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Effect of Working Capital Management Practices on Liquidity Risk of Insurance Firms Listed at the Nairobi Securities Exchange (Nse), Kenya

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Abstract
This study investigated the liquidity risk of firms listed in the (NSE), Kenya. This study established the existing relationship between two or more non manipulated variables using two groups' i.e. listed insurance firms and non-listed insurance firms. The population was made up of 12 firms and it included all the 6 NSE listed insurance firms and 6 non listed and this was over a period of 5 years. The 6 non listed insurance firms were selected using simple random sampling technique. The data was collected from secondary sources which was audited and published financial statements. Descriptive statistics was used. Statistical inferences were drawn using testing of hypotheses. The correlation matrix showed a negative correlation coefficient with the dependent variable (Liquidity). Regression analysis revealed that the total variability in the dependent variable (Liquidity) could be and Cash Conversion Cycle (CCC)), at R Square = 48.4%, 22.2% and 30.1% respectively and this was statistically significant. From the findings, the researcher concluded that all the independent variables had a positive statistically significant impact on the liquidity risk of listed Insurance firms.
Keywords: Working capital management practices; Liquidity risk of insurance firms; Nairobi securities exchange.

1. Introduction

1.1. Background to the Problem

Working capital in analyzing performance of an organization. According to Brigham and Houston (2007) is a financial metric which represents operating liquidity available to a business, organization, or other entity, including governmental entities.

Working capital management (WCM) (Ganesan, 2007). One reason for this is that short-term investments are being converted into other asset types. With regard to current liabilities, the firm is responsible for meeting these obligations in a timely manner.

Working capital usually represents a large part of a firm's assets and can be reduced by more efficient inventory and accounts receivables management. Several studies have concentrated on how managers could create more value by effectively managing different components of the working capital. Kolay (1991), stresses a proactive working capital strategy as working capital is situation dependent and strategy needs to be assessed and adapted. Kolay (1991) found benefits from both short and long term strategies. Maynard (1996), suggests that those companies that are aiming at minimizing their working capital should concentrate on managing their stocks.

Firms usually face decisions in their operations and one of these important decisions concerns the efficient management of liquidity. According to Gupta (2002) working capital management provides the firm with information on the liquidity needed to operate efficiently i.e. a firm usually needs quick cash to ensure that it is in a position to meet maturing obligations.

A firm can either adopt or a conservative working capital management policy. According to Afza and Nazir (2008), an aggressive Investment Policy is an approach that results in minimal level of fixed assets. This has the expectation of higher profitability but greater liquidity risk.

According to Pandey (2007), aggressive financing policies utilize higher levels of normally lower cost short term debt and less long-term capital. Although lowering capital costs, this increases the risk of a short-term liquidity problem.

Lee and Kang (2008), postulated that, an important indicator of sound health of an organization. A firm should therefore formulate certain policies to control the working capital so as to meet financial distress, which may occur in future (Luther, 2007).

However, Smith (1980) noted that WCM practices appear to have been neglected despite the high proportion of business failure being attributed to poor decisions regarding working capital.

Managers usually lay more emphasis on activities that will improve profitability. But if a company is not able to honor its short-term financial obligations, it is a sign that it is moving towards bankruptcy thus liquidity risk.

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The aspect of liquidity is essential for insurance companies as insufficient liquidity means delays in honoring obligations in regard to the settlement of claims by insurance policy holder (Naveed *et al.*, 2011).

But since insurance companies are into payment of claims and receipt of premiums, their current liabilities are made up of unpaid claims which are due whilst the current assets comprises premiums due from policyholders but not yet paid. An insurance firm which is not in a position to pay its due obligation is at risk of losing trust of its customers, thus we say that the risk that can be posed by insufficient liquidity seems to be high for Insurance firms. Thus it is important for Insurance firms to take seriously the aspect of having in place system that ensures that the firm is liquid enough to pay claims.

In Kenya, Insurance provides employment opportunities through its marketing and the distribution networks such as direct insurance companies, insurance brokers, insurance agents, loss assessors, and loss adjustors. It is also important to note that insurance contributes to the national Gross Domestic Product (GDP). Besides, insurance is a funds through its pooling system. This is its basic role of providing protection to the insured against financial loss as well as being a source of security, (Rand, 2000).

The Insurance Act Cap 487 stipulates that where the claimant has submitted all required documents, and the insurer has admitted liability, the claimant must be paid the date of reporting the claim, or if liability is determined by court, such determination (Insurance Act, Cap 487). Failure to comply leads to a penalty being imposed. Inability to pay claims and accrued interest are among grounds to petition the courts to wind up an insurance company.

1.2. Statement of the Problem

According to Afza and Nazir (2008) a large number of business failures have been attributed to the inability to plan and control properly their respective firms.

The aspect of liquidity is essential for insurance companies as insufficient liquidity means delays in honoring obligations in regard to the settlement of claims by insurance policy holder (Naveed *et al.*, 2011). Therefore, managers of insurance companies should not ignore the area and they should be well informed of its effect on the liquidity risk of the firm, thus the need to conduct a study on liquidity risk.

A number of studies on the relationship between working capital management and financial performance have been done in Kenya though limited studies have been done in the area of working capital management practices and its effect on liquidity risk and more so on Insurance sector in Kenya. For instance, Mathuva (2010) conducted a study on working capital management components on corporate profitability of Kenyan Listed Firms in the NSE; the study revealed that there exists a highly significant negative relationship between the accounts collection period and profitability hereby reflecting that more profitable firms take the shortest time to collect cash from their customers. The study also revealed that there exist a highly significant positive relationship between the period taken for inventory to be converted into sales and profitability. Wambu (2013), conducted a study on the relationship between the profitability and the liquidity of commercial banks in Kenya; the study found out that there was a positive relationship between profitability and liquidity of commercial banks in Kenya; liquidity was found to be one of the determinants of profitability of commercial banks in Kenya over the years of study. None of the studies reviewed have attempted to explore the effect of WCM practices on liquidity risk of insurance companies in Kenya; rather more emphasis is on the effect of WCM on profitability. Therefore, this study investigated the effect of working capital management practices on liquidity risk of insurance firms listed at NSE.

1.3. Research Questions

This study was guided by the following research questions:

i. What is the effect of debtors average collection period on liquidity risk of listed Insurance firms?
ii. How does creditor's average payment period affect liquidity risk of listed Insurance firms?
iii. What is the effect of cash conversion cycle on liquidity risk of listed Insurance firms?

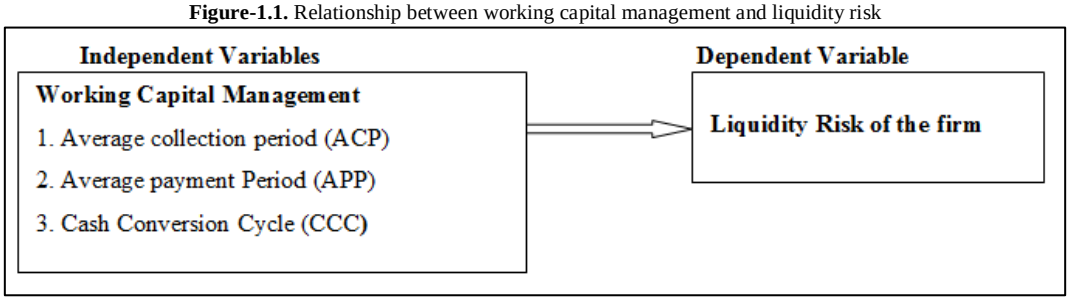
1.4. Research Hypothesis

i. There is a relationship between debtor's average collection period and liquidity in listed Insurance firms
ii. There is a relationship between creditor's average payment period and liquidity in listed Insurance firms
iii. There is a relationship between cash conversion cycle and liquidity in listed Insurance firms

1.5. Conceptual Framework

Working capital management is aimed at sustaining strong profitability together with sound liquidity which in turn leads to strong cash flow for ensuring effective and efficient operation of the business and also ensuring that the interest of stakeholders have been well taken care of. Working capital management by definition is the regulation, adjustment, and control of the balance of current assets and current liabilities of a firm such that maturing financial obligations are met and the fixed assets are properly serviced (Hadley, 2004). Figure 1 shows variables explained and summarized in a conceptual framework.

Figure-1.1. Relationship between working capital management and liquidity risk



2. Literature Review

2.1. Review of Different Theories

2.1.1. The Tradeoff Theory

The trade-off theory of liquidity has the benefits of holding cash are in twofold: secondly, it is worth noting that the critical assumption in the trade-off theory is that all market participants had homogeneous expectations and had the same information about the firm's value and profitability. This assumption has been violated by Myers and Majluf (1984) and Myers (1984) on their pecking order theory of capital structure.

2.1.2. Pecking Order Theory of Liquidity

Adedeji (1998), concludes that the suggestion of pecking order theory, that it is only the internal funds shortage that motivates firms to raise funds externally is questioned. This is because it ignores other theories and the effects of institutional factors that might affect the firm's choice of financing instruments such as the level of interest rate, borrower-lender relations and finally, the government intervention.

This theory gives the researcher a deeper understanding of the other determinants of liquidity of a firm. Should the research findings show a week relationship between working capital and liquidity, the researcher should attribute it to other factors such as leverage, hedging.

2.1.3. The Keynesian Theory of Money

Keynes (1936) in his work, the General Theory of Employment, identified three reasons why liquidity is important, the speculative motive, the precautionary and the transaction motive. The speculative motive for example bargain purchase opportunities of international firms, favorable exchange rate fluctuations.

The precautionary motive is the need for a safety supply to act as financial reserve. Once again, there is probably a precautionary motive for liquidity. However, given that the value of money is relatively certain and that instruments such as Treasury bills are extremely liquid, there is no real need to hold substantial amount of cash for precautionary purpose. Cash is needed to satisfy the transaction motive, the need to have cash on hand to pay bills.

According to the 'quantity theory', which was proposed by Fisher (1911), money is held only for purpose of making payments for current transactions. Irving Fisher's version of the quantity theory can be model; The Nominal Stock of Money in Circulation multiplied by The Transaction equals The Average Price of all Transactions.

Quantity theory measure transactions during the time period and so must be identical. Thus 'the equation' is really an identity which must always be true; it tells us only that the total amount of money handed over in transactions of what is sold.

A host of critics, both modern and old, have maintained that, contrary to the quantity theory, a monetary injection cannot always be relied upon to stimulate spending and increase prices. A monetary expansion may be ineffective for at least three reasons. First, the new money may simply be absorbed into idle hoards. Second, spending may be interest-insensitive, i.e., unresponsive to induced by the monetary expansion.

Third, as previously mentioned, the money stock may be demand-determined, in which case excess supply of money to spill over into the commodity market in the form of an excess demand for goods.

3. Research Design and Methodology

3.1. Description of the Research Design

This study used two groups: listed insurance firms as one group and non-listed insurance firms as another group. This study took measures for both the two groups independently and then look at the relationship between the variables and also do comparison between the groups.

3.2. Targeted Population

This research design was chosen because it enabled the study on liquidity risk of Insurance firms. this study will use 12. This will be further be represented by all the 6 NSE listed insurance firms and 6 non listed insurance firms in between the year 2009 - 2013.

The target population was made up of 12 which included all the 6 NSE listed insurance firms and 6 selected non listed insurance firms. The study adopted of sampling to select the 6 non listed insurance firms from the list of 43 non listed insurance firms between years 2011 – 2015.

This study used data from the financial statements which included statements of financial position and income statements of all the 12 insurance firms from the year 2009 to 2013.

Content analysis guide will be adopted to collect secondary data for the study. The secondary data will be obtained from the audited and published of the selected 12 insurance firms. This study will be interested in collecting the following data from the financial statement to help with measuring the variables: current assets, current liabilities, sales, purchases, total accounts receivables, total accounts payables, inventory and cost of goods sold. These data will be used to calculate the figures for the research variables.

Secondary data will be collected for the purpose of this study; this will be from published financial statements reports of the 12 insurance firms. Data to be collected will be for the years 2009 to 2013. The content analysis guide will guide the researcher in obtaining the needed information from the published financial statements. The focus of the analysis will be critical examination of the content of the financial statements.

The data will be considered reliable and valid after checking and confirming that the auditing firm/external auditor that audited these insurance companies is accredited.

Descriptive statistics were used to analyze quantitative data. Statistical inferences will be drawn using correlation analysis to study and compares the effect of independent variables on the dependent variable. Time series analysis were also used to observe data over a series of years and the change over time. The three stated hypotheses were analyzed by simple linear regression which will help in determining the strength of variable. The t-test was applied for the purpose of testing hypotheses in this study.

4. Discussion

4.1. Introduction

In this chapter, the researcher presents and discusses the findings of the study.

4.2. Descriptive Statistics for the Study Variables

The descriptive statistics for this study variables were generated from SPSS data and the findings were summarised in Table 4.1 below. From the table, the mean statistic for Liquidity were 1.940, 96.034, 64.064 and 4.222 respectively. Ware (2015), found that the variables has an average of 58.3; the value indicates that, it takes an average listed firm approximately 58 days to convert their activities into cash. The Average Collection Period (ACP) which is also a measure of Liquidity has an average of 81.44. This implies that, on the average it takes a listed firm approximately 81 days to receive money due it within a year. Also has average of 102.88. This indicates that, it takes listed companies approximately 103 days to make payments that are due to other entities in a year.

Table-4.1. Descriptive Statistics for Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity	29	.360	3.900	1.940	.945
Average Collection Period (ACP)	29	21.000	204.000	96.034	47.856
Average Payment Period (APP)	29	35.000	98.000	64.069	21.213
Cash Conversion Cycle (CCC)	29	-119.000	88.000	4.222	50.469

4.3. Correlation between the Dependent and Independent variables

The researcher generated a correlation matrix between (Liquidity) and the independent variables. The correlation matrix was presented in Table 4.2. From the table, with liquidity. Only had a negative correlation coefficient with the dependent variable (Liquidity).

Table-4.2. Correlation between Liquidity and Independent variables

		Liquidity	Average Collection Period (ACP)	Average Payment Period (APP)	Cash Conversion Cycle (CCC)
Liquidity	Pearson Correlation	1	.696**	-.471**	.549**
	Sig. (2-tailed)		.000	.010	.002
	N	29	29	29	29
Average Collection Period (ACP)	Pearson Correlation	.696**	1	-.335	.524**
	Sig. (2-tailed)	.000		.076	.004
	N	29	29	29	29
Average Payment Period (APP)	Pearson Correlation	-.471**	-.335	1	-.631**
	Sig. (2-tailed)	.010	.076		.000
	N	29	29	29	29
Cash Conversion Cycle (CCC)	Pearson Correlation	.549**	.524**	-.631**	1
	Sig. (2-tailed)	.002	.004	.000	
	N	29	29	29	29

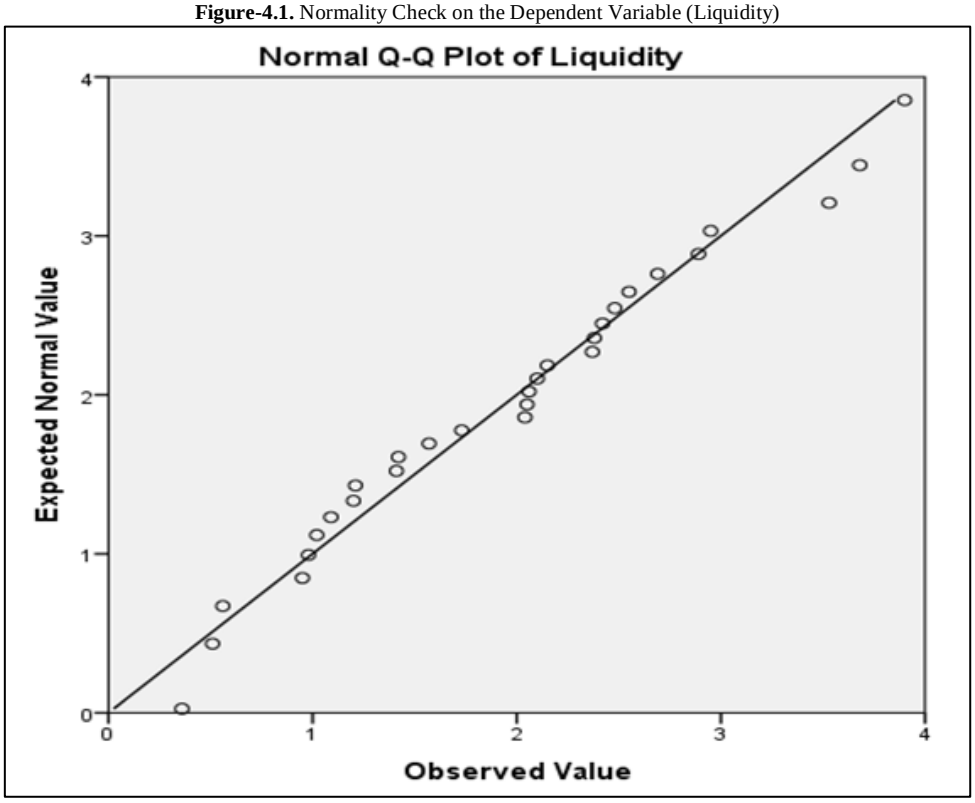
4.4. Testing for the Assumptions of Linear Regression Analysis

4.4.1. Normality Check on the Dependent Variable (Liquidity)

Test of normality is done by inspecting the output of the normal Q-Q plot for the dependent variable (Pallant, 2010; Tabachnick and Fidell, 2007). The researcher carried out a normality check on (Liquidity) by generating from

the SPSS software. The findings were summarized in Figure 4.1. From the figure, most of the scatter dots fell within and therefore, was considered to have a normal distribution.

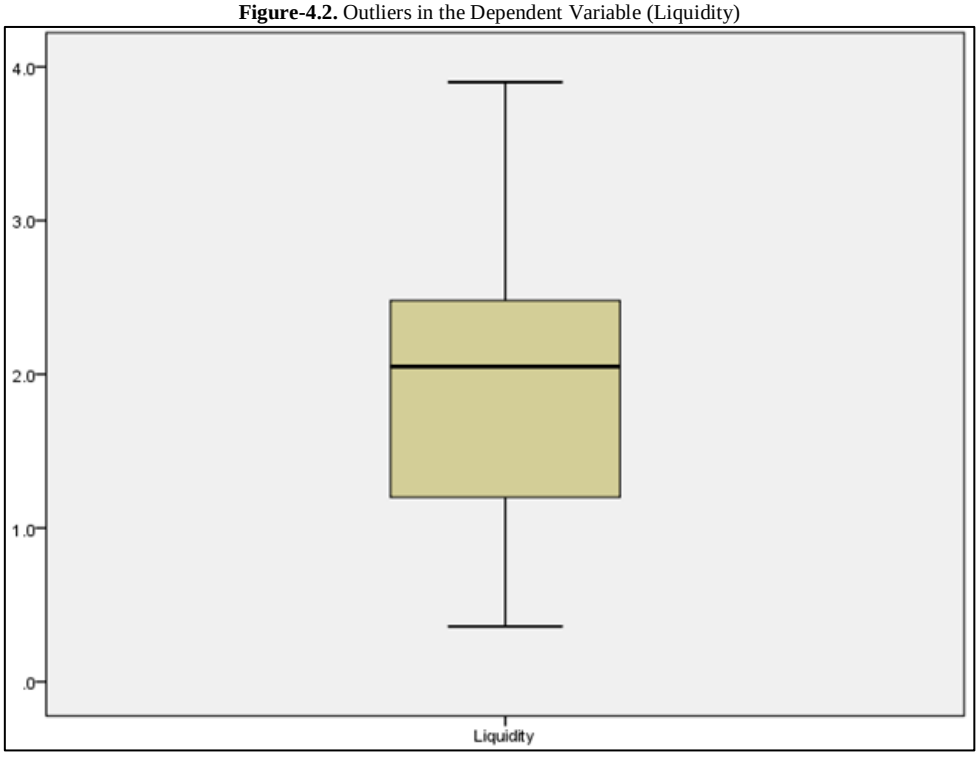
Figure-4.1. Normality Check on the Dependent Variable (Liquidity)



4.4.2. Checking for Outliers in the Dependent Variable (Liquidity)

The study sought to establish if dependent variable (Liquidity) contained any outliers. From the findings presented in Figure 4.2, the study established that there were no outliers in dependent variable (Liquidity).

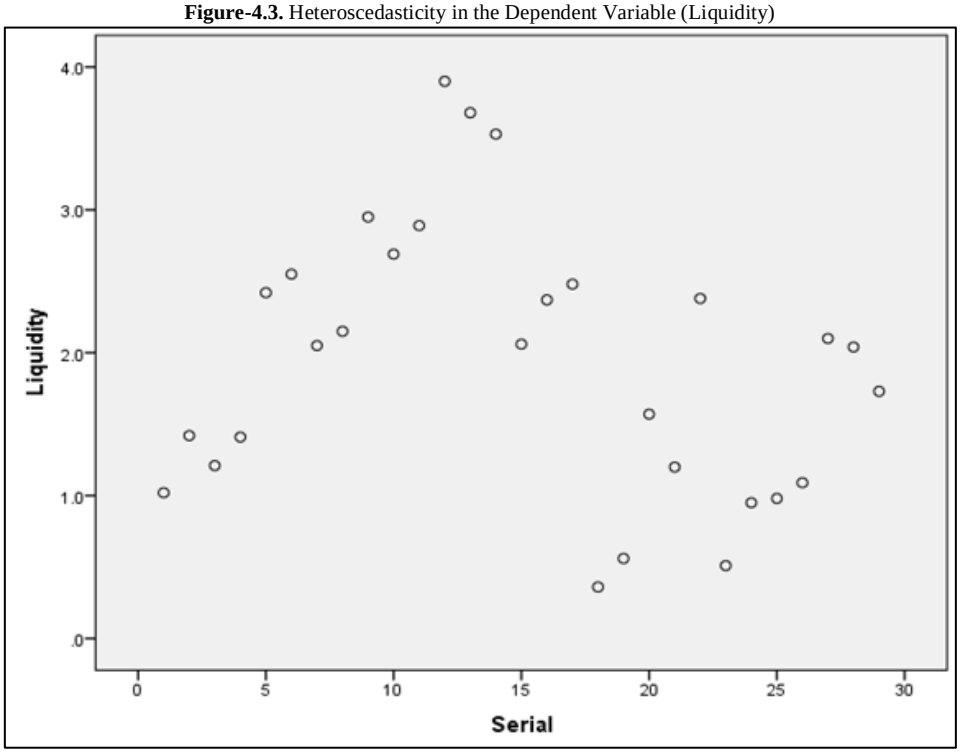
Figure-4.2. Outliers in the Dependent Variable (Liquidity)



4.4.3. Checking for Heteroscedasticity in the Dependent Variable (Liquidity)

In order to check for the presence of heteroscedasticity on the scatter diagram was generated from SPSS software and presented in Figure 4.3. From the figure, the (Liquidity) was found to have no presence of heteroscedasticity as the scatter dots did not form any kind of a systematic pattern that either seemed to converge or explode.

Figure-4.3. Heteroscedasticity in the Dependent Variable (Liquidity)



4.4.4. Checking for Autocorrelation between the Dependent and Independent Variables

The study sought to establish if serial correlation existed between (Liquidity) and independent variables. Autocorrelation is found if Durbin-Watson value is less than 1.5 (negative autocorrelation) and greater than 2.5 (positive autocorrelation) (Chen, 2016). Therefore, the findings presented in Table 4.3 shows that, autocorrelation was not present in the data.

Table-4.3. Autocorrelation between the dependent and independent variables

Model Summary[b]	
Model	**Durbin-Watson**
1	1.559[a]
a. Predictors: (Constant), Cash Conversion Cycle (CCC), Average Collection Period (ACP), Average Payment Period (APP)	
b. Dependent Variable: Liquidity	

4.4.5. Checking for Multicollinearity between the Variables

The researcher sought to find out if multicollinearity existed between Variables. According to Yoo *et al.* (2014), the suggested cut-off point for multicollinearity is tolerance level of 0.8. Also, and Vatcheva *et al.* (2016) proposed a cut-off point for determining presence of multicollinearity of less than 0.10, or a VIF of above 10. From Table 4.4, there was no multicollinearity between the variables.

Table-4.4. Multicollinearity Check between the dependent and independent variables

Coefficients[a]			
Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	Average Collection Period (ACP)	.725	1.379
	Average Payment Period (APP)	.601	1.663
	Cash Conversion Cycle (CCC)	.491	2.036
a. Dependent Variable: Liquidity			

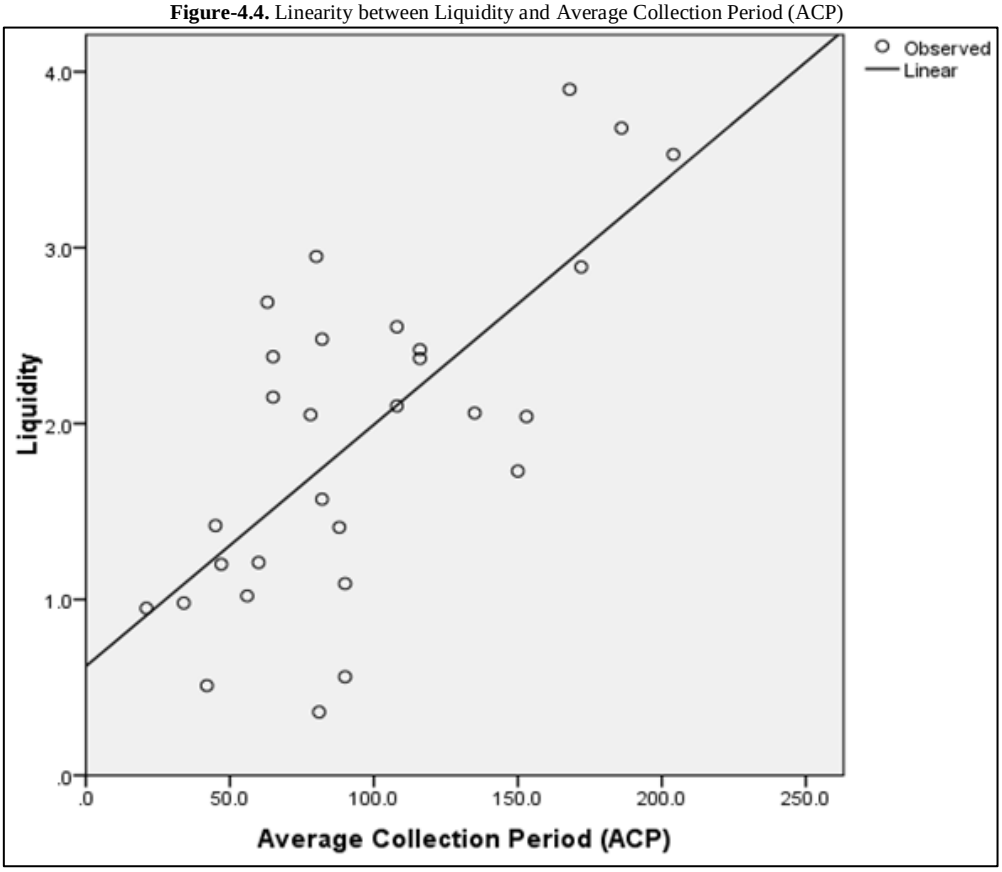
4.4.6. Linearity between the Dependent and Independent Variables

The researcher sought to find out if a linear relationship existed between the (Liquidity) and independent variables (CCC)). The findings are presented and discussed in the subsections that follow.

4.4.6.1. Linearity between Liquidity and Average Collection Period (ACP)

From the curvillinear diagram (Figure 4.4), the researcher concluded that a positive linear relationship existed between the liquidity and independent variable (CCC).

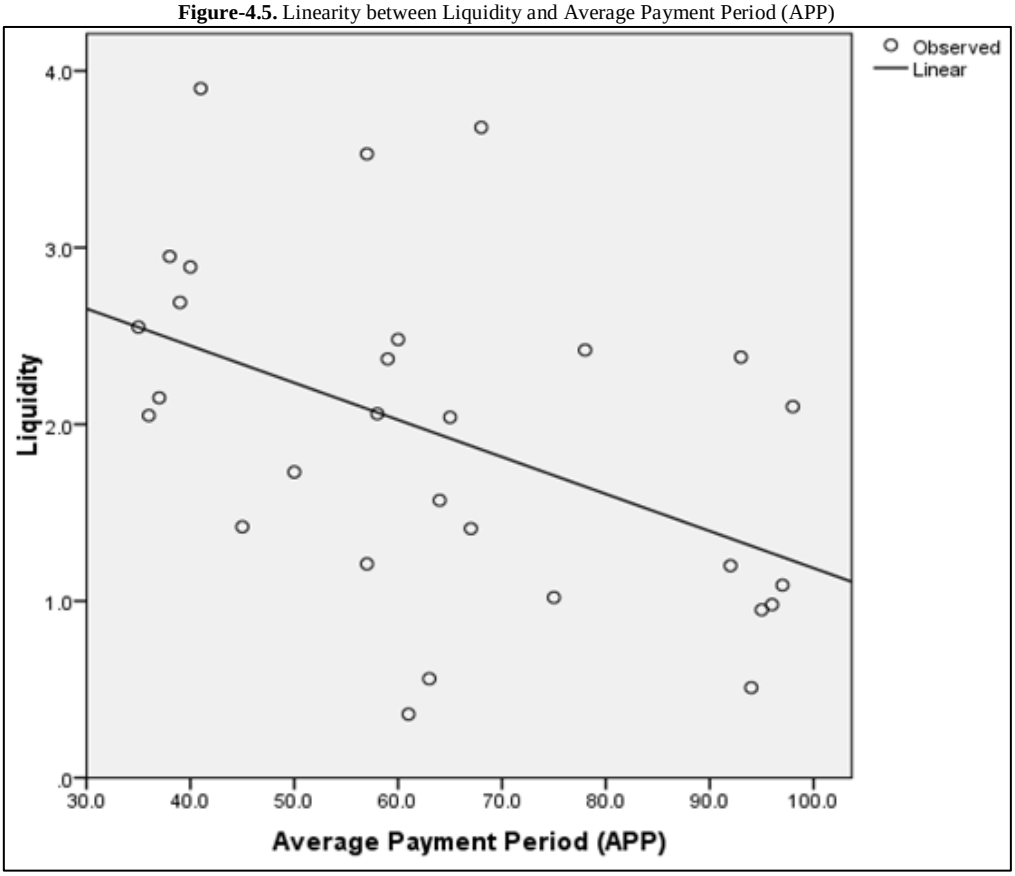
Figure-4.4. Linearity between Liquidity and Average Collection Period (ACP)



4.4.6.2. Linearity between Liquidity and Average Payment Period (APP)

The curvillinear graph (Figure 4.5) shows that a negative linear relationship existed between the dependent and independent variable (Average Payment Period (APP)).

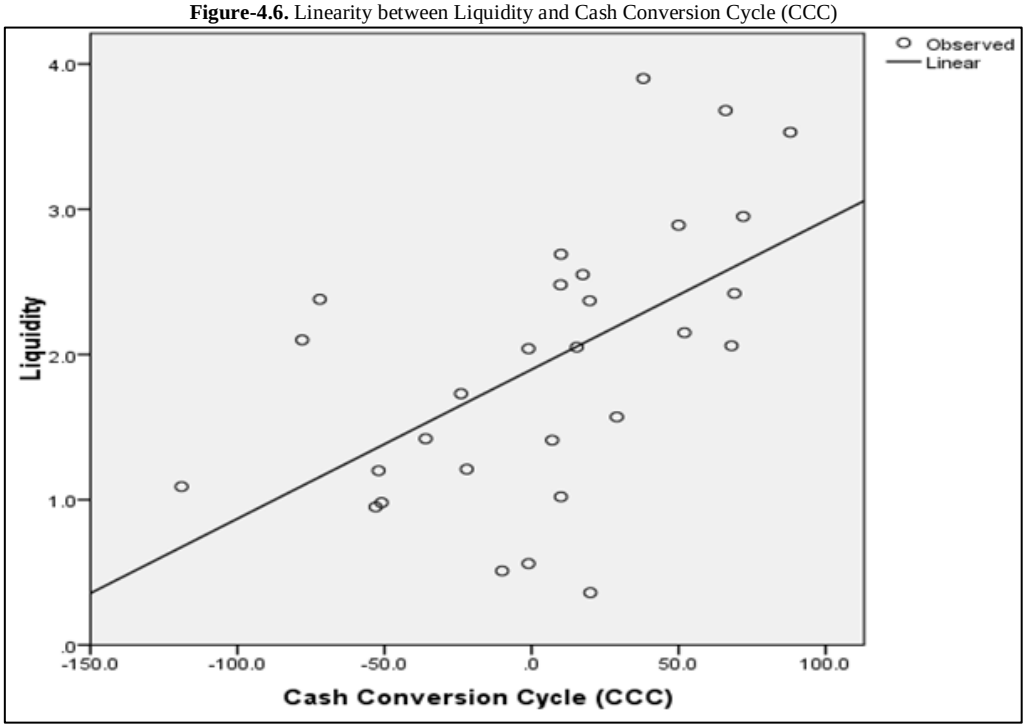
Figure-4.5. Linearity between Liquidity and Average Payment Period (APP)



4.4.6.3. Linearity between Liquidity and Cash Conversion Cycle (CCC)

From Figure 4.6, a positive linear relationship existed between the (Liquidity) and independent variable (CCC)).

Figure-4.6. Linearity between Liquidity and Cash Conversion Cycle (CCC)



4.5. Model Estimation and Hypothesis Testing

4.5.1. Regression between Liquidity and Average Collection Period (ACP)

The research carried out a regression analysis between Liquidity and (ACP). The findings were presented and discussed under this section.

The Model Summary Table 4.5 shows that 48.4% (R Square) of the total variability in the (Liquidity) can be explained by the independent variable (ACP)).

Table-4.5. The Model Summary Table of Liquidity and Average Collection Period (ACP)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.696[a]	.484	.465	.690946
a. Predictors: (Constant), Average Collection Period (ACP)				

Anova Table 4.6 shows that the variability in the (Liquidity) as a result of the influence that (ACP) had on it. The influence was statistically significant (p = .000). Further, the null hypothesis that (ACP) does not have a statistically Liquidity is rejected and instead the alternative hypothesis is accepted.

Table-4.6. Anova Table of Liquidity and Average Collection Period (ACP)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	12.100	1	12.100	25.346	.000[b]
	Residual	12.890	27	.477		
	Total	24.990	28			
a. Dependent Variable: Liquidity						
b. Predictors: (Constant), (ACP)						

From the Coefficient Table 4.7, (ACP) contributes a positive statistically significant value of .014 for every unit increase in Liquidity risk of insurance firms. These findings were in line with the findings of Wang (2002) who found a positive relationship between ACP and Profitability. The regression equation

$$Y = \beta_0 + B_1 X_1 + \mu \text{ Becomes;}$$
$$Y = .620 + .014X_1$$

Table-4.7. Coefficient Table of Liquidity and Average Collection Period (ACP)

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	.620	.292		2.127	.043
	Average Collection Period (ACP)	.014	.003	.696	5.034	.000
a. Dependent Variable: Liquidity						

4.5.2. Regression between Liquidity and Average Payment Period (APP)

A regression analysis was carried out between Liquidity and (APP) and the findings were presented and discussed under this section.

From the Model Summary Table 4.8, 22.2% (R Square) of the total variability in the dependent variable (Liquidity) can be explained by the independent variable (APP)).

Table-4.8. Model Summary Table of Liquidity and Average Payment Period (APP)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.471[a]	.222	.193	.848710
a. Predictors: (Constant), Average Payment Period (APP)				

From the Anova Table 4.9, the variability in the (Liquidity) as a result of the influence of (APP) was statistically significant since p-value was less than 5% threshold at Sig. = .010. Also as result, the null hypothesis that (APP) does not have a statistically significant influence on the Liquidity is rejected and the alternative hypothesis is accepted. In a similar study, Mathuva (2009) found out that there exists a highly significant relationship between the time it takes the firm to pay its creditors and profitability.

Table-4.9. Model Summary Table of Liquidity and Average Payment Period (APP)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	5.542	1	5.542	7.694	.010[b]
	Residual	19.448	27	.720		
	Total	24.990	28			
a. Dependent Variable: Liquidity						
b. Predictors: (Constant), Average Payment Period (APP)						

The Coefficient Table 4.10 Average Payment Period (APP) contributes a negative statistically significant value of -.021 for liquidity risk of insurance firms listed at the (NSE), Kenya. The model equation

$$Y = \beta_0 + B_2 X_2 + \mu \quad \text{Becomes;}$$

$$Y = 3.283 - .021X_2$$

Table-4.10. Model Summary Table of Liquidity and Average Payment Period (APP)

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	3.283	.509		6.445	.000
	Average Payment Period (APP)	-.021	.008	-.471	-2.774	.010
a. Dependent Variable: Liquidity						

4.5.3. Regression between Liquidity and Cash Conversion Cycle (CCC)

The research carried out a regression analysis between Liquidity and (CCC). The findings were presented and discussed under this section.

The Model Summary Table 4.11 shows that 30.1% (R Square) of the total variability in the dependent variable (Liquidity) can be explained by the (CCC)).

Table-4.11. Model Summary table of Liquidity and Cash Conversion Cycle (CCC)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.549[a]	.301	.275	.804359
a. Predictors: (Constant), Cash Conversion Cycle (CCC)				

Anova Table 4.12 shows that the variability in the dependent variable due to the influence that (CCC) had on it, was statistically significant as p-value was .002 (Less than 5% threshold). Further, the null hypothesis that (CCC) does not have a significant influence on the Liquidity is rejected and instead the alternative hypothesis is accepted.

Table-4.12. Anova Table of Liquidity and Cash Conversion Cycle (CCC)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	7.521	1	7.521	11.625	.002[b]
	Residual	17.469	27	.647		
	Total	24.990	28			
a. Dependent Variable: Liquidity						
b. Predictors: (Constant), Cash Conversion Cycle (CCC)						

From the Coefficient Table 4.13, the Independent Variable (CCC)) contributes a positive statistically significant value of .010 for every unit increase in the Dependent Variable (Liquidity). Lyroudi and Lazaridis (2000), conducted a study examining the cash conversion cycle as a liquidity indicator of the food industry for Greece companies. The results indicated that there was a significant positive relationship between the and the traditional liquidity measures of current and quick ratios. The regression equation

$$Y = \beta_0 + B_3 X_3 + \mu \text{ Becomes;}$$
$$Y = 1.896 + .010X_3$$

Table-4.13. Coefficient table of Liquidity and Cash Conversion Cycle (CCC)

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	1.896	.150		12.650	.000
	Cash Conversion Cycle (CCC)	.010	.003	.549	3.410	.002
a. Dependent Variable: Liquidity						

4.5.4. Combined Influence of the Independent Variables on the Dependent (Liquidity)

The researcher carried out a regression analysis to determine the influence that Independent Variables combined had on Liquidity. The findings were presented and discussed under this section.

The Model Summary Table 4.14 shows that 55.6% (Square) of the total variability in the dependent variable (Liquidity) can be explained by the independent variables (ACP), (APP) and (CCC)).

small and medium-sized firms. They found that managers can create value by reducing their inventories and the number of days for which their accounts are outstanding. Moreover, shortening the cash conversion cycle also improves the firm's profitability.

García-Teruel and Martinez-Solano (2007) studied the effects of working capital management on the profitability of a sample of small and medium-sized firms. They found that managers can create value by reducing their inventories and the number of days for which their accounts are outstanding. Moreover, shortening the cash conversion cycle also improves the firm's profitability.

Table-4.14. Model Summary Table of Liquidity and Independent Variables

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.745[a]	.556	.502	.666460
a. Predictors: (Constant), (CCC), (ACP), (APP)				

Anova Table 4.15 shows that the model was statistically significant as p-value was less than .05 at Sig. = 000. Therefore, (ACP), (APP) and (CCC)) do not have influence on the Liquidity is rejected and instead the alternative hypothesis is accepted.

Table-4.15. Anova Table of Liquidity and Independent Variables

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	13.886	3	4.629	10.421	.000[b]
	Residual	11.104	25	.444		
	Total	24.990	28			
a. Dependent Variable: Liquidity						
b. Predictors: (Constant), (CCC), (ACP), (APP)						

From the Coefficient Table 4.16, only (ACP) contributes a statistically significant value of .011 for every unit increase in Liquidity risk of insurance firms listed at the (NSE), Kenya. All the other variables are statistically insignificant. Further, The regression equation model

$Y = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + \mu$ Becomes;

$$Y = 1.445 + .011X_2$$

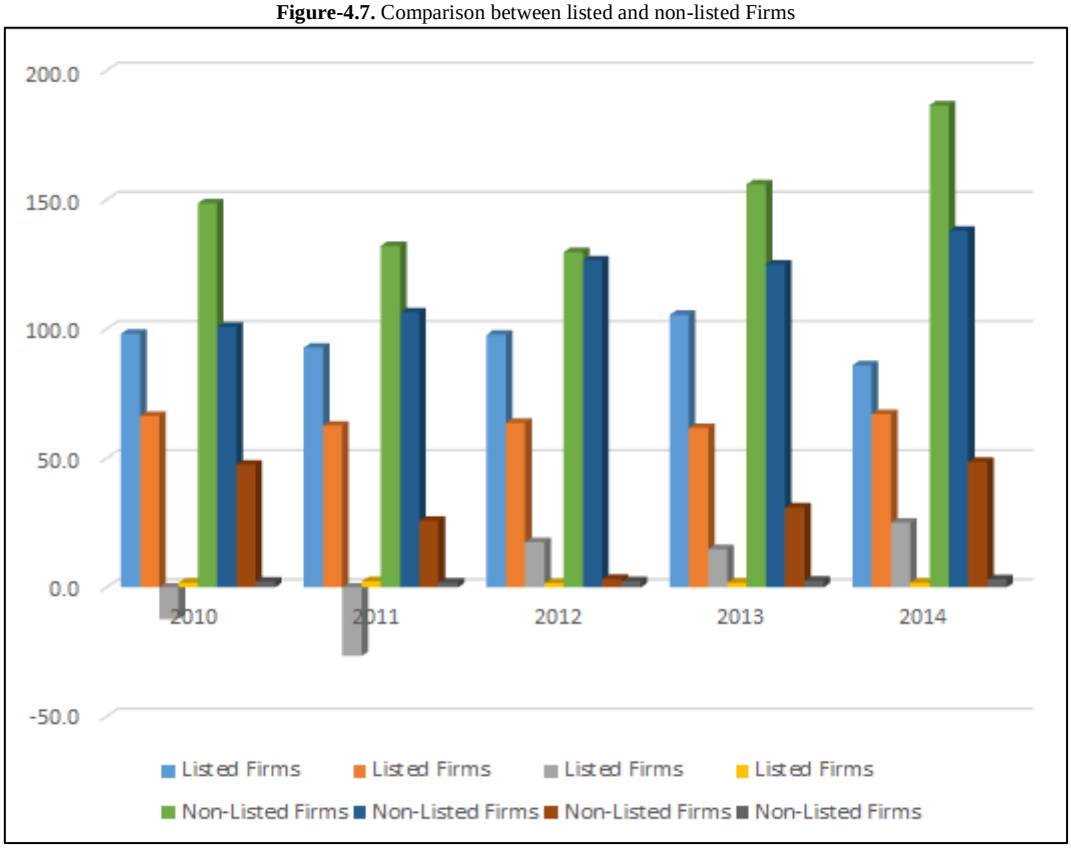
Table-4.16. Coefficient Table of Liquidity and Independent Variables

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	1.445	.592		2.440	.022
	Average Collection Period (ACP)	.011	.003	.562	3.589	.001
	Average Payment Period (APP)	-.009	.008	-.203	-1.183	.248
	Cash Conversion Cycle (CCC)	.002	.004	.126	.660	.515
a. Dependent Variable: Liquidity						

4.6. Comparison between Listed and Non-Listed Firms

Figure 4.7 below shows that the non-listed firms performed better than listed firms across the years

Figure-4.7. Comparison between listed and non-listed Firms



5. Findings

5.1. Introduction

This chapter endeavors to present summary of the findings, the conclusions and the recommendations of this study.

5.2. Summary of the Findings

A Q-Q Plot (Figure 4.1) illustrated that the dependent variable had a normal distribution. Also, the data was checked for outliers and heteroscedasticity from which the findings indicated they were not present (Figure 4.2 and Figure 4.3). A further check on multicollinearity (Table 4.3) and autocorrelation (Table 4.4) showed that both were not present in the data. From the curvillinear diagrams (Figure 4.4, 4.5 and 4.6), the researcher concluded that a linear relationship existed between the dependent and independent variables.

In the first objective, the researcher sought to investigate the debtor's average collection period on liquidity risk of listed Insurance firms. From the correlation Table 4.2, the correlation between liquidity risk of listed Insurance firms was found to be significantly (p = .000) positive at R = .696.

Regression analysis between Liquidity and (ACP) showed that 48.4% (R Square) of the total (Liquidity) can be explained by the (ACP) (Table 4.5). From Anova Table 4.6, (ACP) does not have a statistically influence on the Liquidity is rejected and instead the alternative hypothesis is accepted. Coefficient Table 4.7 shows that (ACP) contributes a positive statistically value of .014 for Liquidity risk of insurance firms.

The researcher, in the second objective sought to find out how creditor's average payment period affects liquidity risk of listed Insurance firms. The correlation analysis between liquidity risk of listed Insurance firms was found to be statistically significantly (p = .010) at R = -.471 (Table 4.2). The regression results (Table 4.8) between Liquidity and (APP) revealed that 22.2% (R Square) of the total in (Liquidity) can be explained by the (APP)). Since p-value was less than 5% threshold at Sig. = .010 (Table 4.9), the null hypothesis that (APP) does not have a statistically significant influence on the Liquidity is rejected and the alternative hypothesis is accepted. (APP) was found to contribute a negative statistically significant value of -.021 (Coefficient Table 4.10) for every unit increase in liquidity risk of insurance firms listed at the (NSE), Kenya.

In the third objective, the researcher sought to establish liquidity risk of listed Insurance firms. From the correlation matrix (Table 4.2), the findings showed that (CCC) was significantly (p = .002) correlated (at R = .549) with liquidity risk of listed Insurance firms. From the regression analysis results (Table 4.11) 30.1% (R Square) of the total variability in (Liquidity) can be explained by the (CCC)).

The null hypothesis does not have influence on the Liquidity was rejected and instead the alternative hypothesis was accepted as p-value was .002 (Less than 5% threshold). From the Coefficient Table 4.13, the (CCC)) was found to contribute a positive statistically significant (p = .002) value of .010 for (Liquidity).

5.3. Conclusions of the Study

In the first objective, the researcher sought to investigate debtor's average collection period on liquidity risk of listed Insurance firms. From the findings average collection period was found to have a significant positive correlation to liquidity risk of listed Insurance firms. Regression analysis between Liquidity and (ACP) revealed that variability in the (Liquidity) could be explained by the (ACP). The null hypothesis that (ACP) does not have a statistically significant influence on the Liquidity was also rejected and instead the alternative hypothesis was accepted. Further, beta coefficients results showed that (ACP) contributes a positive statistically significant value for every unit increase in Liquidity risk of insurance firms. These findings led the researcher to conclude that debtor's average collection period had a positive significant effect on liquidity risk of listed Insurance firms. These findings were similar to those of Wang (2002) who found a positive significant relationship between ACP and Profitability. Ware (2015), found that (ACP) had no statistical significance on profitability.

The researcher, in the second objective sought to find out how creditor's affect liquidity risk of listed Insurance firms. The correlation analysis between liquidity risk of listed Insurance firms was found to be statistically significantly. The regression results between Liquidity and (APP) revealed that a significant variability in the dependent variable (Liquidity) can be explained by the (APP)). The null hypothesis that (APP) does not have a statistically significant influence on the Liquidity was rejected and the alternative hypothesis was accepted. Further, (APP) was found to contribute a negative statistically significant value for every unit increase in liquidity risk of insurance firms listed at the (NSE), Kenya. The findings were in line with the findings of Mathuva (2009) that there existed a highly significant profitability.

In the third objective, the researcher sought liquidity risk of listed Insurance firms. The correlation findings showed a correlated to liquidity risk of listed Insurance firms. The regression analysis proved that (Liquidity) could be explained by (Cash Conversion Cycle (CCC)). The null hypothesis (CCC) does not influence on the Liquidity was rejected and instead the alternative hypothesis was accepted. From the Coefficient, the (CCC)) was found to contribute significantly for every unit increase in the (Liquidity). From these findings, the researcher concluded that (CCC) had a positive statistically significant impact on the liquidity risk of listed Insurance firms. The findings confirmed those of Lyroudi and Lazaridis (2000) that there was a liquidity measures of current and quick ratios.

5.4. Policy Recommendations

From the finding that debtor's (ACP) had a positive significant effect on liquidity risk of listed Insurance firms; the researcher recommends that listed Insurance firms should not adopt credit policies that are too tight as this tends to limit sales.

(APP) was found to contribute a negative statistically significant value in liquidity risk of insurance firms listed at the (NSE), Kenya. The researcher therefore recommends that insurance firms listed at the (NSE), Kenya adopt longer payment periods as a very short payment period may be an indication that the company is not taking full advantage of the credit terms allowed by suppliers.

(CCC) was found to have a positive statistically significant impact on the liquidity risk of listed Insurance firms. Since the operations of this listed Insurance firms do not necessarily consist of buying inventories and selling them to customers, then longer cycles can be considered.

5.5. Suggestions for Further Studies

This study sought to determine the effect of working capital management practices on liquidity risk of insurance firms listed at the Nairobi Securities Exchange (NSE), Kenya. Similar studies can be carried out in other securities exchange belonging to other countries.

This study used Average Collection Period (ACP), Average Payment Period (APP) and Cash Conversion Cycle (CCC) as measures of working capital management practices. A similar study can be carried out using other measures of working capital management practices.

This study focused only on insurance firms listed at the Nairobi Securities Exchange (NSE), Kenya. The researcher recommends a study be carried out in other industries with listed firms such as the banking industry, energy and petroleum, and commercial and services.

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