0.063078 while debt to equity ratio reported a mean of 5.7833 with standard deviation of 4.6473. This depicts that the ratio of debt to equity was five to one implying that DTMs total debt was less than their equity. On average, DTMs operating expenses recorded a mean of 2.0591 with standard deviation of 2.9380 which indicates that DTMs operating expenses was higher than the revenue collected during the study period. Risk coverage ratio for the DTMs had a mean of 0.4825 with standard deviation of 0.08400. The high risk coverage implies that DTMs were able to meet their financial obligations.

### **4.2 Correlation Analysis**

Table 4.2 shows that debt to equity ratio and credit risk had a positive relationship with corporate liquidity while portfolio at risk ratio, operating expense ratio and portfolio to asset ratio were negatively associated with corporate liquidity.

### **4.3 Regression Analysis**

According to the results in Table 4.3, there is a strong relationship between corporate liquidity and the explanatory variables as shown by the correlation coefficient (R) value of 0.9012. This indicates that credit risks have strong effect on the corporate liquidity of DTMs. R square of 0.9034 implies that 90.34% of the total variation in corporate liquidity is attributed to the changes in explanatory variables. The Durbin-Watson measure of autocorrelation in this analysis was 1.9354 which indicates that there was no autocorrelation among the independent variables. This is because the value was within the acceptable levels of 1.5 to 2.5.

### **4.5 Test of Hypothesis. .**

Table 4.5 shows that debt to equity ratio has a statistical significant effect on corporate liquidity ( $p < 0.05$ ). Consequently, this study rejects the first hypothesis and concludes that debt to equity ratio has a statistically significant effect on corporate liquidity. Furthermore, the degree of significant of the relationship between portfolio to asset ratio and corporate liquidity was 0.041. This value was less than 0.05 hence this study rejects the second hypothesis and concludes that portfolio to asset ratio has a significant effect on corporate liquidity.

According to the results in table 4.5, operating expense ratio and corporate liquidity had a p value of 0.029 which was less than 0.05. As a result, this study rejects the third hypothesis and concludes that operating expense ratio has a significant effect on corporate liquidity. Moreover, credit risk and corporate liquidity had a p value of 0.04 ( $p < 0.05$ ). Therefore, this study rejects the fourth hypothesis and concludes that credit risk has a statistically significant effect on corporate liquidity. Finally, the results of the study indicated that there was a statistically significant relationship between risk coverage ratio and corporate liquidity as shown by the p value of 0.044 ( $P < 0.05$ ). Accordingly, this study rejects the fifth hypothesis and concludes that risk coverage ratio has a statistically significant effect on corporate liquidity. The results in table 4.6 show that the degree of relationship between the variables was 0.02. This implies that the regression model was significant in giving a true estimate of the variables since the t value of 0.002 was below 0.05. Therefore, this study rejects the sixth hypothesis and concludes that credit risk has a statistically significant effect on corporate liquidity

## **5.0 Summary and Conclusions**

The main objective of the study was to establish the effect of credit risk on corporate liquidity. The study established that corporate liquidity had a mean of 0.2683 with standard deviation of 0.063078. The required statutory liquidity for the DTMs as per the Microfinance Act (2008) is 0.2. This means that DTMs are meeting their expected liquidity levels. Furthermore, the average debt to equity ratio of DTMs was 5.7833. This implies that the DTMs rely more on equity than on debt. The results from correlation analysis indicated that there is a positive but weak relationship between debt to equity ratio and corporate liquidity. Conversely, portfolio to asset ratio and operating expenses ratio reported negative relationship with corporate liquidity. Finally, Credit risk had a positive and strong relationship with corporate liquidity. The regression results showed that there is a strong and a statistically significant relationship between portfolio asset ratios and corporate liquidity. All the explanatory variables were statistically significant in explaining the variation in corporate liquidity.

The results of this study are in line with the credit risk theory by Cantor and Frank (1996) which postulates that credit risk approach enables a company to consolidate credit risk across its entire organization, and provides a statement of value-at-risk due to credit caused by upgrades, downgrades, and defaults. Nonetheless, the DTMs need to check on their operating expenses as they take up to 31 per cent of their revenue. A decrease in these operating expenses will lead to higher levels of liquidity. An adequate level of liquidity for any financial institution is required so that they are able to cover withdrawal of funds by customers, meet inter-bank indebtedness that may arise on a day-to-day basis following the payment clearing process. The institutions also need to be able to meet unforeseen borrowing requests from customers and be able to cope with interruptions to their normal cash flows. In addition to these operational factors, DTMs are required by law (Microfinance Act, 2008) to maintain a liquidity level of 20 per cent. The adequacy of liquidity for any institution depends not only on the volume of liabilities to be covered but is also affected by the quality of its assets. The more risky the assets, the greater must be the cushion provided by the institution in its loan loss reserves.

### 6.0 Recommendations and Suggestions for Further Studies

DTMs should adopt a credit risk grading system. The system should define the risk profile of borrower's to ensure that account management structure and pricing are commensurate with the risk involved. This should be done as an effort to maintain a sensible corporate liquidity even as the DTMs try to satisfy all their customer needs. Additionally, DTMs should establish Credit Policies that clearly outline the management's view of business development priorities. These Credit policies should be updated at least annually to reflect changes in the economic outlook and the existing loan portfolio.

Future studies should be conducted to determine the effect of credit risk on corporate liquidity of DTMs using more credit risk variables and longer time periods. In addition, more studies should be undertaken in order to identify other major variables that affect corporate liquidity of DTMs and are connected to credit risk. Further studies should be carried out to determine the effect of credit risk on corporate liquidity in other institutions like commercial banks that are faced with credit risk.

### Tables

**Table 4.1: Descriptive Statistics Table**

| Variable                 | Mean      | Median  | Std.Dev. | Min  | Max   |
|--------------------------|-----------|---------|----------|------|-------|
| Liquidity                | 0.2683333 | 0.35845 | 0.063078 | 0.21 | 0.4   |
| Debt to Equity ratio     | 5.783333  | 7.2     | 4.647352 | 0.1  | 14.6  |
| Portfolio to Asset ratio | 2.059167  | 1.6995  | 2.938081 | 0.09 | 11.08 |
| Operating Expense ratio  | 31.99167  | 13      | 9.279543 | 24.1 | 48.1  |
| Credit Risk              | 0.4825    | 0.50    | 0.084005 | 0.35 | 0.6   |
| PaR(30 days)             | 8.258333  | 7.52    | 4.365663 | 5.2  | 17.4  |

**Table 4.2: Correlation coefficients of credit risk and corporate liquidity variables**

|                     | Liquidity | Debt to Equity | Portfolio to Assets | Operating Expense | Credit Risk | PaR    |
|---------------------|-----------|----------------|---------------------|-------------------|-------------|--------|
| Liquidity           | 1.0000    |                |                     |                   |             |        |
| Debt to Equity      | 0.1373    | 1.0000         |                     |                   |             |        |
| Portfolio to Assets | -0.0926   | 0.5810         | 1.0000              |                   |             |        |
| Operating Expense   | -0.3877   | -0.6791        | -0.3696             | 1.0000            |             |        |
| Credit Risk         | 0.7352    | -0.2134        | -0.4605             | -0.3113           | 1.0000      |        |
| PaR                 | -0.0356   | -0.4501        | -0.2148             | -0.2157           | 0.2137      | 1.0000 |

**Table 4.3: Model Summary**

| Model | R      | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|--------|----------|-------------------|----------------------------|---------------|
| 1     | 0.9012 | 0.9034   | 0.8738            | 1.27800                    | 1.9354        |

**Table 4.5: Regression Coefficients**

| Liquidity                 | Coef.      | Std.Err. | T     | P> t  |
|---------------------------|------------|----------|-------|-------|
| Debt to Equity ratio      | 0.0214679  | 0.015948 | 4.241 | 0.007 |
| Portfolio to Assets ratio | 0.0092458  | 0.007446 | 3.24  | 0.041 |
| Operating Expense ratio   | 0.0101919  | 0.008179 | 1.75  | 0.029 |
| Credit Risk               | 1.183708   | 0.456088 | 2.6   | 0.041 |
| PaR                       | -0.0109118 | 0.010618 | 2.03  | 0.044 |
| Cons                      | -0.8621699 | 0.650651 | -2.33 | 0.013 |

**Table 4.6: ANOVA Test**

| Model |            | Sum of Squares | DF | Mean Square | F       | Sig. |
|-------|------------|----------------|----|-------------|---------|------|
| 1     | Regression | .250           | 5  | .036        | 6.92307 | .002 |
|       | Residual   | .0871          | 9  | .0052       |         |      |
|       | Total      | .3371          | 14 |             |         |      |

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