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Relationship between Credit Risk Management and Financial Performance of Grain Milling Firms in Mombasa County, Kenya

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Abstract:
This study sought to determine the effect of credit risk management on financial performance of grain milling firms in Mombasa County, Kenya. The study used descriptive research design that permitted the researcher to explain the characteristics of the research variables. Correlation analysis and regression analysis was used to determine the relationship between the variables. It was observed from the study findings that there was a significant positive correlation between credit period and ROA. The relationship between credit period and ROE had a weak positive correlation. Secondly, a significant positive correlation existed between ROE and liquidity as measured by the quick ratio. Liquidity and ROA also portrayed a significant positive correlation. Thirdly, there was a significant negative correlation between overdue accounts and ROA. This also corresponded to a significant negative correlation between overdue accounts and ROE. Lastly, we observed an insignificant positive correlation between size and ROA. This also corresponded to a significant positive correlation between overdue accounts and ROE. The regression coefficients also postulated a positive significant relationship between ROE and credit period with a beta of 0.001. The study concluded that having overdue accounts negatively affects the ROA and ROE of a company hence the study recommended that managers should strive to enforce prompt payment of company debtors. The study also concluded that credit period as measured by average collection period significantly affected financial performance of grain milling firms in Mombasa County depicted by significant positive correlation between credit period and ROA. The study therefore recommended that credit should be cautiously extended to customers so as to increase financial performance.

Keywords: *Credit risk management, ROA, ROE, grain milling firms, liquidity*

1. Introduction

Risk management entails forecasting and evaluation of financial risks while identifying the procedures in place so as to minimize or eliminate their negative impact (Ikiao, 2015). Risk management is receiving growing attention within both the financial and non-financial organizations. Credit risk management involves structures of decision-making meant in reducing exposures on the credit asset classification and in the provisioning of loan losses (Tanui, Wanyoike & Ngahu, 2015). Businesses basically allow selling on credit to make the payment process easier and to encourage more sales and hence affecting its financial performance. Accounts receivable arise from the credit sales of a firm, and its proper management enables a firm to improve on its profitability by raising funds in case of liquidity crisis (Ahmet, 2012).

According to the third International Conference on Credit Analysis and Risk Management (2015) credit is the provision of access to liquid assets today while promising a repayment at a future date. Habitually, credit ought to be the debt that one party owes another. Credit risk is the probability of loss due to borrower's failure or inability to settle his debt in due time. Credit Risk Management is simply the identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments. According to Namusonge, Lyani and Sakwa (2016) credit risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. CRM consequently entail various processes that are internal as well as external to an organization with the aim of strategizing on the best ways to enhance liquidity while minimizing the adverse effects of issuing credit (Mutwiri, 2007).

The goals of credit risk management are to assist a firm to reduce the amount of funds tied up in accounts receivables and to decrease its irrecoverable debts (Mukherjee, 2014). Most commonly, CRM entails, assessing the credit period, management of overdue accounts, assessing the firm's liquidity and determining the credit limits of a firm. In circumstances that a customer becomes difficult to follow up with, future sales are stopped until the debt is fully paid (Namusonge, et al., 2016).

Financial performance indicates a firm's ability to make good use of their resources in an efficient and effective way in order to attain firm's goals and objective (Warsame, 2016). In other words, Financial Performance is the process of

measuring the outcome of the policies and operations of firm in form of monetary value and in accordance to the degree of which the financial objectives have been accomplished. Measuring a firm's performance is important for both the managers as well as the company shareholders. Actions that occur outside the non-financial system are indicated in form of financial measures. It ascertains and quantifies past actions results that were taken by managers and presents them through various financial ratios (Bone, 2017).

Financial performance is measured by use of many ratios and models like the return on investment, profit margin, efficiency ratios, liquidity ratios etc. (Fujo & Ali, 2016). The Return on asset (ROA) is the most preferred profitability measure by investors. This is because the higher the ROA, the higher the income that comes along with it compared to the cost of investment. A major disadvantage to the traditional financial measures is being too historical or backward looking. Investors are therefore gradually moving towards more dynamic measures of measuring financial performance, although the traditional measures are still predominantly used (Kalume, 2014).

1.1. Research Objective

To determine the relationship between credit risk management and financial performance of grain milling firms in Mombasa County, Kenya

2. Methods

Descriptive design was adopted in this study. The target population was all grain milling firms in Mombasa County, Kenya. This included a total of 8 firms in Mombasa County. The study covered the grain milling firms present in Mombasa County between years 2013 to 2017. The research used secondary data to extract information on the firms' financial statements for the past five years (2013-2017) to determine the financial performance of the firm.The data collected was analyzed using correlation and regression analysis. The regression equation was expressed as follows:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

Y – ROA and ROE
X_1 – credit period
X_2 – overdue accounts
X_3 – liquidity
X_4 – size of the firm
α – intercept
e – error term representing other factors not in the model, and
$\beta 1$, $\beta 2$, $\beta 3$ and β_4 - represent the slope of the regression lines or the coefficients of the regression model.

3. Results and Discussion

Correlation results between credit risk management and financial performance of grain milling firms in Mombasa County is summarized in table 1 below.

Variable		Return on Assets	Return on Equity
Credit Period	Pearson Correlation	.345*	0.271
	Sig. (2-tailed)	0.046	0.121
Overdue Accounts	Pearson Correlation	-.479	-.478
	Sig. (2-tailed)	0.004	0.004
Liquidity	Pearson Correlation	.571	.409*
	Sig. (2-tailed)	0.001	0.016
Size	Pearson Correlation	0.248	0.161
	Sig. (2-tailed)	0.158	0.364

Table 1: Correlation Matrix

**. Correlation is Significant at 0.05 Levels (2-Tailed)*

It was observed from the study findings that there is a significant positive correlation between credit period and ROA since the p-value was 0.046 ($p < 0.05$) and correlation value of 0.345. The relationship between credit period and ROE had a weak positive correlation with p value of 0.121 ($p > 0.05$) and correlation value of 0.271.

Secondly, a significant positive relationship exists between ROE and liquidity as measured by the quick ratio with a p-value of 0.016 ($p < 0.05$) and the correlation value was 0.409. Liquidity and ROA follow a significant positive correlation giving a p value of 0.001 ($p < 0.05$). The correlation value from the analysis is 0.571. Thirdly, there was a significant negative correlation between overdue accounts and ROA with a p value of 0.004 ($p<0.05$) and a correlation value of -0.479. This also corresponds to a significantly negative correlation between overdue accounts and ROE with a correlation value of - 0.478 and a p value of 0.004 ($p<0.05$).Lastly, we observed an insignificantly positive correlation between size and ROA with a p value of 0.158 ($p> 0.05$) and a correlation value of 0.248. This also corresponds to a significant positive correlation between overdue accounts and ROE with a correlation value of 0.364 and a p value of 0.161 ($p<0.05$).

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-0.005	0.028		-0.179	0.847
Credit Period	0.001	0.001	0.299	1.000	0.047
Overdue Accounts	-0.216	0.159	-0.265	-1.358	0.185
Liquidity	0.023	0.014	0.330	1.643	0.129
Size	0.001	0.003	0.050	0.333	0.751

Table 2: Regression Coefficients- Dependent Variable ROA

Table 2 above indicates that there is a positive significant relationship between ROA and credit period with a beta of 0.001. There exists an insignificant negative relationship between ROA and overdue accounts with Beta= -0.216. ROA and liquidity follows an insignificant positive relationship with a beta value of 0.023. Lastly, there is an insignificant positive relationship between size and ROA with a beta value of 0.001.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	0.040	0.028		1.429	0.275
Credit Period	0.001	0.001	0.275	1.000	0.093
Overdue Accounts	-0.432	0.159	0.454	-2.717	0.042
Liquidity	0.004	0.018	0.044	0.222	0.850
Size	0.001	0.004	0.055	0.250	0.747

Table 3: Regression Coefficients- Dependent Variable ROE

The data in table 3 postulates a positive significant relationship between ROE and credit period with a beta of 0.001. There is also a significant negative relationship between ROE and overdue accounts with Beta = -0.432. ROE and liquidity had an insignificant positive relationship with a beta value of 0.018 while size had an insignificant positive relationship with ROE with a beta value of 0.001. Hence, from the research analysis, the following regression equations were obtained:

$ROA = -0.005 + 0.001X_1 - 0.216X_2 + 0.023X_3 + 0.001X_4$

$ROE = 0.04 + 0.001X_1 - 0.432X_2 + 004X_3 + 0.001X_4$

4. Discussion of Findings

It was observed from the study findings that there was a significant positive correlation between credit period and ROA. The relationship between credit period and ROA and ROE had a weak positive correlation. There was also a significant positive relationship between ROA and credit period and also a significant positive relationship between ROE and credit period. There was a significant negative correlation between overdue accounts and ROA that also corresponded to a significant negative correlation between overdue accounts and ROE. The study also found an insignificant negative relationship between ROA and the overdue accounts of Mombasa County grain milling firms and also a significant negative relationship between ROE and overdue accounts.

There was a significant positive correlation between both ROA and ROE with liquidity. In addition, the study postulated an insignificant positive relationship between both ROA and ROE with liquidity. The study found out an insignificant positive correlation between size and ROA. This also corresponded to a significant positive correlation between overdue accounts and ROE. Additionally, there was an insignificant positive relationship between ROA and size and also an insignificant positive relationship between size and ROE.

4.1. Conclusion

The study concludes that credit period as measured by average collection period significantly affected financial performance of grain milling firms in Mombasa County. This is illustrated by a significant positive correlation between credit period and ROA. The study findings also revealed a significant negative relationship between return on assets and overdue accounts of Mombasa County grain milling firms. Also, a significant positive correlation between ROE and overdue accounts was observed. The study therefore postulates a linear positive relationship between credit period and financial performance, meaning that extending of credit sales indeed improves a firm's financial performance.

The study also concluded that liquidity did not greatly affect the financial performance of the firms as indicated by an insignificant positive relationship between ROA and liquidity. Similarly, ROE and liquidity followed an insignificant positive relationship therefore concluding that liquidity had an insignificant positive relationship with the financial performance of grain milling firms in Mombasa County. The study concluded that an insignificant positive correlation between size and ROA existed. This also corresponded to a significantly positive correlation between overdue accounts and ROE. Additionally, there was an insignificant positive relationship between ROA and size and also an insignificant positive relationship between size and ROE. This concludes that size was not a major determinant of the financial performance of grain milling firms in Mombasa County.

4.2. Recommendations

The study recommends that the managers of grain millings firms with an objective of maximizing the firm's assets and equity should strive to enforce prompt payment of company debtors. This could be done by implementing standard operating procedures in debt collection which would send email reminders, follow up with telephone reminders, pay visits to the overdue account owners and finally take legal action. The study also recommends charging of interest on overdue accounts so as to discourage such moral hazards of debtors staying long overdue without settling their debts. The interest charged would therefore tend make up for the time value of money on the late settlements of their sales. This will also tend to improve the cash flow of the company. The study also recommends that reasonable credit terms should be offered to the clients because credit sales seemed to increase the financial performance of a firm. Proper credit analysis should be done, implementing the use of the 3 C's in assessing credit application. This is the capital, character and capacity. These areas should satisfy the management before credit is issued.

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