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WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE IN FINANCIAL INSTITUTIONS IN RWANDA: A CASE STUDY OF I&M BANK LTD, KIGALI CITY MAIN BRANCH (2009-2013)

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Abstract: **The study assessed the working capital management used and its effect on performance of financial institutions in Rwanda. In this research the I & M bank Ltd main branch in Kigali city was used as a case study to determine the relationship between the working practice and financial performance in institution from 2009 to 2013. The specific objectives of the research included the following; to identify the management practices used for managing working capital in banking institutions in Rwanda, to determine the factors that affect working capital of banking intuitions in Rwanda and to determine the relationship between the working capital management practices and the performance of banking institutions in Rwanda. A descriptive approach which involved measurement, classification, analysis, comparison and interpretation of the data was used in this study. A sample of 15 heads of department of I & M bank Ltd main branch in Kigali city were purposively sampled out of the top management population of 15 based on Robert and Morgan (1970) table. Both qualitative and quantitative research design were used in order to provide better opportunities to answer the research questions and to evaluate the extent to which the findings may be trusted, and inferences made from the data collected. Secondary data was obtained from financial documents of the bank while primary data was collected on perception and attitude of the respondent on working capital management and performance of financial institutions in Rwanda. The numerical variables that needed accounting and interpretation were collated for data analysis. Data analysis was done using descriptive and inferential statistics and the result presented using tables and figures of percentages, frequencies and correlations based on the objectives. The age gender, education and experience of the respondents were found to be accurate and reliable to constitute a strong bases on which conclusions should be based. The factors for performance and the measures of working capital management were identified to visualize the impact on financial performance. The main findings in the research indicated that the bank employs the conservative practices in working capital management characterized by high cash and current assets with relatively low levels of non-performing loans and profits. The respondents also ranked accounts receivable as the most important component of working capital (53.4%) followed by cash at hand (40%) and inventory (6.6%) respectively. The secondary data showed that the working capital management and financial performance in I & M bank Ltd are related as was further confirmed by 93% of contacted respondents who also revealed that the main factor which affected the working capital was the nature of business. The research findings are important in enhancing the performance of financial institutions through their ability to maintain sound working capital management strategies. The strategies are known to enhance proper financial planning and control that enable the banks to maintain enough working capital with constant financial reporting channels and procedures.**

Keywords: **working capital management, accounts receivable, cash at hand, inventory financial performance, I & M bank Ltd.**

1. INTRODUCTION

1.1 Background of the study

Working capital is alternatively referred to as current or circulating capital. It represents an investment made by firms in their current assets. Current assets comprise of all assets such as cash, marketable securities, account receivables inventories that the firm expects to convert into cash within the year. It is these current assets that determine the liquidity position of the business. From the liquidity perspective, the higher the investment in the current assets the better the health of the firm (Oguntimehin, 2001).

Working capital management refers to the management refers to the management of short-term assets (the current assets). It involves planning and controlling the level and mix of firm's current assets as well as the pattern of their financing. Its is alternatively referred to as current assets management. Specifically, working capital management requires the finance manager to decide on two issues: the optimal level of current assets held by the firm and financing of the current assets (Abuzar, 2004).

The level and the quality of current assets (Working capital) held by the firm and have direct impact on its liquidity (short – term solvency) position. As is known, current assets have the basic feature of transformation. One form of current assets converts itself into other form until cash is realized eventually at the end of the operating cycle of the business (Afza & Nasir, 2007). Thus, working capital management is essentially concerned with managing the liquidity position of the position of the business and it entails two related problems -managing the firm's investment in the current assets and managing the firms use of current liabilities (Anand, 2001). It is the cash which is used by the business to repay its current obligations or to pay for the procurement of the inputs needed in its operations. Without cash, or at least access to it, bankruptcy becomes a grim of possibilities (Anad, 2001).

The liquidity position of the business depends on the level of current assets it holds. The higher the level of current assets the higher would be the capacity to transform these current assets to generate cash. Consequently, the liquidity position of the business denoted by the current ratio (Ratio of current assets to current liabilities shall also be high). Apart from the level of current assets the quality of current assets is equally important aspect that affects the liquidity position of the business (Bridge, 1997).

The higher the investment in more liquid current assets such as cash and receivables, the better is the liquidity position of the business. The banks are the financial institutions or financial intermediaries that accept deposits and channel these deposits into lending activities, either directly by loaning or indirectly through capital markets. The working capital which is our most concern is the money belonging to financial investment company, in this case I & M bank Ltd, which according to Flexiner (1987) is the money immediately available for business issues, rather money it has an investment or property.

According to Gitman (1991) helps to get a better understanding of this concept of working capital while defining a net working capital as a difference between the company current assets and current liabilities. When the current assets exceed the current liabilities, the company has positive net working capital. The banking institutions do their working capital to offer different services to customers.

The commercial banks are required by National Bank of Rwanda (BNR) to maintain balance between liquidity and business profitability in indicated range of percentage because they have to meet their short-term obligations. In that way there are information processing operations, in which information is transformed, from one form to another. This information process includes accountancy, banking, financial services, telecommunications and research of all kinds (MINECOFIN, 2010).

The commercial banks offer a wide range of services including retail and corporate banking, credit cards, assets management, investment banking, private banking, insurance, brokerage, leasing and factoring. There are many reasons that make Rwanda very attractive to foreign banks especially Kenyan banks. With Rwandan economic indices remaining at high levels, structural reforms well underway and infrastructure projects being completed at a rapid pace. Rwanda has developed a dynamic that renders it highly attractive to foreign investors (MINECOFIN, 2010).

Due t inability of financial managers to properly plan and control the current liabilities, the failure of large number of businesses can be attributed to the inefficient working capital management (Oguntimehin, 2001). Commercial banks like any other business face challenges such as insolvency, lack of loanable funds due to working capital management and disappointments to clients who fail to get back their savings. Working capital performance of commercial banks is to achieve balance between profitability and risk of making business which contributes to the organizations value. It is that part of commercial bank where services required by customers are produced. No commercial bank can hope to be successful unless its working capital management to an organization is emphasized by Hill (2010); who precuts out that it's the function responsible for 60 -70 percent of costs, assets, and people.

1.2 Statement of the Problem

Commercial banks like any other business face challenges such as insolvency, lack of loanable funds due to poor working capital management and disappointments to clients who fail to get back their savings due to poor planning (Oguntimehin, 2001). Working capital performance of commercial banks aims to achieve balance between profitability and risk of making business which contributes to organizations value. No commercial bank can hope to be successful unless its working capital is well managed. The importance of working capital management to an organization is emphasized by Hill (2010); who precuts out that it is the function responsible for 60-70 percent of costs, assets and people. A commercial bank should have working capital policies on the management of receivables, cash, inventory and short-term investments. The policies if implemented appropriately, helps in minimizing the possibility of erratic working decisions by the managers. The aforesaid problems affect performance of commercial banks hence signifying that there is a relationship between working capital management in the performance of financial institutions in Rwanda. It is against this background that, the researcher intends to carry out this study on the role of working capital management on financial performance of financial institutions in Rwanda.

1.3 Objectives of the study

1.3.1 General objective

The general objective of this study is to assess the role of working capital management on financial performance of financial institutions in Rwanda.

1.3.2 Specific objectives

The following specific objectives guided the study:

1. To identify the management practices used for managing working capital in banking institutions in Rwanda.

2. To determine the factors that affect working capital of banking intuitions in Rwanda.

3. To determine the relationship between the working capital management practices and the performance of banking institutions in Rwanda.

1.3.3 Research questions

1. What working capital management practices are used in banking institutions in Rwanda?

2. What are the factors that affect working capital of banking intuitions in Rwanda?

3. What is the relationship between the working capital management practices and the performance of banking institutions in Rwanda?

2. CONCEPTUAL FRAMEWORK

Mugenda & Mugenda, (2009), asserts that the term conceptual framework simply means the researcher's map or boundary within which he or she is to operate or carry out the investigation. Conceptual framework is a set of ideas that are broadly put together to explain the relationship between the independent variables (factors) and the dependent variables (outcome) according to Coulthard, (2004). The notion here includes the purpose (boundaries) with flexibility (evolution) and coherence of the research which all stem from conceptual frameworks. A researcher forms an idea of the relationship between variables as they appear in the study and therefore shows such a relationship by use of graphs or diagrams.

Kothari (2009) defines a variable as a concept of quantitative value(s). However, on the other hand, Brace (2008) asserts that a variable is any attribute that can be expressed as a measure and more so recorded. A dependent variable is therefore the outcome variable and is the one that is being determined by the researcher. The change in the dependent variable is basically what the researcher seeks to record or measure. Lastly, are the independent variables, these are factors that determine variations in the dependent variable according to Cooper & Schindler (2008).

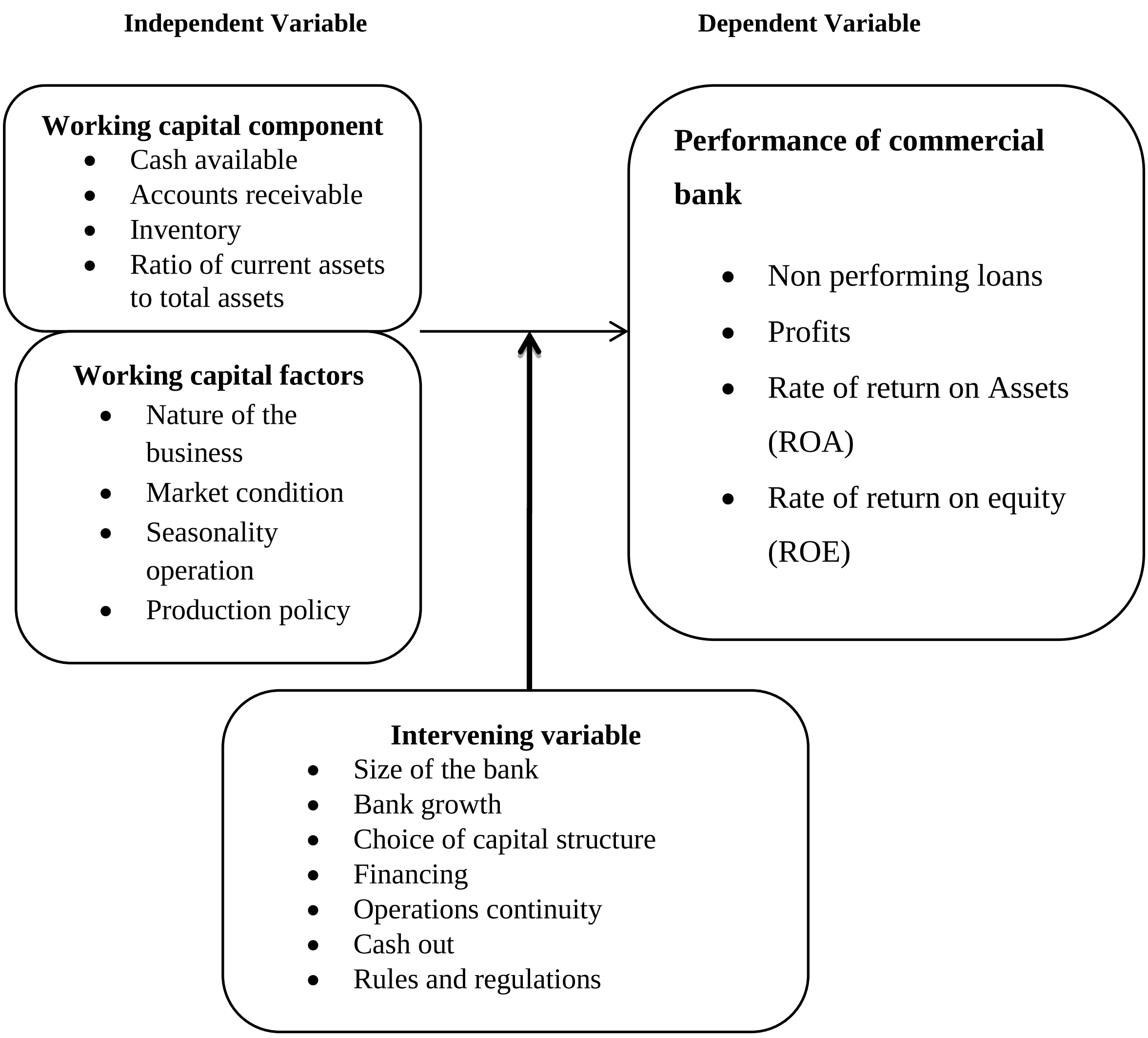

Figure 1: Conceptual Framework Source: Researcher, (2014)

A conceptual framework for this study indicated the effects of working capital management on the financial performance of commercial banks. The figure visualizes that working capital management comprising of cash management, inventory management, accounts payable management and accounts receivable management and intervening variable such as Government policies and Financial Institutions activities all influences on financial performance of commercial banks and measured by volume of profit, firm size, turnover, return on equity and return on assets which are the dependent variables. An efficient and effective working capital management will produce the benefit of avoiding the followings: - carrying cost of inventory, stock outs, inability to meet customer's obligations and unnecessary bad debts.

3. RESEARCH METHODOLOGY

Descriptive statistics also known as statistical research was used through percentage calculation, and analytical design was used trough financial ratios analysis. The researcher identified the metrics of working capital management and developed the constructs of every working capital in I & M bank Ltd. For the purpose of this study I & M bank Ltd was purposively selected as a case study. The population of the bank was 60 employees was targeted including the managing director and different head of department among the senior managers, credit department, portfolio managers, finance department supervisors, internal auditors, senior accountants and head recoveries.

In the case study of working capital management on financial performance of financial institutions in Rwanda the target respondents were senior management staff of I & M bank Ltd. The sample of the study was 52 respondents as depicted by Robert and Morgan (1970). Primary data was obtained from the sampled respondents using self-administered questionnaires and unstructured interview.

In the process of collecting data, the researcher used structured questionnaires to be responded by the sampled respondents within the organization. By this instrument the respondents read questionnaires themselves and answer them without the assistance of the researcher.

These are data that have been already collected by others and readily available from other sources. Such data are cheaper and more quickly obtainable than the primary data. The researcher used data from company records such as audited financial statements, brochures, and so forth. In this study we used data concerning balance sheets of this company from 2009 to 2013. They helped us to compute Gross Operating Profit, Days in accounts receivables, Days in accounts payables, Days in inventory and Cash Conversion Cycle which are major variables under analysis.

To get the permission to collect Data, the researcher got the approval letter from Mount Kenya University. This permission letter was presented to the General Manager of the organization under case study. Thereafter the researcher booked appointment from the concerned departments.

Data collected was analyzed basing on objectives of the study. The regression analysis was used to establish a relationship between the independent variable and organizational performance. Regression analysis is the study of how independent variable(s) affects dependent variable(s).

4. PRESENTATION OF FINDINGS ON THE ROLE OF WORKING CAPITAL MANAGEMENT ON FINANCIAL PERFORMANCE OF FINANCIAL INSTITUTIONS IN RWANDA

4.1 Analysis of financial reports

The financial reports and the financial statements for I & M Bank were used to determine the trends on cash at hand, accounts recievable, inventory and current asset to total asset ratio as the determinants of management practice being employed by the bank. The accounts were analyzed in terms of yearly total and yearly percentage change,

4.1.1 General trend of financial indicator

The trend of cash at hand, cash recievable, inventory and current assets to total assets ratio was extracted from the balance sheet over the five-year period (2009- 2013).

Table 1: General trend of financial management practice indicators

		Accounts in Rwf ('000)		
Year	**Cash at hand**	**Accounts recievable**	**Inventory**	**Current assets to total asset ratio**
2009	32,373,735	49,192,897	15,613,139	0.94
2010	35,576,966	42,402,748	14,405,743	0.93
2011	23,507,771	62,793,624	25,177,644	0.93
2012	38,324,600	66,611,231	13,139,560	0.95
2013	31,740,508	88,942,293	23,305,885	0.96

Source: Secondary data 2014

The results in table 1 indicated that the cash at hand and inventory was maintained at a steady minimum while increases were noted on the records of accounts recievable over the years which also maintained a high current asset to total asset ratio. Such a ratio indicated that the bank was keen on maintaining a high current asset which is one main way of avoiding illiquidity.

Table 2: Other financial indicators

			Accounts in Rwf ('000)			
Year	**Fixed assets**	**Current assets**	**Total assets**	**Current assets to total asset ratio**	**Total liabilities**	**Total equity**
2009	4,975,910	82,566,632	82,542,542	0.94	79,496,583	8,045,941
2010	6,237,671	77,979,714	84,217,386	0.93	73,788,006	10,828,938
2011	6,594,407	86,301,395	92,895,813	0.93	50,530,242	12,365,571
2012	6,234,913	104,935,831	110,170,745	0.95	84,720,820	15,459,745
2013	5,931,973	120,682,801	125,803,778	0.96	107,057,120	18,746,659

Source: Secondary data 2014

The figures in table 2 shows trends of assets, liabilities and equity and it was observed that the fixed assets seem to remain within the same range over the years while there was significant increase in current assets. The total liabilities and the equity almost remained within the same range in the first three years but increased significantly in the last two years. This is an indication that the banks main interest was in current assets and only focuses on the other forms of investment in the institution periodically or when need arises.

4.1.2 Yearly percentage changes for the financial management indicators

Further analysis was done on percentage change on financial management indicators and the results were shown in table 3

Table 3: Yearly percentage change on the financial management indicators

Year	Cash at hand	Accounts recievable	Inventory	Current assets to total asset ratio
2009-2010	+9.9%	-14%	-7.7%	-1%
2010-2011	-34%	+48%	+74%	+1%
2011-2012	+63%	+6.1%	-47%	+2.2%
2012-2013	-17%	+34%	+77%	+1%

Source: Secondary data 2014

The percentages in table 3 show both decreases and increases in the different indicators. However, it can be generalized that there was a general cumulative increase in cash at hand over the five-year period by 71.9% as compared to the cumulative decrease of 51%. The accounts recievable were only low between 2009 and 2010 at 14% increase but increased over the next three years with cumulative increase of 88.1%. the inventories increase steadily but with decreases between 2009-2010 and 2011-2012. These were well balanced with the increase and decreases cash at hand. An indication that whenever the inventories were increased cash at hand reduced. A drastic increase in inventories was realized in 2010-2011 and 2012-2013 years because of high investment in financial instruments held to maturity within one year. The current asset to total asset ratio remained high at above 0.9and the cumulative increase was also higher at 2.5% compared to cumulative decreases at 1.5% indicating the high investment in current assets over the five-year period.

4.1.3 General working capital management trend in the bank

Respondents were requested to identify and rank the working capital components and the results were as follows.

Table 4: Other financial indicators

Working capital components	The most important Working capital components	The second most important Working capital components	The third most important Working capital components	The fourth most important Working capital components
%	**%**	**%**	**%**	**%**
Accounts receivable	53.4	53.4	13.3	13.3
Cash	40	26.7	26.7	20.0
Inventory	6.6	13.3	13.3	20.0
Accounts payable	0	6.6	46.7	46.7
Total	100	100	100	100

Source: Secondary data 2014

Majority of the respondents (53.5%) identified cash recievable as the most important component of working capital as compared to 40% of the respondents who identified with cash at hand. Accounts payable was ranked third by majority of the respondents while inventory was identified in the fourth position but still competing with other components which include accounts payable and the cash at hand. The observation was supported further when the employees were requested to indicate the frequency with which target levels of cash, accounts recievable and inventory are set and 86% of the employees indicated that cash recievable targets are always set while 80% of the employees said that cash payable are always set.

4.2 Factors that affect working capital of banking intuitions in Rwanda

Respondents were requested to rank the factors that affect working capital of banking intuitions in Rwanda. The factors were ranked from the most influential to the least influential,

Table 5: Factors that affect working capital of banking intuitions in Rwanda

Factors influencing working capital of banking intuitions in Rwanda %	The most influential factor %	The second most influential factor %	The third most influential factor %	The fourth most influential factor %	The fifth most influential factor
Nature of business	46.7	40	33.3	20.0	20.0
Seasonality of operations	33.3	33.3	26.7	13.3	13.3
Production policy	13.3	20	20	26.7	20.0
Market conduction	5.7	6.7	20	26.7	26.7
Conditions of supply	0	0	0	13.3	20.0
Total	100	100	100	100	100

Source: Secondary data 2014

The results in table 5 indicated that the nature of business is the most influential factor as ranked by 46.7% of the respondents followed by seasonality of the business and the product policy. However, 40% and 33.3% of the respondents ranked nature of the business second and third most influential factor followed by production policy and marketing policy in that order. The other factors were also given various rankings percentages by the respondents indicating that they are also important to some extent but not appearing as first or second in ranking order.

The identified factors can therefore be ranked in order of nature of business, seasonality of operations, production policy, market conduction and conditions of the supply. The respondents were considered reliable in this kind of outcome because they are always involved at high level in banking transactions, policy and control a domain involving all aspects of the factors brought up in the day of operation.

4.3 Relationship between the working capital management practices and the performance of banking institutions in Rwanda

4.3.1 Analysis of the financial reports

The financial reports and the financial statements for the banks were analyzed to determine the trends on profits, ROE, ROA and non-performing loan accounts in terms of yearly totals and averages, yearly percentage change and correlations with financial indicators in order to determine financial performance of the bank over the five-year period.

General trend of financial performance indicators.

The trend of ROE, ROA, profitability and non-performing loans were extracted from the balance sheets over the five-year period (2009-2013) and the results are indicated below.

Table 6: General trend of financial performance indicators

			Accounts in Rwf ('000)	
Year	**ROE (%)**	**ROA (%)**	**Profitability**	**Non – performing loans**
2009	19	1.7	1,500,645	1,232,422
2010	26	3.2	2,829,971	1,485,852
2011	23	3.1	2,860,772	1,379,927
2012	27	3.8	4,238,662	315,681
2013	7	1.0	1,276,969	703,553
Average	20	2.6	2,541,404	1,023,487

Source: Secondary data 2014

The results in table 6 showed that all the performance indicators were low in 2009 and even much lower in 2013 indicating that there was an improvement in 2010, 2011 and 2012 with the highest being 2012 when non-performing loans was at its lowest. This is an indication that other than the main factors a drastic reduction in non-performing loans had some effects on other performance indicators in the banking institutions.

4.4 Correlation between working capital management indicators and banks financial performance

Research reports by previous researchers such as Eun and Resnick (2012) showed that there is a relationship between working capital management policy applied and the financial performance of financial institutions in Rwanda. Correlation was analyzed n this case to determine the relationship between working capital management and financial performance of financial institutions in Rwanda.

4.4.1 Relationship between working capital management and the rate of return on equity

The rate of return on equity is an important is an important determinant of how the share holders are benefiting from the profits and hence its an important indicator of performance that relates closely to the working capital management indicators. The rate of return on equity there fore determines the productive levels of the equity put in bank by shareholders and hence profitability of shares. Correlation between the working capital management indicators and ROE was analyzed.

Table 7: Correlation between the working capital management indicators and ROE

		Rate of return on equity	Cash at hand	Cash recievable	Inventory
Rate of return on equity	Pearson Correlation	1	.230	-.696*	-.555
	Sig. (2-tailed)		.710	.019	.331
	N	5	5	5	5

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Secondary data 2014

The results of the correlation analysis showed that only the relationship between cash recievable and ROE was significant at $p<0.05$ (with an r value of -.696*). Given that the relationship between cash recievable and profits is negative but not significant the observations can be interpreted to mean that the bank invests some of its cash recievable on short term equity components such that as the cash recievable increases the equity value also increases giving the lower ROE value. However, it should be noted that this occurs at the expense of the profits which tends to reduce.

5. CONCLUSIONS

A report by nazir and Afza (2008) indicated that the values and trends of cash at hand, cash recievable, inventory and ratio of current assets to total assets can be used to determine the working capital management approach being applied by the financial institution. Cash is a liquid asset like cheques, money orders and bank drafts that a business owns. Its management therefore involves efficient collection and disbursement of cash and any temporary investment. Thus, maintaining optimum level of cash in an organization is called cash management. Key elements involved in this activity are cash forecasting, balances management, administration of cash receipts and disbursements, and internal control (i.e. bank reconciliation).

A conservative and more flexible working capital policy for a given level of turnover is associated with maintaining a larger cash balance recievable with some investments in short term securities, offering more generous credit terms to customers and holding higher levels of inventory. Such a policy will give rise to a lower risk of financial or inventory problems but the expense of profitability which tends to reduce or remain relatively constant. Looking at the trends of working capital management components especially the cash recievable, the current assets, and the current total assets ratio and the financial performance components especially the lower profits, lower non- performing loans and high ROE, it can be concluded that the banks practices and conservative approach of working capital management. The importance of current assets lies in the fact that they fund the ongoing, day to day operations of banking institutions. Banking intuitions are therefore expected to have a high level of current assets as the working capital increases in order to speed up cash conversion cycle through the trade operations and also avoid illiquidity problems.

A significant positive correlation was observed between inventory and non-performing loans (r= 0.195**). This is an indication that inventory increases, the non-performing loans also increased which may be interpreted to mean that the inventory of the bank mainly focuses on more permanent forms that may not be able to realize all the returns at the required time.

The relationship between cash recievable and ROE was negative but significant at $p<0.05$. Given that the relationship between cash at hand and profits was negative but not significant can be interpreted to mean that the bank invests some of its cash recievable on short term equity component such as the cash recievable increases, the equity value also increases giving a lower ROE value.

Working capital management is the most important decisions in knowledge of financial management. The ability of corporate for long term activity related to this subject that financial managers apply optimum management for working capital management. The managers of manufacturing firms can create balance between corporate profitability and liquidity and get optimum working capital management. Hence the conclusion made that there is a relationship between working capital management employed by the financial performance indicators in the financial institutions in Rwanda.

5.1. Recommendations

Based on the findings and the conclusions drawn above, this study makes the following recommendations.

a. The bank was seen to have over emphasized on the increment in current assets and cash recievable but to the disadvantage of cash at hand, fixed assets and inventory. This low investments in inventory and fixed assets may cause losses as old assets become obsolete and are not replaced adequately. The bank therefore needs to identify a model that will help them institute a high value financial management system and practices, especially the applications of quantitively investments appraisal techniques for optimal capital structure decisions. This will censure a proper management system for inventory and other assets to avoid overstock and stock outs and improvements of the profits realized.

b. The bank managers should different ways through which banks has benefited from working capital management and should intensify the staff training or base their recruitment on sufficient and component staff in order to improve their earnings-based knowledge related to working capital management.

c. The government of Rwanda established a law No. 007/2008 concerning organizations of banking systems in Rwanda in the section related to the working capital kept at the bank. However, in an open market, the banks should be allowed some flexibility to fix themselves the level of available working capital according to their daily operations. Naturally, the estimation of working capital requirements should be based on past data and future projections.

5.2 Suggestion for further study

The following suggestions were made based on the limitation and findings of the study:

a. A more detailed study targeting all the stakeholders in the banking sector is required to derive a comprehensive model explaining the quantitively relationship between financial institutions in Rwanda and their respective working capital management practices.

b. Future researchers are advised to adopt others sets of working capital management indicators to test how respective practices influence the companies' financial performance. This will significantly make contributions towards establishing a comprehensive scholarly opinion relating to corporate finances and working capital management modifications.

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