The Effect of Working Capital on Liquidity Risk Management: A Case of Deposit Taking Savings and Credit Co-Operative Societies (DT-SACCOS) in Nairobi County- Kenya

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Abstract: **Liquidity risk is brought about by factors such as nature of the customer base and prevailing economic environment among others. The study sought to establish the effect of working capital on Liquidity risk management. It considered that though DT-SACCOs aimed at making profits and meeting needs of their members as they keep afloat by closely monitoring the working capital components which affect operations in the short run but can cause insolvency in the long run if not taken into consideration. The specific objective was to determine the effect of debtor's payment period on liquidity risk management. An explanatory research design was adopted. The targeted population for the study constituted 40 DT-SACCOs in Nairobi County. Primary data was collected using structured questionnaires while secondary data was collected from audited financial reports of DT-SACCOs. Reliability was determined using Cronbach alpha and validity of the instruments by content validity. SPSS was used to analyze the data, descriptive statistics included percentage, frequency, mean and standard deviation. Inferential statistics included Pearson correlation and linear regression at significance level of 0.05. study established that management of working capital components affects liquidity risk in DT-SACCOs. Debtor's payment period had negative significant relationship with liquidity risk management. As the DT-SACCOs determine length of the conversion cycle between the payables and receivables it should be lengthy enough to ensure that the DT-SACCOs are able to meet their obligations when they arise. This signifies that debtors payment period has an impact on liquidity risk management in the DT-SACCOs.**

Keywords: **Liquidity Risk Management, Debtors' Payment Period, Working Capital, Deposit Taking SACCOs.**

I. INTRODUCTION

Liquidity risk is the potential of financial loss that arises from the inability either to meet obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses (Ajanthan, 2013). The risk emanates from maturity mismatches where liabilities have a shorter tenure than assets. An unexpected rise in the borrowers' demands above the expected level can lead to shortages of cash or liquid marketable assets (Asongu, 2010). According to Puneet and Parmil (2012), liquidity concerns in the financial sector have been a source of worry to the management of firms. The inability of a financial entity to meet its financial obligation is a premise on which a crisis may result.

In a financial institution, liquidity crisis could lead to insolvency and unanticipated runs. Consequently, minimizing liquidity risk is one of the most important aspects in working capital management. In essence, the objective of working capital management is to mitigate the impact of the maturity mismatch on the firm's statement of financial position. This requires the understanding of how cash flows are moving within an organization, identifying the presence and location of cash flow strains by measuring emerging liquidity pressures and taking corrective action to prevent these pressures from growing (Buchmann et al 2008).

Managing liquidity risk is one of the top priorities of a financial institution's working capital management. In the context of DT-SACCOs' liquidity, the ability to fund increases in assets and meet obligations as they come due, is critical to the ongoing viability of the DT-SACCOs. Since there is a close association between liquidity and solvency, sound liquidity management reduces the probability of DT-SACCOs becoming insolvent, thus reducing the possibility of bankruptcy and disruptive runs. Ultimately, prudent liquidity management as part of the overall risk management ensures a healthy and stable SACCO sub-sector (Brigham and Ehrhardt, 2012). In addition, Bhunia, Khan and Mukhuti (2012) emphasize the significance of SACCO liquidity management in achieving both short and long term objectives of the financial entity. Ideally, therefore, it is imperative that DT-SACCOS retain sound ability to sustainable liquidity controls to provide basis for insulating them against uncertainties and market dynamics while maximizing their owners' worth (Wanyama, 2012).

The Sacco movement in Kenya has evolved in the past 40 years into a formidable force for the social and economic transformation of the Kenyan people. There are over 12,000 registered co-operative societies with a membership of over 7 million; out of which 5,000 are non-deposit-taking DT-SACCOs while 230 are deposit taking (have FOSAs). About 63% of the Kenyan population directly and indirectly depends on co-operative related activities for their livelihood. The Sacco movement has mobilized over Ksh 200 billion in savings which is about 31% of the national savings. 70% of Africa's Sacco portfolio is Kenyan which also ranks 7th worldwide. Kenya sits in the group of 10 largest co-operative movement (G10) member countries (Ademba, 2013).

The Sacco sub sector comprises both Deposit Taking (with FOSA concept) and non-Deposit Taking DT-SACCOs (without FOSA concept). Deposit Taking DT-SACCOs are licensed and regulated by SASRA while non-Deposit Taking Sacco's are supervised by the Commissioner for Co-operatives. The FOSA concept is where services like deposit taking and loans, including for non-members, are offered and has seen Sacco's expand their customer base and business substantially (Mwaniki, 2013). According to the SASRA list of licensed DT-SACCOs dated 28th January, 2015, there were 135 licensed DT-SACCOs in Kenya. Of those, 40 had their registered head offices in Nairobi. This number put Nairobi as the county with the highest number of SASRA licensed DT-SACCOs. 11 other DT-SACCOs in Nairobi had their license applications under review at the end of 2012. In total, these 51 deposit-taking DT-SACCOs in Nairobi had over 540,000 members and held deposits amounting to over Ksh. 92 billion. Their total turnover was over Ksh. 14 billion, total assets were over Ksh. 122 billion with loans totaling over Ksh. 98 billion.

1.1 Statement of the Problem

SACCOs have been providing financial products to their members without any competition from other financial service providers (Song'e, 2015). SACCOs convert immediately available savings deposits into loans with longer maturities (Muriuki, 2013). However, individual savings deposits are typically much smaller than an average loan, requiring multiple deposits to fund a single loan (Obbuyi, 2014). These predispose them to liquidity risks (Kimathi, 2014). More so, liberalization has also resulted in a lot of competition from other financial service providers leading to liquidity problems (Kimathi, 2014).

Liquidity risk has afflicted numerous DT-SACCOs in Kenya, many of which has been closed down by the regulatory authorities or has been restructured under their supervision. The Financial Sector Deepening (FSD, 2013) found out that only a paltry 3.4% of Kenya DT-SACCOs met the requirement of maintaining a minimum liquidity level of 10% of the savings deposits as provided for in rule 53 (3b) of the Cooperatives Societies Rules (2004), even when it was less than the 15% minimum recommended by the World Council of Credit Unions (WOCCU). By extension, therefore, there seemed to be a cause-effect relationship between SACCO's inherent risks and management processes, and the liquidity risk faced.

Vision 2030 strategy requires that the financial services sector plays a critical role in mobilizing savings and investments for development by providing better intermediation between savings and investments. The subsector was further expected to assist the mobilization of investment funds required to implement the projects of Vision 2030. DT-SACCOs are among the financial services strategies to be implemented in improving the reach and access of financial services which were a reserve for a paltry 19% of Kenyans (Ndung'u, 2010). A financial institution needs to hold liquid assets to meet the cash requirements of its customers. Inability to meet its customers' demands leaves the institution exposed to a run and more importantly a systemic lack of confidence (Moore, 2009). However, there were a number of notable challenges in promoting quality financial management in Kenyan DT-SACCOs, thus cumulatively weakening their focal commitment (Ndung'u, 2010). This study therefore seeks to assess the effect of working capital on liquidity risk management: a case of savings and credit co-operative societies (DT-SACCOs) in Nairobi County- Kenya.

1.2 Research Objective

To study sought to determine the effect of debtor's payment period on liquidity risk management of DT-SACCOs in Nairobi County, Kenya.

1.3 Research hypothesis

The specific objective of the study sought to test null hypothesis that posits H_{01}: There is no significant relationship between debtors payment period and liquidity risk management of DT-SACCOs in Nairobi County, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study was hinged on anticipated income theory and Cash Conversion Cycle Theory.

Anticipated Income Theory

This is where liquidity of commercial bank holds the view that liquidity can be estimated and met if scheduled payments are based on the income of the borrowers. It emphasizes on relating loan repayment to income rather than relying heavily on collaterals. It also holds that, liquidity can be influenced by the maturity pattern of the loans and investment portfolios, short-term business and customer installment loans which would have more liquidity than those secured by real estate (Ngwu, 2006). According to Crowe (2009), the doctrine of anticipated income embodies the ideas and equates intrinsic soundness of term loans with appropriate repayment schedules adapted to the anticipated income or cash flow of the borrower. As a result, the credit demands of business are well accommodated under this system of banking policy, and the use of loan commitments is freely pursued. Changing economic conditions, however, have placed extra demands on the banking system and probably resulted in a new approach to balance sheet. Under this emerging state of affairs, credit commitment policies would come to play a more important part in the credit process (Crowe, 2009).

Cash Conversion Cycle Theory

It is asserted that the working capital management theory is founded on the traditional models of cash conversion cycle (CCC). It was noted Nobanee, et al (2011) that, it is crucial to understand how fine a firm is organizing its working capital. It is stated that CCC is a dynamic measurement of the time between cash payment for raw materials, and then receiving it from accounts receivable. In the same light, it is posited that relative to the dynamics of ongoing liquidity management, CCC combines both balance sheet and income statement data to measure liquidity with dimension of time. Indeed, it is deduced that CCC is the most important aspect of working capital cycle (WCC). CCC illustrate the investment and credit decisions in the customer, which in turn, shows the average number of days from the date when a firm starts payment to its creditors and date when it begins to receive payments from its debtors. CCC is employed as the overall measure of working capital since it illustrates the gap between payment of creditors and collection from debtors (Padachi, 2006). In fact, Jordan defined cash cycle as the time between cash disbursement and cash collection. Cash cycle can be illustrated in an equation where: Cash cycle = operating cycle – accounts payable period. On the other hand, Operating cycle = inventory period + accounts receivable period.

2.2. Conceptual Framework

The independent variable is debtor's payment period which was measured using trend of debtor payment, minimum debtor level, period given to repay loan, debtor conversion period while liquidity risk was measured using current ratio, capital adequacy and SACCO earning. The above relation is indicated in the Figure 1
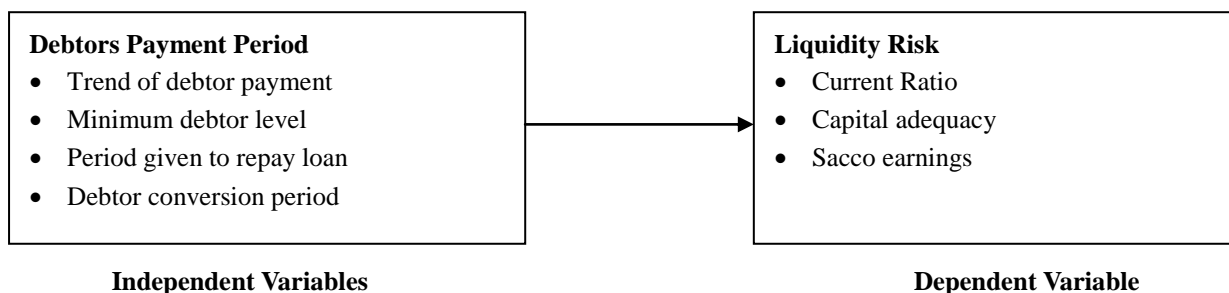
Debtors Payment Period • Trend of debtor payment • Minimum debtor level • Period given to repay loan • Debtor conversion period	→	**Liquidity Risk** • Current Ratio • Capital adequacy • Sacco earnings
Independent Variables		**Dependent Variable**

Figure 1: Conceptual Framework

Liquidity Risk Management

Liquidity risk management is an essential component of the overall risk management framework of the financial services industry, concerning all financial institutions. The liquidity of an asset means how quickly the assets can be transformed into cash. In corporate context, liquidity means ability of a company to meet its current liabilities when they fall due (Puneet and Parmil, 2012). Tirole (2009) distinguishes two types of liquidity risk: asset side of balance and liability side of balance liquidity risk. Liability side liquidity risk arises when financial institutions liability holders claim cash in their financial claims immediately. If financial institutions have less cash than their liability holders wish to withdraw, it has to liquidate their assets to cover the difference (Saunders, 2003). Asset side liquidity risk arises when a given security or asset cannot be traded quickly enough or at wanted price in the market to prevent a loss or make the required profit. Most of the assets can be turned into cash eventually, but if some assets have to be liquidated immediately, there is a chance that this might be done either at very high cost or at much lower price than financial institution would be able to get in some near future (Allen and Carlletti, 2008). Efficiency in liquidity risk management involves planning and controlling current assets and liabilities in such a manner that eliminates the risk of the inability to meet due short-term obligations, on one hand, and avoid excessive investment in these assets, on the other (Tirole, 2009).

Jenkinson (2008) suggests that, liquidity risk influences both the financial institution's capital and earnings. If the risk is over valuated, the firm cannot invest its funds in more profitable liquid assets, so earnings will suffer. If risk is under-evaluated, the firm might have to handle fire-sales and not surely to reasonable price, so it can damage the capital. This is why it becomes the top priority for management to ensure the availability of sufficient funds to meet future demands of providers and borrowers, at reasonable costs. Moreover, the institution's position towards liquidity risk affects not just its performance but also the firm's reputation (Jenkinson, 2008). If the financial institution delays in the provision of funds to depositors it will be considered untrustworthy and unsafe; it may lose confidence and at the same time clients (Arif and Nanuman, 2012). Liquidity risk has become a serious concern for the financial sector because of high competition for consumer deposits and new wide assortment of funding products in wholesale and capital markets with technological advancements. The funding and risk management structure has completely been changed (Akhtar, 2007).

In order to counter the stiff competition, Sacco's have taken up the provision of various products and have their customers get loans at lower rates of interest making liquidity risk more likely to occur. Even as working capital management affects profitability the tradeoff of liquidity also needs to be extensively handled. The demands for liquidity by depositors may be requested at an inconvenient time and force the fire sale liquidation of illiquid assets in order to meet their demands. This may jeopardize the activities of the Sacco (Diamond & Rajan , 2007).

Debtor's payment period

Efficient debtors payment period management augmented by a shortened creditors collection period, low levels of bad debts and a sound credit policy often improves the firm's ability to attract new customers and accordingly improve its financial performance as stated by (Lazaridis & Dimitrios 2005). Management of accounts receivable is a practical issue and businesses can find their cash flow under considerable strain if the levels of accounts receivable are not well managed. Without efficient management of accounts receivable, Gill et al (2011) state that receivables build up to excessive levels resulting into bad debts which lowers the firm's financial performance. Pandey (2008) state that investment in accounts receivable take a big amount of a firm's assets which are highly vulnerable to bad debts and losses if not efficiently managed. This may in the long run lead to liquidity challenges or insolvency.

Zariyawati et al (2009) provide that the effectiveness of management of accounts receivable have a significant impact on a firm's exposure to liquidity risk. According to Sushma and Bhupesh (2007), an increase in the level of accounts receivables in a firm increases both the net working capital and the cost of holding and managing accounts receivable and both lead to a decrease in the value of the firm. Firms who pursue an increase in the accounts receivable to an optimal level increase their profitability resulting from the increased sales and market share (Weston &Copeland (2005) but there is a consequence of persistent inflation on accounts receivable in inflationary period, when interest rates are high and financial requirements become large. Due to lack of a proper plan for Working Capital (WC) requirements most firms often experience excess working capital or a shortfall of working capital. The way in which Working capital is managed will have a significant impact on the profitability of companies (Deloof, 2003).

2.3 Critique of existing relevant Literature and Research gap

Etim (2008) did not indicate whether the relationship between working capital components and liquidity level was negative or positive. However, indicated that all the sampled companies failed to meet their short term financial obligations. Niranjan et al. (2010) indicated that working capital management has significant effect on the profitability

and sound liquidity of an enterprise; however, he failed to isolate which components were used in their study. Further, few studies have investigated the effect of working capital management on liquidity risk in financial sector and specifically in SACCO. Kimani (2012) focused on 9 listed commercial banks in NSE while Sayeda (2011) focused on cement industry in Dhaka Stock Exchange and Yakubu et al. (2017) on non-financial firms in Ghana, Ganesan (2007) on telecommunication equipment industry and Onyeji (2013) banking industry in Nigeria. From survey of relevant literature it was found that there is no studies specific to Kenya in regard to the assessment of working capital management on the liquidity risk of DT-SACCOs in Nairobi County in Kenya. This study was therefore conducted in order to fill the contextual gaps in literature by studying the effect of working capital management on liquidity risk of DT-SACCOs in Nairobi County, Kenya

2.4 Measurement of Variables

Measuring Debtors Payment Period

The debtor's payment period was assessed through the length of time that a firm is able to defer payments for various resources purchased. Padachi (2006), Raheman and Naser, (2007) state that using data from financial statements, the average payment period is obtained by dividing accounts payable by cost of sales and multiplying the results by 365 days. Thus:

Debtor's payment period= short term loans awarded/total loans awarded*365

Debtor turnover ratio (DTR) was used to measures the relationship between credit sales and average trade debtors (Gitman, 2005). DTR is used to calculate the speed with which debts are settled on average during a year. A high ratio implied either a firm operates on cash basis or that its extension of credit and collection of accounts receivables is efficient while a low ratio implies the firm is not making the timely collection of credit. According to Bhunia (2010) the measure is used to judge how efficiently the debtors are managed. Studies by Bhunia (2010), Duru *et al* 2014) and Al-Shabiri and Mohammad (2013) argue that shorter periods have a better and positive effect on liquidity.

III. METHODOLOGY

The current study, in carrying out the investigations, adopted an explanatory research design. The targeted population for the study constituted 40 DT-SACCOs in Nairobi County. The study sampled 80 finance managers and credit officers. A census study was thus carried out according Mugenda and Mugenda (2003) because the target population was less 100. The study used both secondary and primary data. Secondary data, both in numeric and non-metric forms, was drawn from audit accounts such as income statements and balance sheets of the DT-SACCOs over a 5-year period between the year 2011and 2015. Referring directly from the DT-SACCOs' audited statements, the data obtained were considered reliable. Primary data was used to gather information on the liquidity risk management and respondent's opinion on debtors. The questionnaire in this study was administered through prior appointment to the respondents. A comparison between the primary data and secondary data was done in order to determine the congruence of the findings in the research.

Content validity was carried to establish the appropriateness of content in an instrument. The researcher prepared the instrument in close consultation with supervisors whose expert judgment helped improve content validity. Collected and refined data was analysed depending on type and source. Thus, numeric and scale data from the SACCO's annual reports and respondents views were analysed by simple linear regression analysis to show relationships and impact of working capital on liquidity risk management. To test that debtor's payment period does not influence the liquidity risk management of DT-SACCOs in Nairobi County, the following model was used:

$Y = \beta_0 + \beta_1(X_1)$

Where β_1 was the regression coefficient for debtor's payment period, X_1 was debtor's payment period and Y is the liquidity risk management

IV. FINDINGS AND DISCUSSIONS

Frequent the debtors were paying up their loans

The study sought to investigate how frequent the debtors were paying up their loans as this affects liquidity. The results are as shown in Table 1

Table 1: Frequency of Debtors paying their loans

Trend	Frequency	Percent
very frequent	51	63.8
Frequent	33	27.6
Rarely	5	6.3
Very rarely	2	2.5

From the findings, 68.3% of the respondents indicated that debtors paid their loans very frequently, 22.7% indicated that debtors paid their loans frequently and only 6.8% rarely paid and 2.8% rarely paid. Further, 88 % of the DT-SACCOs noted that they maintain a specified level of debtors while 12 % noted that they did not do so. Pandey (2008) affirms that invests in accounts receivable takes a big amount of a firm's assets which are highly vulnerable to bad debts and losses if not efficiently managed. This may in the long run lead to liquidity challenges or insolvency. DT-SACCOs hence need to monitor the trend at which their loanees are fulfilling their obligations

Maximum period Sacco gives for repayment of short term loans

The study sought to establish the maximum period the DT-SACCOs give debtors to pay their short loans. The results are as shown in Table 2

Table 2: Maximum period Sacco gives client to repay their loans

	Frequency	Percent
6 months	16	20.0
1 year	21	26.3
2 years	36	45.1
3 years	7	8.8

Table 2 reveals that 41.3% gave clients 2 years, 28% 1 year, 21.3% 6 months while 9.3% gave 3 years. The study showed that maximum outstanding period in most DT-SACCOs was 2 years. This is in line with Pandey (2008), who notes that the average collection period determines the speed of payment by clients. Delayed payment is a potential ground for bad debts which have a negative effect on a firm's liquidity risk status.

Rate at which Loanees are fulfilling obligations

The study sought to establish whether loanees are fulfilling their obligations as stipulated. The findings are presented in Table 3

Table 3: Rate of fulfillment of obligations by debtors

	Frequency	Percent
Agree	51	63.8
Strongly Agree	22	26.3
Disagree	6	7.5
Strongly Disagree	2	2.5

The findings were that 68% agreed, 21.3% strongly agreed, 8% disagreed, while 2.7% strongly disagreed. This is in concurrence with Sayeda (2011) who established that proper debt collection resources ensures better and timely collection and few instances of bad debts. This avoids the potential build-up of excessive levels of accounts receivable which would erode set profits and affect cash flow.

Debtors Collection Periods among DT-SACCOs

The debtor's collection period is the average amount of days it takes for the business to receive the money it is owed from its customers. If debtors pay quickly, it helps cash flow and reduces the risk of customers not paying the money they owe and thus improves liquidity and investment, which in turn influences liquidity levels of the DT-SACCOs. In this study, the debtors' collection periods were presented as illustrated in Figure 2.
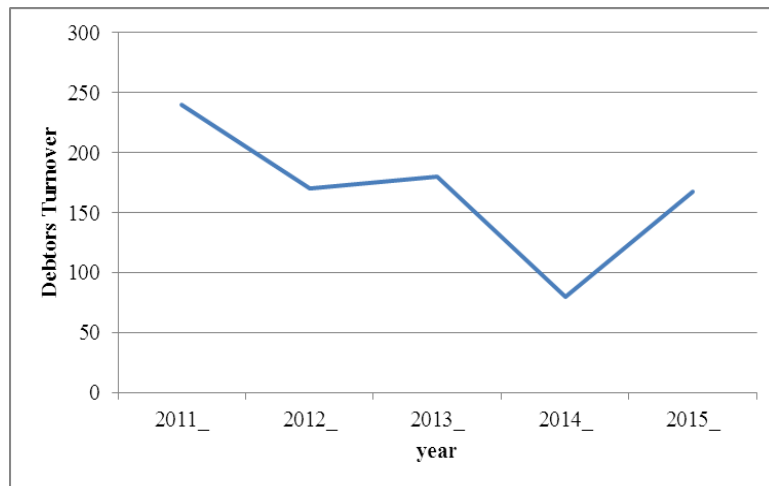
Figure 2: Debtors turnover

Source: Field Data (2017)

The fastest SACCO realized its debt averagely in 215.4 days while the longest delay was 1,650 days. The majority DT-SACCOs (21%) had average collection periods between 878 and 1,108 days. The study sought to establish the trend in debtor's turnover. The findings as shown in Figure 4.9 indicate a positive trend. DTD in the period 2011 to 2012 dropped from over 240 days to 170 days. In the period 2012 to 2013 there was increase from 170 days to 180 days. In the period 2013 to 2014 DTD dropped to 80 days. This finding implies that the firms were improving on management of accounts receivable. The findings correspond with those of Award and Alewesat (2012)

Primary Data

Primary Data was collected using questionnaires. Debtors payment period was measured using the number of days given to debtors for them to payback, the minimum debtor level maintained and their trend of repayment while liquidity risk management was measured using Capital adequacy and Sacco Earnings Composite index of statement relating to debtors payment period was used as independent variable and composite index for liquidity management risk was used as dependent variable. Pearson correlation and regression analysis were used to test the hypothesis using significance level of 5% and confidence level of 95%

Correlation between debtors payment period and Liquidity risk Management

The Pearson correlation analysis was used to investigate the relationship between Debtors payment period and Liquidity risk Management. The objective tested the first hypothesis of the study which is there is no significant relationship between debtor payment period and Liquidity risk Management. The results in Table indicated that the relationship between debtors payment period and Liquidity risk Management is negative and statistically significant (R = -0.338, p< .001) with 99.0% confidence level. This showed that Debtors payment period has a significant negative effect on the Liquidity risk Management of DT-SACCOs in Nairobi County.

We reject the first null hypothesis since the significance level is less than 0.05 and confirm that there is significant relationship between debtor's payment period and liquidity risk Management of DT-SACCOs in Nairobi County. A decrease in debtor's payment period would result to increase Liquidity of DT-SACCOs in Nairobi County therefore DT-SACCOs are able to increase their liquidity when they shorten their debtors' payment period. This is in agreement with Falope and Ajilore (2009), Dong and Su (2010), Mathuva (2009) and Gitau et al. (2014) who found that a small number of day's accounts receivable and shorter cash conversion improved liquidity. Lengthening the amount of time for debtors to fulfil their obligations implies that inflow of funds into the Sacco will be at a slow rate hence imposing on liquidity risk management.

Regression Results of Debtors payment period and Liquidity risk Management

Regression analysis was used to tell the amount of variance accounted for by one variable in predicting another variable. Simple regression analysis was conducted to find the proportion in the dependent variable (Liquidity risk Management) which can be predicted from the independent variable (Debtors payment period).Table 4 below shows the analysis results.

Table 4: Regression Results of Debtors payment period and Liquidity risk Management

	Coefficients	df	F	Sig.
R	-0.338**	(1,79)	10.081	.002
R Square	0. 114			
Adjusted R Square	0.103			

Dependent Variable: Liquidity risk Management

In establishing the extent of Debtors payment period on Liquidity risk Management of DT-SACCOs in Nairobi County, the study established a coefficient of correlation (R) as -0.338 and a coefficient of determination (R Square) equal 0.114. This reveals that there is a negative linear relationship between Debtors payment period and Liquidity risk Management Debtors payment period can explain 11.4 % of the Liquidity risk Management. The ANOVA results revealed that the percentage variation that is been accounted by Debtors payment period is statistically significant with F (1, 79) = 10.081, P<0.001. This implied that there is a significant relationship between the predictor variable (Debtors payment period) and Liquidity risk Management further rejecting the first null hypothesis as debtors payment period has significant negative relationship with Liquidity risk Management.

The research hypothesis were tested using the significance level of both the R and R^2; the research aimed to test the hypothesis with an aim of accepting whether there is no effect by the variable on liquidity risk management. The first research hypothesis posited H_O1: There is no significant relationship between debtor payment period and Liquidity risk Management. From the results, Debtors payment period had significant negative effect on liquidity of DT-SACCOs in Nairobi with P<0.01 and it significantly accounted 11.4% variance in liquidity of DT-SACCOs in Nairobi County. Therefore the null hypothesis is rejected as Debtors payment period has significant relationship with the Liquidity risk Management.

Secondary Data

Debtor repayment period was measured by trade receivables/total loans received *365 and liquidity risk was measured by cash and cash equivalents divide by current liabilities. Pearson correlation and regression analysis were used to test the hypothesis using significance level of 0.05. Debtor's payment period is a measure showing the relationship between loans awarded and their payment. This ratio is used to calculate the speed with which debts are settled on average during a year. According to Bhunia (2010), the measure is used to judge how efficiently the debtors are managed. Debtors payment period can be used to determine customer's payment habits compared to the firm's terms. This measure is mostly applied on credit sales and best employed if seasonal effects are not factored in accounts receivables. Studies by Bhunia (2010), Darek (2012) and Ahmad (2016) argue that shorter periods have a better and positive effect on liquidity and propose a period of less than 30 days.

Correlation between debtors payment period and Liquidity risk Management

The results in Table 5 indicated that the relationship between debtors payment period and Liquidity risk Management is negative and statistically significant (R = -0.509, p< .001) with 99.0% confidence level. This showed that Debtors payment period have significant negative effect on the Liquidity risk Management of DT-SACCOs in Nairobi County. We reject the first null hypothesis since the significance level is less than 0.05 and confirm that there is significant relationship between debtor's payment period and Liquidity risk Management of DT-SACCOs in Nairobi County.

Regression Results of Debtors payment period and Liquidity risk Management

Table 5: Regression Results of Debtors payment period and Liquidity risk Management

	Coefficients	df	F	Sig.
R	-0.509**	(1,39)	13.271	.001
R Square	0.259			
Adjusted R Square	0.239			

Dependent Variable: Liquidity risk Management

In establishing the extent of Debtors payment period on Liquidity risk Management of DT-SACCOs in Nairobi County, the study established a coefficient of correlation (R) as -0.509 and a coefficient of determination (R Square) equal 0.259. This reveals that there is a negative linear relationship between Debtors payment period and Liquidity risk Management

and Debtors payment period can explain 25.9 % of the Liquidity risk Management. The ANOVA results revealed that the percentage variation that is been accounted by Debtors payment period is statistically significant with $F(1, 39) = 13.271$, $P<0.001$. This implied that there is a significant relationship between the predictor variable (Debtors payment period) and Liquidity risk Management further rejecting the first null hypothesis as debtors payment period has significant negative relationship with Liquidity risk Management.

Coefficient of the Debtor Payment Period and Liquidity

Table 6: Coefficient of the Debtor Payment Period and Liquidity

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2.050	.228		9.001	.000
	Debtor Payment Period	-.002	.000	-.509	-3.643	.001
a. Dependent Variable: Liquidity						

The intercept value for liquidity risk is 2.050 this implies that if the effect of Debtor Payment Period is fixed to zero then the liquidity of DT-SACCOs will be significantly at 2.050, P<0.0 1. This implied that performance will be significant positive at 2.050. The unstandardized regression coefficient (β) value of Debtor Payment Period is -0.002 with a t-test of -3.643 and significance level of p< .001. This indicated that that for one day increase in the debtor payment period, there is a decrease on the liquidity of the DT-SACCOs in Nairobi by 0.002. The regression equation to estimate the liquidity as a result of debtors' payment period was hence stated as:

Liquidity = 2.050-0.002*Debtor Payment Period

These findings are in concurrence with Deloof (2003) who established Using correlation and regression tests a significant negative relationship between gross operating income and the number of day's accounts receivable. Hence an increase in the number of days for debtor payment would reduce the liquidity level in the firm. This findings are in agreement with Kimani (2014) who studied liquidity risk management in banks This shows that as banks increase the length of time it takes to collect its debts, liquidity decreases and when the banks reduces the period of collecting its debts, liquidity increases.

In comparison between the primary data and secondary data, the study established there was significant increase in R (Correlation coefficient) from -0.338** to -0.509**.Both the primary and secondary data rejected the null hypothesis This indicated that, with primary data, the correlation coefficient is weak while with secondary data is moderate. The secondary data was from audited financial statements therefore has more reliability as compared to the primary data.

V. CONCLUSION AND RECOMMENDATION

There is a significant relationship between debtors payment period and liquidity risk management of DT-SACCOs in Nairobi County, Kenya. SACCOs are able to increase their liquidity when they shorten their debtors' collection period. The DT-SACCOs showed they have a high debtor turn as over half of the SACCOs had very frequent trend of debtors paying their loans although the maximum period Sacco gives client to repay their loans was less than two years. Similarly, over 90.0% of the DT-SACCOs indicated that debtors fulfilled their obligation. It is important for the DT SACCOs to take account of their debtors' conversion period as it has an inverse relationship with liquidity. It should be long enough to maintain the turnover levels yet short enough to ensure there is adequate liquidity available at any point in time. The ratio of current liabilities to current assets is quite high which implies high possibility of liquidity risk occurring. The SACCOs can improve the cash conversion cycle by better debtor's collection period management. The DT SACCOs should minimize debtors by reducing number of day's accounts receivable which will reduce the cash conversion and ultimately improve liquidity.

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