

The Effect Analysis Of Financial Leadership On Working Capital Of Commercial Banks In Rwanda

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Abstract- This study was to assess the effect analysis of financial leadership on the working capital of commercial banks in Rwanda. To achieve this, the general objective was to analyze the effect of financial leadership on the working capital of commercial Banks in Rwanda. A multimethod approach composed of both qualitative and quantitative research design was used. Data were collected from both primary and secondary sources using questionnaire and documentation were used. A population comprised of 270 from different commercial banks operating in Rwanda. Data were captured using the statistical package for sciences (SPSS 21) and presented into frequency tables. Simple regression and ANOVA analysis were carried out. A significance test $t \leq 5\%$ was assumed. The findings indicated that Management capacities have a strong effect where the econometrics and statistical analysis shows a strong effect with ($\beta=0.831$) on Current Asset (CA), and ($\beta=0.978$) on Current liability (CL); The Same findings demonstrate that the Management systems play a positive effect on working capital of Commercial banks where the econometrics and statistical analysis shows the positive effect of Financial leadership with $\beta= 0.827$ on Current Asset (CA) and ($\beta=0.755$) on Current liability (CL). Lastly, the findings demonstrate that the Management efficiency has a good effect on the working capital of commercial banks in Rwanda where the econometrics and statistical analysis shows the ties contribution of Management efficiency with ($\beta=0.541$) on Current Asset (CA), ($\beta=0.502$) on Current liability (CL) of working capital of commercial banks

Index Terms- Management efficiency; management systems and management capacities

I. HISTORICAL BACKGROUND

INTRODUCTION

Scholars and practitioners have been analyzing the effect of Financial leadership on the working capital of the commercial bank for some years, The Financial leaderships such as Management efficiency, management systems, and management capacities in large Financial corporations has been documented to be a key ingredient in the revitalization of commercial Banks as well as in the ongoing management of these larger commercial banks. While the research on commercial banks is clear evidence that financial leadership plays an important role in the success of these commercial banks, there are fewer data to support the idea

that financial leadership plays a similarly vital role in other levels of the executive chain, including the management efficiency, policy instrument and financial sector strategies segment, the dearth of research in the whole working capital component such as Cash, Raw materials and inventory, finished goods and Account receivable that surprising to consider the important effect.

I.1 contextual Expansion aspect

The field of finance Leadership and banking administration began in the 1930s with early research on British institutions, such as Sir John Clapham's study on the Bank of England and W. F. Crick and J. E. Wadsworth's research on joint-stock banking, Subsequent on the early-modern period began in the 1950s/1960s, covering topics such as bills of exchange management of English financial revolution, and Italian merchant bankers which brought out a challenge to its growth split between academics in history and Financial history; From the late 1950s, Financial history increasingly became a sub-field of economics, rather than of history, change also coincided with the growing use of quantitative models and cliometric analysis; Meanwhile, historians began to combine the study of economic and social phenomena through the methodologies founded by the Annales Finance School in France. This new discipline paved the way for finance and Social History programs, common at universities in the United Kingdom and Europe in general, (Colvin, 2015).

According to (ICAEW., 2018), demonstrates how in the past, Financial leadership was considered by the Confederation of Asian, Pacific countries, Australia, Northern America, and some European countries as the norm for financial information to be held by the finance people which did not provide a strong effect on the financial performance of commercial banks in world affairs; All too often, there has been a mismatch in policy-making, with economists and policymakers taking the lead in big decisions without involving the finance leaders. Sometimes the finance role has been underplayed when the outcome hasn't been what policymakers want to see. In contrast, in most private sector companies, from the big corporations down to smaller sized companies, the finance leader is involved in all key decisions. Today a Strong financial leadership is considering as essential to driving the sustainability of finances with a special core set of the harder technical and organizational skills, and the softer leadership, people, culture, and behavioral skills entering into public-private partnership arrangements that can carry great risks on the macro level, budget decisions and programs sensible and

sustainable on the financial sector, especially for the development of the Countries, The federal government of the United States has incorporated more elements of business-sector practices in its management approaches, including the use of the CFO position alongside, for example, increased use of the chief information officer post, within public agencies, (Zwilling, 2016)

From the Continent perspective, the development of financial leadership in Africa followed the demand of exchange networks from traditional indigenous finance and economies to colonial exchange with the European world; The establishment of European banking institutions reflected the needs of the capitalist economy introduced by colonialism with the financial management of late nineteenth century and early twentieth-century European banks adhered to the interests of shareholders, (Rice, 2013)

According to (Longman, 2015), in the early 20th century, African systems of financial leadership and management were confronted by European modern financial services systems who remained conservative and controlled them as committed to their traditional functions established national central banks and designed to serve the capitalist colonial economies as their penetration linked Africa to the wider world of commercial and imperial expansion in the eighteenth and nineteenth centuries on the continent.

As for (Daniel, 2014) The Africa Finance system supported by the financial leadership prioritizes those sectors which simultaneously offer a significant development impact and an attractive profit potential, to achieve the best return on investment for shareholders and it's which today the [economic services](#) provided by the finance industry encompasses a broad range of [businesses](#) that manage money, including credit unions, banks, credit-card companies, [insurance](#) companies, [accountancy](#) companies, [consumer-finance](#) companies, [stock brokerages](#), [investment funds](#), individual managers and some [government-sponsored enterprises](#) cash, accounts receivable (customers' unpaid bills) and inventories of raw materials and finished goods, and its [current liabilities](#), such as accounts payable.

From the regional perspective, the origins of the Financial leadership in the East African Community (EAC) can be traced back to the long history of Finance, trade, administrative, and socio-cultural ties between the Partner States, stretching back nearly a century in its present form was formally created to include Kenya, Tanzania, and Uganda in 1999, In 2007, EAC membership was extended to Burundi and Rwanda, (Elke & Craig, 2017)

According to (Sandrey, 2015) The EAC implemented a Customs Union from the beginning of 2005 as a significant milestone achieved with the signing of the Common Market Protocol in November 2009, ratified by all Partner States in April 2010; The agreement envisages the phased liberalization of trade in financial services and the elimination of restrictions on the free movement of capital by 2015 at the latest supported by strong Financial leadership on the achievement of the working capital component such as cash, accounts receivable (customers' unpaid bills) and inventories of raw materials and finished goods, [current liabilities](#) and accounts payable.

For (World Bank., 2014) About 22 multinational and transnational finance corporate such as Kenya Commercial Bank, Equity Bank, Fina Bank, and Commercial Bank of Africa and

others owned by EAC members states as a hub are operating in the region; There are four (4) Kenyan banks with a total of 63 branches 35 in Kenya, 16 in Tanzania, 31 in Uganda 16 in Rwanda, 7 in Burundi in 2012.

From a National perspective, the development of the financial leadership in the Financial sector in Rwanda was based on few financial institutions composed of 3 commercial banks and 2 specialized banks operated with a total of fewer than 20 branches in the country, and one microfinance (UBPR) with around 146 branches which the genocide affected heavily the banking sector has resulted in the closure of the Central bank for 4 months, government wealth looted, with two-thirds of the national monetary base in addition to the US \$7 million in cash which was taken from the UBPR as consequently, the country took almost a period to reestablish Rwandan financial system, (Ingabe & Kigabo, 2016)

According to the same scholar (Ingabe & Kigabo, 2016) The post-genocide period was marked by an increase in the number of banks, wherein 2010 there were 6 commercial banks with 28 branches, 2 specialized banks, and 1 union of financial institutions (UBPR) with 148 branches, only 7 % of all branches of financial institutions and by the end of 2019, 10 commercial banks, 7 specialized banks, and 34 Microfinance bank were in operations supported by financial leadership.

I.1 Problem Statement

Since 2011, Rwanda coordinated its the Financial sector looking for different financial leadership plans such as Management efficiency, management systems, and management capacities which orienting in the working capital of Commercial Banks with the implementation of the country where it is aiming to become a Middle Income Country (MIC) status by 2035 and High-Income Country (HIC) status by 2050. This has made the Country to be ranked by several international bodies such as International Monetary Fund, World Bank; World Economic Forum on Africa; Easy of Doing Business, (Laure, et al., 2020)

Some studies including (BNR, 2019) (Karemera, 2013) and (BK, 2014) indicate the highest level of despite the widely recognized importance of the Financial Sector and the increased international attention in this area, at which financial leadership operations remains low at domestic level as facing a low level of contribution on her dependent indicators of Liquidity Ratio (LR) Cash Balance (CB), to face the Financial challenges in which should resolve by them.

Based on the above studies, different challenges entitled gaps such as feeble investment in Financial sectors of 17%, the low level of using management systems and management capacities services at the rate 9%, low Skills and expertise of implementing financial leadership at the rate of 21% low savings rate level of 16.6%, High-interest rate of 20%, and total assets decreased from 58% in 2010 to 42% in 2015, the population living below the poverty line to less than 30%; extreme poverty to less than 9%, Unemployment Rate of 13.2% and this could be fixed by the financial leadership management and control, however, it has no enough relationship on Financial Performance of Commercial Banks in Rwanda.

This is the reason the Researcher decided to carry out a study, which provided his contribution to the aforementioned gaps by

demonstrated the existence effect analysis of financial leadership and working capital of Commercial Banks in Rwanda.

I.2 Research Objectives

The general objective was to analyze the effect of financial leadership on the working capital of commercial Banks in Rwanda

I.2.2. Specific objectives

- ✓ To Analyze the contribution of Management efficiency on working capital of commercial Banks in Rwanda
- ✓ To assess the impact of management systems on working capital of commercial Banks in Rwanda
- ✓ To understand the effect of management capacities on working capital of commercial Banks in Rwanda

I.3 Research hypothesis

According to (Creswell J. , 2009) the Hypothesis is defined as a proposition that can be tested to determine its validity; it may prove to be correct or incorrect (positive or negative aspect). The function of the hypothesis is to test specifically the relationship between phenomena in such away. Referring to this assumption the researcher verified if really and to what extent the pillars of the Independent variable in this study (Life and Non-Life insurance services) have a significant role in the dependent variable in this study. The Hypothesis of this study was proposed based on Creswell's confirmation

H₀₁: The Management efficiency has no significant contribution to the working capital of commercial Banks in Rwanda

H₀₂: The management systems have no significant impact on the working capital of commercial Banks in Rwanda

H₀₃: The management capacities have no significant effect on the working capital of commercial Banks in Rwanda

II. Diverse Literature Effect Analysis on financial leadership and working capital of commercial Banks in Rwanda

Different theories and models from Literature were used that assisted the conceptual relationship between financial leadership and working capital of commercial Banks, Rwanda as a case study.

II.1 Theoretical on the effect Analysis of the financial leadership and working capital of commercial Banks in Rwanda

During this study, Theoretical literature was based on thoughts and opinions of how Commercial Banks are in operations

II.1.1 The Leadership: Current Leadership: Current Theories, Research and Future Directions: Financial Sustainability for Nonprofit Organizations of (Bruce, Fred, & Todd, 2009)

According to (Bruce, Fred, & Todd, 2009) A great deal of leadership research has been undertaken over the years, which has led to a variety of financial leadership theories. The earliest studies on leadership started with the "great man theory," which stated that world progress results from individual achievements of great persons; This theory was questioned for its intentional sexism, linking financial leadership exclusively to individuals' business.

Traits theories: the questioning of the great man theory led to the formulation of the leadership traits theories. Innumerable studies have been undertaken to examine physical, personal, social, and personality traits in individuals who are leaders; According to advocates of the leadership traits theories, these traits could determine whether an individual is a leader or not Gardner; Most studies conducted to show the consistency of the relationships between the traits associated with financial leadership and organizational effectiveness have failed to convince; Behavioral theories: The limitations identified in financial leadership traits theories led researchers to look at the behaviors of leaders. Research projects in behavioral theory have attempted to identify relationships between patterns of leadership behavior and the performance of groups within organizations.

The Contingency theories: the inability of behavioral leadership theories to take into account the situation where the process of influence is occurring facilitated the emergence of contingency theories, prompting researchers to turn to the context of leadership style. Fiedler 1967 studied the effectiveness of the leader based on the leadership style and the degree to which the situation or the context gives control and influence to the leader; Hersey and Blanchard in 1977 stated that the Financial leadership style is contingent on the situation, which means the level of followers' readiness or maturity; The successful leader, according to Hersey and Blanchard, chooses the appropriate style for the particular situation.

In short, situational leadership theories promote the idea that the leader must understand his/her behavior, the behavior of the followers, and the situation before deciding to use any particular leadership style; Other approaches, such as the leader-member exchange theory, the path-goal theory House and the leader-participation model, have also considered the interaction between the process of leadership and the situation or the context; however, the contingency or situational theories of leadership have focused mainly on the relationships between the leader and the immediate followers and very little consideration has been given to the structure, politics, or symbols that constitute a leadership environment.

II.1.2 The Managerial Efficiency, Managerial Succession, and Organizational Performance theory, (John & Michael, 2010)

According to (John & Michael, 2010) the Managerial Efficiency, Managerial Succession, and Organizational Performance theory demonstrate how Managers perform several functions that are often deemed critical to the performance of organizations.

Thus, when organizations exhibit poor performance, there is a common notion that dismissing and replacing the manager will lead to improved performance. While that has intuitive appeal, both the assertion that `performance causes succession and the counter-assertion that `succession causes performance' are subject to theoretical and empirical debate. Amid this controversy is the problem of measuring managerial performance. Managerial performance measures in business are often difficult to define, use

distorted or proprietary data, or are determined, in part, by forces outside managerial control. The researchers use data envelopment analysis (DEA) to introduce a new measure of managerial performance to this debate; DEA estimates the efficiency of a given manager relative to the efficiency of all managers in Managers perform several functions that are often deemed critical to the performance of organizations.

Thus, when organizations exhibit poor performance, there is a common notion that dismissing and replacing the manager should lead to improved performance. While that has intuitive appeal, both the assertion that 'performance causes succession' and the counter-assertion that 'succession does not cause performance' are subject to theoretical and empirical debate. Amid this controversy is the problem of measuring managerial performance. There are several reasons why basketball is a useful and convenient point of departure for our measure of managerial efficiency. First, data on inputs and output are readily available and provide easy-to-interpret proxies for the productivity relationships that exist in the industry. Second, the dimensions of basketball coaching parallel those of business managers.

The coaching function includes personnel decisions (recruiting, training, scheduling), the motivation of personnel (allocating playing time), and strategic planning (devising and altering offensive and defensive schemes). The Attribution and charismatic theories: Further research has contributed to more recent approaches to leadership, such as the attribution theory, which associates the performance of an organization to the leader by Pfeffer, 1992 and the charismatic theory in which the followers attribute the observed leader's behaviors to heroic or extraordinary leadership abilities.

II.1.3 The Systems Theory of Management in Modern Day Organizations - A Study of Aldgate Congress Resort Limited Port Harcourt (Chikere & Nwoka, 2015)

According to (Chikere & Nwoka, 2015) Organizational management systems consist of many internal subsystems that need to be continually aligned with each other. As companies grow, they develop more and more complex subsystems that must coordinate with each other in the process of transforming inputs to outputs.

In their own opinion, the above model requires expansion and development into a model of the processor operational management that indicates how the various inputs are formed through the managerial functions of planning, organizing, staffing, leading, and controlling. However, the following sub-topics are the basic components of a system.

- i) **Inputs:** The composition of inputs from the external environment may include people, capital, managerial skills as well as technical knowledge of skills. It also includes the various claimant groups of people making demands on the organization; such as employees, consumers, suppliers, stockholders, federal, state, and local governments.
- ii) **Transformation process:** In an organizational system, inputs are transformed into an effective and efficient manner into outputs. This can be viewed from different perspectives. Focus can be on such

management functions as finance, production, personnel, and marketing.

- iii) **External variable** As a component of the systems model, the external environment plays a key role in the transformation of inputs into outputs. While it is true that organizations have little or no power to change the external environment, they have no alternative but to respond to it.
- iv) **Outputs:** Inputs are secured and utilized by transformation through the managerial functions with due consideration for external variables into outputs. Outputs of different kinds vary with the organization. They usually include many of the following; products, services, profits, satisfaction, and integration of the goals of various claimants to the organization. v) Reenergizing the system, it is worthy of note that in the systems model of the management process, some of the outputs become inputs again. The satisfaction and new knowledge or skills of employees become important human inputs.

Similarly, profits are reinvested in cash and capital goods, such as machinery, equipment, buildings, and inventory. But tressing what Wehrich et al had written, revealed that the systems theory has been likened by many management experts to the three-part production process of organizational activity. They revealed that Katz and Kahn in their analysis of the basic properties of an organization had also identified the input throughout the output process.

II.1.4 Contingency Theory of Capacity Planning: The Link between Process Types and Planning Methods (Antti, 2017)

According to (Antti, 2017), the theory of constraints was first proposed in 1986 by Goldratt. The theory of practical results of Goldratt's work on 'how to think'. TOC is a philosophy that suggests that any system must have at least one constraint otherwise it would generate an infinite amount of output and that constraints generally determine the pace of an organization's ability to achieve its goal which is profit. Goldratt emphasizes that constraints pose a significant threat to the well-being of an organization and must be identified. The researcher suggests that constraints may be labor availability, staff skills, machine availability, and capital or time available, They may however be more difficult to identify such as organizational policies, guiding principles, or rate of innovation identified that there is rarely an equal flow of work within each work center in a process.

The constraint should therefore be the control of the pace of the process, This theory reduces the emphasis on maximizing all resources within the process and prioritizes the management of the bottleneck, The theory he advocates is called 'drum, buffer, rope' where the bottleneck is the 'drum' which marks the time through the process – due to insufficient capacity this should be working the most, the 'buffer' principle is required to make sure that the bottleneck is never short of work and therefore the front end of the process should stockpile inventory to maximize output.

When measuring capacity the unit of measure can be either an input or an output to the process. The key is to take the most

logical unit that reflects the ability of the operation to create its product or service. However, where the input is more complicated to measure, such as machine hours on a process layout, then output is a more suitable measure. The unit of time could be a minute, an hour, a day or a week, or whatever time scale fits the operation, but the unit of output and time scale needs to be consistent.

Input measures of capacity when using input measures of capacity, the measure selected is defined by the key input into the process. Where the provision of capacity is fixed, it is often easier to measure capacity by inputs, for example; rooms available in a hotel or seats at a conference venue. Input measures are most appropriate for small processes or where capacity is relatively fixed, or for highly customized or variable outputs such as complicated services.

The Output measures of capacity of the finished units from the process such as mobile phones produced in a day or cars manufactured per week, This measure is best used where there is low variety in the product mix or limited customization.

II.1.5 Toward A Theory Of Working Capital Management By (John S. , 2020)

According to (John S. , 2020)

The money manager is concerned with having funds available to meet current expenditures or for investment. As his receivables are collected, it is his responsibility to convert these checks into usable funds. An analysis of his banking methods might uncover methods of improving the inflow of his cash by presenting checks to the paying banks faster. Part of his cash frequently is in the form of both undeposited and uncollected checks. Accordingly, if he can deposit checks faster and thus reduce this amount of unavailable cash he can reduce his cash needs. Let me give you a concrete example of this. The corporates' trucks as an example normally are delivered to the dealers on auto transports and in many cases, the dealer will pay the driver of the transport for the vehicles. In past years, the driver would carry the check back to his office for transmittal to our assembly plant controller under strong leadership.

A business whose sales are relatively large compared to assets normally requires larger bank balances to support these sales than a business of similar asset size but with smaller sales. Generally the larger the sales, the larger is the amount of money tied up each day as uncollected funds in cash receipts.

Many corporations employ a rule-of-thumb and maintain cash balances at some multiple of average daily sales. Those companies subject to sudden cash drains often maintain additional cash balances for such occasions. Many companies maintain balances over and above these amounts as a means of compensating banks for services rendered. The determination of the size of the bank balances that a firm maintains cannot be considered a science-it is an imperfect art. It is an art, however, in which the money manager must appraise the value of his banking relationship and weigh it against the possible income that can be earned on balances above some minimum. In addition to determining the size of bank accounts, the money manager must

decide where to maintain bank accounts. Here the approach is even more "artful."

A nationwide corporation needs depositories throughout the country, while a localized business may be well served by one or two banks. Banking relationships ordinarily are maintained in those territories or financial centers that enable the money manager to collect his receipts most promptly and facilitate the transfer of funds from area to the area most easily. In recent years we have taken the soundness of banks for granted and have relied on governmental agencies to determine the safety factors behind deposits in various depository banks. Where a company's bank balance is above the insured amount, the money manager should evaluate the soundness of the bank for himself. In general, banks are very co-operative in supplying the information needed to determine the safety factors behind deposits.

II.2 The Econometric Model on the effect Analysis of Financial leadership and working capital of commercial Banks in Rwanda

The researchers' empirical strategy was used to test the effect Analysis of Financial leadership and working capital of commercial Banks in Rwanda, uses the methodology of (Beck *et al.* 2004) to analyze the empirical relationship between Financial leadership and working capital of commercial Banks in Rwanda. Thus, the researchers' regression equation of Economic growth is defined as follows :

$$Y_{i,t} - Y_{i,t-1} = \alpha Y_{i,t-1} + \beta INS_{i,t} + \delta X_{i,t} + \delta X_{i,t} + n_t + \epsilon_{i,t} \quad (1)$$

where $(Y_{i,t} - Y_{i,t-1})$ is working capital of commercial Banks in Rwanda, X represents a vector of control variables (population growth, index of human capital, domestic investment, inflation, Cash Balance (CB

The researcher uses the following approximation to calculate the Liquidity Ratio (LR)

$$\text{between } t \text{ et } t-1 : \frac{Y_{i,t} - Y_{i,t-1}}{Y_t} = \frac{\Delta Y_t}{Y_t} \cong \ln CY_{t-1}$$

According to the literature on Liquidity Ratio (LR) regressions to Solow, authors such as Beck *et al.* (2002) and Allen *et al.* (2001), made an assumption of technical progress rate and a depreciation rate of the physical capital constants, the sum of which is $\rho + d = 0.05$

The government consumption, openness to commercial and terms of commercial), $Y_{i,t-1}$ the logarithm of initial Liquidity Ratio (LR) to control the conditional convergence effect of the standard Solow-Swan growth theory and INS is financial Leadership penetration defined as ratio of premiums to Liquidity Ratio (LR) and Cash Balance (CB) n_t is the time fixed effects, $\epsilon_{i,t}$ is the idiosyncratic error term and the subscripts $i = 1, \dots, N$, and $t = 1, \dots, T$, represent country and period, respectively. In equation (1), β is the researcher coefficient of interest and allows us to analyze the effect of financial leadership on the working capital of commercial banks. The researcher anticipates a positive sign for β .

Furthermore, the convergence hypothesis between the financial studied suggests that the coefficient α of $Y_{i,t-1}$ is negative and significant in the growth model, ie $0 < 1 + \alpha < 1$. To examine the heterogeneity of the effect analysis of financial

leadership on working capital of commercial Banks, the researcher specifies an augmented version of equation (1) as follows :

$$Y_{i,t} - Y_{i,t-1} = \alpha' Y_{i,t-1} \beta' INS_{i,t} + \rho * (INS_{i,t} \beta' MS_{i,t}) + \gamma MS_{i,t} + \theta' * \delta X_{i,t} + n'_t + \epsilon_{i,t}$$

Where $MS_{i,t}$ represents the conditional variables of country-specific structural characteristics which are Management efficiency; management systems and management capacities and working capital composed by Liquidity Ratio (LR) and Cash Balance (CB); The three categories of conditional variables defined above include variables described as follows: first, to analyze whether Management efficiency has a positive contribution on working capital of commercial Banks in Rwanda; Second, to assess if management systems have a positive impact on working capital of commercial Banks in Rwanda; lastly Third, to understand if management capacities have a positive effect on working capital of commercial Banks in Rwanda.

The researcher retains the Management efficiency; management systems and management capacities and working capital composed by Liquidity Ratio (LR) and Cash Balance (CB), by himself but also through complementarities with Financial Sector in general, Commercial banks in particular.

II.3 Conceptual framework

A Conceptual framework is a diagrammatical research tool intended to assist the researcher to develop awareness and

understanding of the situation under scrutiny and to communicate this (Kandampully & Tingting, 2019). In this case, the researcher finds out that the [Financial statement analysis](#) is the process of reviewing key financial documents to gain a better understanding of how Working Capital of the commercial banks are performing in terms of impacting the [Balance Sheet](#), [Income Statement](#), [Cash Flow Statement](#) and the [Annual Report](#).

Normally the financial performance of Working Capital of commercial banks in Rwanda are characterized by different indicators such as Net Working Capital (NWC), Working Capital Requirements (WCR), Current Asset (CA) and finally Current Liability (CL) which all of these component can have academic challenges to analyse all of them based on the limitations on one side academic linkages between these pillars of Financial leadership and its indicators of Working capital of Commercial Banks and on other side time and finance. Based on that challenge, the researcher was focused on two active indicators only such as Current Asset (CA) and Current liability (CL)

A theoretical framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. It can be defined as a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation. In this conceptual framework in figure 2.1, there are demonstrated the linkage between the independent variable and dependent variable as an outline

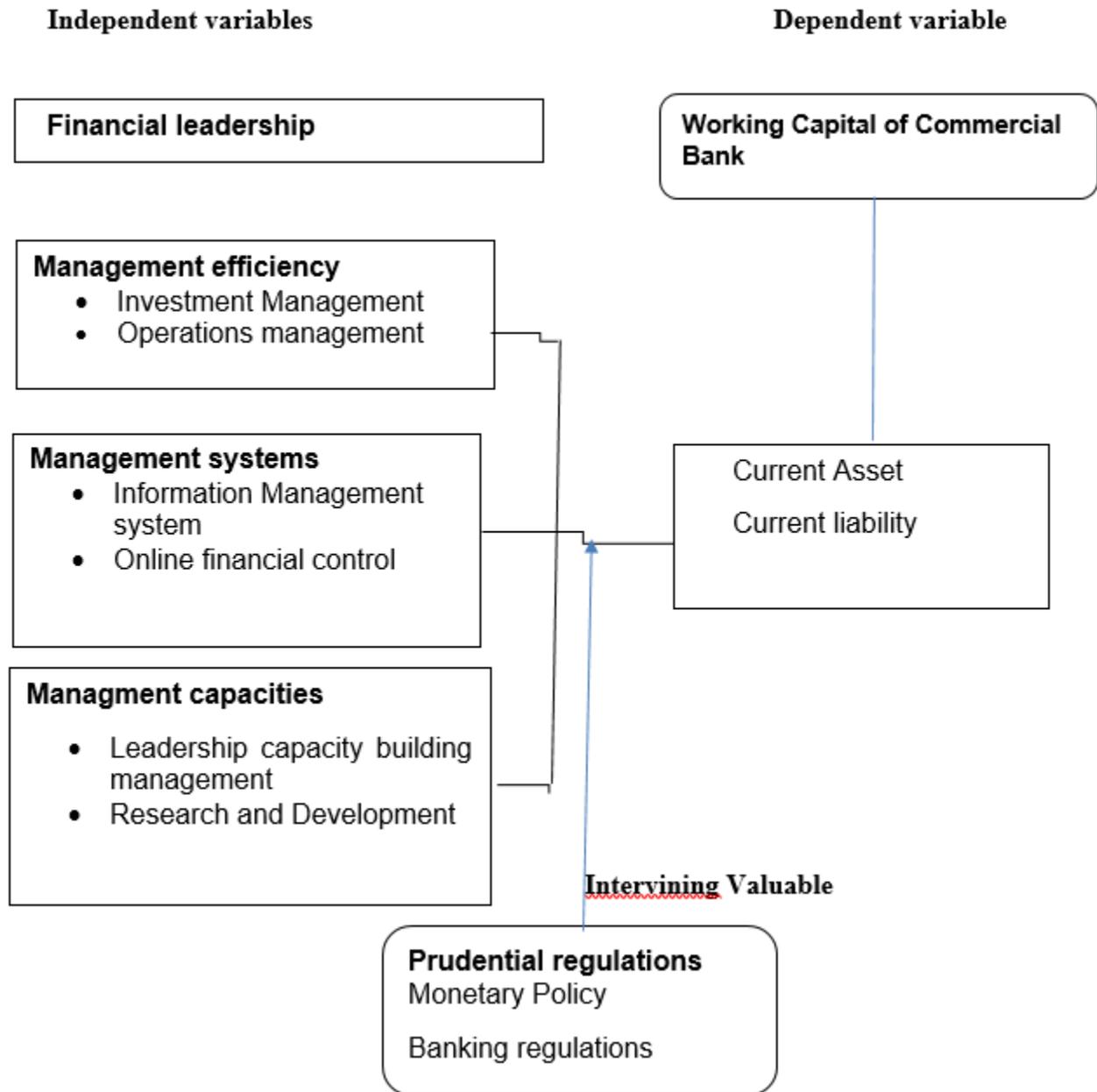


Figure 2. 1: Conceptual framework, 2020
 Source: (Dickson, Emad, & Joe, 2018), modified by the researcher 2020

In figure 2.1, the conceptual framework gives an overview of the types of research variables that play roles in this study. In the above conceptual framework Management efficiency, Management systems and Management capacities are independent variables. The independent variables that are Financial leadership also referred to as manipulating variables deal with all theories and practices related to working capital of commercial banks; On the other hand, working capital is the dependent variable measured such as Current Asset and Current liability.

The use of appropriate framework Management efficiency in commercial banks gives them competitive advantage, reduces costs in most operations and services, and leads to efficiency in transactions and better customer services; These in turn lead to better Bank performance of commercial banks which adopt framework Management efficiency in their operations; On the other hand when commercial banks don't adopt framework Management efficiency, they are likely not to realise competitive advantage, their costs should be high in most operations and services, maybe inefficient in their transactions and they should offer poor customer service which in turn lead poor Bank

performance, Also when the banks have sound Management systems characterised by Information Management system and Online financial control, appropriate and reliable procedures and adequate skills and capacity, their Bank performance should increase and the reverse is true; accordingly when there are good and favourable Prudential regulations like Monetary Policy and Banking regulations, working capital of commercial banks should be high and low when regulations, policy instruments and sector strategies are poorly crafted and unfavourable.

After firms achieve optimal efficiency in Management capacities such as Leadership capacity building management and Research and Development utilization and deploying them effectively two likely scenarios can emerge; The organizations will be very successful at home and amass sufficient resources and capabilities that they can effectively deploy in competing regionally and globally; As a result, these firms should expand regionally and globally and into new products either to stretch their success record globally or to protect their home advantage; In expanding regionally and globally and into new products, these firms gain access to complementary resources domiciled within these new territories leading to greater heterogeneity and complementarily enhancing regional and global competitiveness; This is an initial explanation of resources, expansion strategies, and performance. Conversely, after internal efficiency is attained firms may fail to deploy their internal competitiveness effectively within territorial markets.

II.4 Empirical analyses on financial leadership and working capital of commercial Banks in Rwanda

Different Knowledge and results derived from the investigation, observation, experimentation, and experiences were done by different researches on similar work with financial leadership with its pillars of Management efficiency (Investment Management and Operations management); Management systems (Information Management system and Online financial control), and Management capacities (Leadership capacity building management and Research and Development) working capital of commercial Banks (Current Assets (CA) and Current Liability (CL)) were dependent variables while Prudential regulations (Monetary Policy and Banking regulations) as intervening Valuable on opposed to the theoretical knowledge based on logical or mathematical assumptions to drive the study.

II.4.1 The contribution of Management efficiency on working capital of commercial Banks

According to (Abbadi & Abbadi, 2013) The contribution of Management efficiency examines the approaches of Working Capital of commercial Banks in a sample of Mauritian small and mid-sized manufacturing companies; The study was depending on the survey and case studies; A total of 145 forms were collected out of a sample of 420 manufacturing companies; The results indicate that the variables interpret 76.5% and 51.7% respectively in the variance of NOP in both sectors.

For (James, Benson, Robert, & Kibet, 2014) the contribution of Management efficiency on working capital of commercial Banks was demonstrated the mean short term debts from the year 2002 to 2011 depicts Kenya Commercial bank as the NSE listed bank with the highest mean of 99,160 million; This

translate to the fact that KCB has the highest short term debts followed by Barclays bank with a mean of 97,474 million worth of short term debts. Equity bank ranks third with 89,954 million, Standard Chartered Bank ranks the fourth with 68,577 million while NIC bank has the least mean short term debts of Kshs 22,105M.

For (Sundararajan & Balino, 2011) the analysis for the debtors' average collection period depicts that the National Bank of Kenya is the bank with the highest collection period of 382 days followed by Barclays Bank with 132 days. NIC has an average collection period of 126 whilst Cooperative Bank has an average of 110 days. Diamond Trust Bank had an average collection period of 107 days. Kenya Commercial Bank had 105 while equity averaged 87 days. CFC Stanbic had an average collection period of 79 days while Standard Chartered Bank 57 days. The industry or the market had an average collection period of 131 days.

As for (Muia, Banafa, & Mwanzia, 2017) The contribution of Management efficiency gave the average cash conversion cycle on working capital of commercial Banks and liquidity for 9 banks in ten year period between 2002 and 2011; National Bank of Kenya had the highest average cash conversion cycle of 371 days. Barclays bank had an average cash conversion cycle of 126 days while NIC bank had 111 days. Cooperative Bank and Kenya Commercial Bank had an average cash conversion cycle of 99 and 97 respectively. Diamond Trust Bank had an average of 91 days whilst Equity had 82 days. Standard Chartered bank had an average cash conversion cycle of 50 days. The market average conversion cycle was 122 days meaning that National bank and Barclays bank were above the Market level and their liquidity was at risk.

For (Marco, 2014) The contribution of Management efficiency with a mean value of firms return on assets is 28.69 percent of total assets, and it deviates 21.65 percent. It means that the value of profitability can deviate from mean to both sides by 28.69 percent. Its minimum value is 4.36 percent while the maximum is 93.26 percent. Likewise, the descriptive statistics for the two measures of the efficiency of working capital management, namely, average collection period, and leverage are also presented in the same table. Accounts receivable period, a measurement for collection policy, is averaged to 28.30 days for the sampled firms. The interpretation for the average of the account receivable period is that firms in the sample wait 28.30 days on average to collect cash from credit sales. The Account receivable period can vary by 11.27 days to both sides of the mean value.

As for (Huynh, 2011) The minimum and the maximum account receivable period for the sampled firms are 10.44 and 53.05 days respectively. There was a variation of 0.9% on the financial performance (ROA) of companies due to changes in the Average Collection Period and Leverage at a 95% confidence interval. This shows that 0.9% changes in the financial performance of companies could be accounted for by the Average Collection Period and Leverage.

The Management efficiency was assisted in the contribution of different business activities in Rwanda by 46,052,000Rwf representing a 29.9% increase. From 2010 to 2011 Akabanga sales have varied 21,334,000Rwf, representing 11.6% of the increase, and lastly, from 2010 to 2011, the commercial banks have gained

increased on working capital revenue from their financial activities of BK product which were of 18,912,000Rwf, representing 8.5%. From the percentage obtained, it is shown that from 2010 to 2017, Cogebank gained more income from the services compared to other years, (Sazir, Kato, & Twesige, 2019).

For (Twesige, Mwirumubi, & Mugerwa, 2016) The Management efficiency supported the capital conservation buffer increased on 2.5% of RWA and to be met with CET 1 capital, applies at all times and it is intended to ensure that institutions can absorb losses in stress periods lasting for many years. Considering the 4.5% CET 1 capital ratio, institutions must hold 7.0% CET 1 capital on an individual and consolidated basis at all times.

II.4.2 The impact of management systems on the working capital of commercial Banks by (Sundararajan & Balino, 2011)

According to (Sundararajan & Balino, 2011) The impact of management systems on working capital of commercial Banks was reduced by 75 percent and invoice reconciliation improved by 85 percent, which improved the company's ability to leverage payment discounts; Working capital statistic of 2.02 reveals that the auto-correlation that was detected in the OLS regression result has been corrected; The result obtained shows that holding all the independent variables constant by 2.98 unit. Also, a unit increase in Net Profit Margin (NPM) holding other variables constant will increase working capital by 174 804.4 unit which confirmed that there is a positive relationship between working capital and unit profit margin.

For (Akoto, Vitor, & Angmor, (2013) this included the joint UNIDO and ISO project 'Standard on Food Safety Management Systems in EAC countries' which provided preparatory assistance for training of trainers and awareness courses on ISO 22000 in five EAC Partner states. An additional 596 EAC regional standards have been developed since September 2007 bringing the current total to 1080 of which 187 are related to food, plant, or animal products.

As for (Christer, 2014) the Both spheres countries such as USA, UK, Brazil, France, Turkey, Singapore, Russia, China, Japan, Egypt, Nigeria, Cambodia, Mexico, Kenya, South Africa, Senegal, and others were demonstrated positive asset management acceptable by all efforts led to ISO on 55000 which consists of three standards; ISO 55000 provides critical overview Asset performance measures, concepts and terminology needed to develop a long-term plan that incorporates an organization's mission, values, objectives, business policies and stakeholder requirements; ISO 55001 specifies the requirements for the establishment, implementation, maintenance and improvement of an asset management system.

For (Didier & Michael, 2014) Compared to corresponding benchmarks, seven categories of equity funds outperformed their benchmark while eight underperformed in some parts of Asian and European Countries. Equity funds with a focus of investment on Finland strongly outperformed their benchmark (5.3%) while equity funds with a focus of investment on Romania underperformed their benchmark (-5.3%); European focus of investment delivered 1%, respectively 0% on average in real terms, while monetary funds with a euro area focus of investment lost 1%. Real average annual performances for alternative

investment funds ranged from 2% (for funds of funds) to 8% (for hedge funds).

(UNCTAD, 2018), the Asset performance measures by EAC Member states have also changed throughout the region's financial performance commercial banks; Despite their dominant share in total exports, primary products fell in share from 53 percent in 2002–2004 to 44 percent in 2010–2012, on average, and were surpassed by manufactured products over time; Export markets also shifted more towards SSA and Developing Asia, replacing the past dominance of the European Union markets in EAC exports; the share of SSA in EAC exports increased from 30 percent in 2002–2004 to 36 percent in 2010–2012, while the share of developing Asia in EAC exports increased from 17 percent to 26 percent over the same period; The role of intra-EAC trade remains limited, accounting for only 19 percent of EAC exports in 2010–2012.

For (François, Oral, & Tomasz, 2014) EAC Member states like Rwanda followed by the United Republic of Tanzania and Uganda, and to a lesser extent Kenya, all had high Asset performance measures rates over the last decade affected the Financial performance of commercial banks, with Burundi being an exception due to its political and socio-economic crisis. Overall growth performance translated into sustained growth in real per capita GDP for all the countries except Burundi. In 2016, Kenya had GDP per capita of US\$ 1455, the United Republic of Tanzania US\$ 879, Rwanda US\$ 703, Uganda US\$ 615, and Burundi US\$ 286. As a result, poverty fell significantly in general. However, inequality remained high across EAC partner states, implying that the benefits of growth were not equally distributed among individuals in society.

For (Mbanigaba, 2019) Commercial Banks in Rwanda such as ECOBANK, Bank of Kigali,

I and M Bank generated diluted Asset performance measures of 0.28 U.S. Dollar cents, a fall of 83% compared with the 1.69 U.S. Dollar cents reported in 2014; Return on total shareholders' equity (ROE) was 4.2% in 2015 versus 16.5% in the prior year; Profit attributable to shareholders of ETI amounted to \$66 million, compared to \$338 million in 2014; The major reason behind these less than satisfactory results was the high level of impairments on loans and financial assets made in 2015, totaling \$532 million, almost double 2014's level.

For instance, Rwandan Commercial banks reported revenues decreased by 8% in 2015, underlying revenues would have increased by 9%, assuming constant exchange rates. The cost base remained fairly stable, with a cost-to-income ratio (CIR) of 64.9%. The balance sheet is healthy, with a Tier 1 ratio of 20.5% and a total capital adequacy ratio (CAR) of 23.9%. The revenue for the year ended 31 December 2015 was \$2.1 billion while that of the parent company was \$174 million; Profit before tax for the Group was \$205 million and \$61 million for the parent company; The profit after tax stood at \$107 million, (Mbonigaba, 2019).

II.4.3 The effect of management capacities on working capital of commercial Banks

According to (World Bank group, 2014) ranked the management capacities with the countries Commercial banks Life

expectancy by the support the working capital of commercial Banks; the Estimated GNI per capita based on the management capacities with Leadership capacity building management and Research and Development (2011 PPP\$), Estimated GNI per capita (2011 PPP\$), 2013 where Botswana ranked 7.9, Egypt, 2.8, S. Africa 41.1, Ghana 10.1, Congo 9.6, Kenya 19.9, Rwanda 51.9, Nigeria 6.6, Zimbabwe 35.1, Ethiopia 25.5, Tanzania 36.0 and Senegal 42.7. These were part of the classification that took these countries to the ascertain level of their capacity building and improved working capital of commercial banks based on the innovative rate aspect.

For the same scholar (World Bank group, 2014) the Countries in sub-Saharan Africa such as Ethiopia 173 and Rwanda 151 achieved the fastest growth management capacities, followed by Angola, Burundi, Mali, Mozambique, the United Republic of Tanzania, and Zambia. They all had the second-highest rate of progress in the capacity building and Human Development Index (HDI), which combined the achievements of their income in health and education that involved in the mainstream of the technical partnership strategy aspect.

Despite this mile, stone accomplishment mentioned by (Malik, 2014), shows that 585 million people in sub-Saharan Africa were trained with different skills and knowledge in Leadership capacity building management and Research and Development, the equivalent of 72 percent of the region's population, and were living in multidimensional poverty. This group of poor people also suffers deprivation in education, health, and living standards or at risk of falling back into poverty because of the low capacity building level mark, which is destruction to the sub-continent's economic development.

In Sub-Saharan Africa, the Multi-Sectoral Regional Office in Nairobi and the Multi-Sectoral Regional Office in Yaoundé have had the highest regular budget on the management capacities with Leadership capacity building management and Research and Development expenditures in the period 2012-2017, that is US\$ 51 810 and US\$ 45 189 respectively. Over the three years, this has been less than the average US\$ 10 000 per year supporting different physical activity which has been improving the production, (UNESCO, 2015).

(Egedy, Földi, Balogi, & Kovács, 2009) demonstrates that the returns to pieces of training for individuals were 13.1% in France and 6.1% in Sweden, whereas the estimated returns to the firm (productivity) for investments in training were 17.3% in France and 7.3% in Sweden. This was after investigating the effects of training and R&D on wages and productivity at the firm level in France and Sweden which improved the countries productions and also affected its Gross Domestic Product. The Same scholars (Egedy, Földi, Balogi, & Kovács, 2009), adds that French workers obtained 30% of the returns to training and Swedish workers about 35%; the firm, therefore, obtained the larger returns to investments in training, although the gains to workers are also substantial;

(Dearden, Reed, & Van, 2006) shows the impact of training on labor productivity in British industries between 1983 and 1996 on productivity and wages. An increase from the average of 10% to

11% in the proportion of workers trained in the industry, value-added per worker was about 0.6% and wages on 0.3%, which affected confidently their per capita and household income. The Human capital and indigenous innovation played a very important role in Portugal's economic development from 1960 to 2001 were found that a 1% increase in average schooling led to a 0.42% increase in productivity of different aspects. Also, a 1% increase in the internal stock of knowledge measured by the real accumulated expenditures on firms' Research & Development depreciated at a rate of 5% per year, tended to increase productivity by 0.3%.

According to (Tom, 2008), USAID/Rwanda has worked in close the management capacities especially on Leadership capacity building and Research and Development with the Government of Rwanda (GOR) to advance the objectives outlined in its Vision 2020 and Economic Development and Poverty Reduction Strategies by improved its financial sector capacity; over the last 10 years, annual funding to USAID/Rwanda has increased from about \$48 million in 2004 to over \$128 million in 2016. The bulk of the increase was due to the launch of several new U.S. Presidential Initiatives including the President's emergency plan for AIDS Relief (PEPFAR), the President's Malaria Initiative (PMI), and the Feed the Future (FtF) food security initiative. USAID/Rwanda continues to support each of these Presidential Initiatives, as well as the Global Climate Change (GCC) initiative in its programming. For RDB Rwanda (2015), Different pieces of training include those that were supported by the department of Capacity Building Funds under the Rwanda Development Board and others by bilateral support the Beneficiaries of 8942 in 2010; 5557 in 2011; 7858 in 2012, 3385 in 2013; and 13167 in 2014.

The level of education in financial sector capacity building recorded a significant increase in the number of pupils, staff, and schools. The number of pupils increased from 159,291 in 2014 to 183,658 in 2015; that of staff increased from 4,671 in 2014 to 5,386 in 2015, while that of schools increased from 2,431 in 2014 to 2,618 in 2015. The Net Enrolment Rate increased from 13.3% in 2014 to 14.2% in 2015, while the Gross Enrolment Rate increased from 17.5% in 2014 to 20.2% in 2015 and thus achieving the 2014-2015 ESSP target, (Mineduc, 2014).

II.4.4 The importance of working capital on commercial Banks in Rwanda

According to (Mbanigaba, 2019) the proper management of working capital is essential to a company's fundamental financial health and operational success as a commercial bank in Rwanda; A hallmark of good business management is the ability to utilize working capital management to maintain a solid balance between growth, profitability, and liquidity; A Bank uses working capital in its daily operations; working capital is the difference between a business's current assets and current liabilities or debts; Working capital serves as a metric for how efficiently a company is operating and how financially stable it is in the short-term. The working capital ratio, which divides current assets by current liabilities, indicates whether a company has the adequate cash flow to cover short-term debts and expenses as some findings from Rwandan commercial Banks

(Egedy, Földi, Balogi, & Kovács, 2009) assessed the magnitude of human capital spill-overs at the community level; his results were that 1 percent point increase in the supply of college graduates in an area raised the wages of high-school dropouts by 1.9%, of high-school graduates by 1.6%, and of college graduates by 0.4% which could affect the level and percentage of productivity of human capita; taking into consideration the countries' in differing economic contexts, the results suggested that low-income countries benefited most from investments to expand primary education, with a full rate of return of 47% at this level; Middle-income country investments to expand secondary education carried by the highest overall returns at 52%. Besides, in high-income countries, expanding tertiary education yielded the best full returns at 20% of significance also was the finding that expanding higher education in low-income countries had relatively poor social returns that suggest that the capacity to utilize technology and add value to capital investments to keep improving the level of productivity, (Psacharopoulos & Patrinos, 2018).

III. Materials and Methodology

This study adopted a research philosophy from the empirical literature, hinged on two prominent research paradigms: positivistic and deductive philosophical approach. The positivist approach is quantitative and based upon values of reason, truth, and validity. The focus is purely on facts gathered through direct observation and experience and measured empirically using quantitative survey methods, experiments, and statistical analysis (Erickson & Kovalainen, 2008). Positivism maintains that knowledge should be based on real facts, not on abstractions.

III.1 Research Design

Proportional stratified sample size

Targeted Banks	Target Population	Proportion (%)	Sample
Bank of Kigali	95	11.46	31
Bank Populaire du Rwanda	94	11.34	30
I & M Bank	85	10.25	28
Cogebanque	85	10.25	28
Ecobank	75	9.04	24
KCB	85	10.25	28
Equity	80	9.25	26
GT-Bank	85	10.25	28
Access Bank	75	9.04	24
Crane Bank (BCR)	70	8.44	23
Total	829	100	270

Source: Secondary data, 2020

The selected sample units show a general representation of other Commercial Banks Organs in the study area that operate in different business activities (sectors).

III.3 Sampling Frame

A research design is a plan or an overall strategy for conducting the research. It is a means of ensuring that a research process is systematic and scientific enough so that the results obtained can be applied in real life (Prabhat & Meenu M., 2015). This study was mainly descriptive research. Descriptive research studies are those studies, which are concerned with describing the characteristics of a particular individual or characteristic of a group, (Kothari, 2004).

For (Mugenda & Mugenda, 2003), on the other hand, define descriptive research as a process of collecting data to gain insight on the data patterns and answer questions concerning the status of the subject of study. (Sekaran, 2003), also contends that a descriptive study is undertaken to ascertain and be able to describe the characteristics of the variables of interest in a situation; A descriptive survey design was adopted for this study because; first, it was used to quantitatively describe specific aspects of the population. Finally, the study data used a sample of the population from Commercial Banks by utilizing questionnaires, from which research findings were generalized to the population.

III.2 Target population

The target population is an aggregation of study elements and refers to all members of a real or hypothetical set of people, events, or objects to which the researcher wishes to generalize the findings (Prabhat & Meenu M., 2015); The target population for the study was 829 from Bank of Kigali, Bank Populaire du Rwanda, I & M Bank, Cogebanque, Ecobank, KCB, Equity Bank, GT-Bank, Access Bank, and CraneBank (BCR) in financial activities operating from 2011 to 2019 which means that some of these Commercial Banks were started its performance activities in Rwanda in the aforementioned period with a sample size of 270 given after statistic calculation.

The sampling frame was designed to cover Commercial Banks officials such as DGs, CEOs, Directors, Head of Units, Specialists, Experts, Professionals from Rwanda. A study sample is a subgroup or a fraction of the target population and is a representation of the study population (Roger, 2011); Multistage sampling was used in this study; This was followed by systematic

random sampling, by using random number table digits to identify the respondent; The next step involved the selection of the respondents from the sampling frame of potential respondents from each targeted institution.

III.4 Sampling Technique

The sample size is the number of individuals from whom the researcher obtains the required information and is usually denoted by the letter n . The respondents for this study were the Experts from Bank of Kigali, Bank Populaire du Rwanda, I & M Bank, Cogebanque, Ecobank, KCB, Equity, GT-Bank, Access Bank, and CraneBank (BCR); In determining the sample size, this study adopted the formula and procedure for categorical data using the Fishers formula; According to (Singh & Masuku, 2014) reformulated the formula of Yamane 1967, provided a simplified formula to calculate the said sample sizes as below.

$$n = \frac{N}{1 + N(e^2)}$$

Where n is the sample size, N is the population size, and e is the level of precision 5% for our study

Thus, $n = \frac{N}{1 + N(e)^2} = \frac{829}{1 + 829*(0.05)^2} = 269.7$, and then, $n = 270$ employees.

For (Singh *et al.*, 2014) added that the proportional stratified sample size means that, the number of sampling units drawn from each stratum is in the proportion to the relative population size of that stratum.

III.5 Data Collection Instruments

According to (Kothari, 2004) questionnaires are popularly used data collection tools. Primary data was collected using structured to have a broad range of data to enhance data accuracy.

III.5.1 Primary Data

Primary data was collected from 270 officials from different Commercial Banks such as Bank of Kigali, Bank Populaire du Rwanda, I & M Bank, Cogebanque, Ecobank, KCB, Equity, GT-Bank and Access Bank, and CraneBank (BCR) operating in Rwanda.

III.5.2 Secondary Data

Secondary data was collected based on the Financial Reports, Financial Statement reports, Journals, Books, and other document reports from Bank of Kigali, Bank Populaire du Rwanda, I & M Bank, Cogebanque, Ecobank, KCB, Equity, GT-Bank and Access Bank, and CraneBank (BCR).

III.6 Data collection procedures

According to (Creswell & Garrett, 2008), defined data collection is the process of gathering and measuring information on variables of interest in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes. For this study, primary data was collected by administering questionnaires face to face and via e-mail. 270 questionnaires were distributed to the different officials from the commercial Banks.

III.6.1 Validity Test of Research Instrument

Validity is about the accuracy of the data obtained in the study in representing the variables of the study (Saunders, 2015), defined validity as to how well an instrument measures what it is intended to measure. The study used open-ended and close-ended questionnaires with a Likert scale; Another important feature is the population for which the measure is intended, once some of these decisions were made and a measure was developed. This study established the validity of the research instrument with the help of the university supervisors and the pilot testing; In this study, the following measures were put in place to ensure the items in the questionnaire produced valid data.

The Expert opinion: the comments of supervisors were incorporated in the instruments as a way of improving their validity; a pretest study was carried out among the Director-General, Chief Executive Officer, Directors, Head of units, Experts, Specialists, and Professionals on the Effect Analysis of Financial Leadership on Working Capital of Commercial Banks in Rwanda, after which the results of the pilot data analysis were used to improve the validity of the instruments. Factor analysis: Validity test was also used on the research instrument using a method of Principal Component Analysis (PCA) to extract the factors.

The criteria, as suggested by (Chou, 2006), was those factor loadings greater than 0.40 were considered statistically significant for studies with a sample size less than 200. Consequently, in this study, 0.40 was used as the cut-off for loadings since the sample size of the study was 270. The higher the factor loadings were, the greater they were relating to the variable.

III.7 Data Analysis and Presentation

III.7.1. Data analysis

To support the relationships as suggested in the model, the study used statistical and econometrics Package for Social Sciences (SPSS version 21) to analyze the perception, multinomial model, and descriptive analysis. First, the researcher analyzed internal correlations to analyze the effect of the research variables. Second, the researcher conducted a standard multiple regression analysis to test for the direct effect of the independent variables on the working capital of commercial banks in Rwanda with its indicators such as Current Assets (CA) and Current Liabilities (CL).

III.7.2 Data Analysis and Presentation

The Data analysis was conducted according to the research objectives and hypotheses; This included the need to analyze the relationship between financial leadership and working capital of commercial banks based on different Institutions of Rwanda; Before processing the responses, data preparation was done on the completed questionnaires by editing, coding, entering, and cleaning the data and Data collected were analyzed using descriptive, econometrics, and inferential statistics.

III.8 Model specification

III. 8.1 Multiple Linear Regression Model

The study employed a multiple linear regression model given by the equation below:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ without the moderator.

Where:

- i. Y: Working capital of commercial banks in Rwanda
- ii. X_1 : Management efficiency,
- i. X_2 : Management systems
- ii. X_3 : Management capacities
- iii. Z: **Prudential regulations**
- iv. β_0 : Coefficient of Intercept
- v. $\beta_1 - \beta_3$: The corresponding coefficients for the respective independent variables for financial leadership
- vi. ε : error term

The linear regression model is based on the following assumptions; the randomness of the error term, assumption of zero means of the error term, the assumption of constant variance, and assumption of normality of the variables, (Robert & Lachlan, 2014) emphasize that regression methods have become an integral component of any data analysis concerned with describing the relationship between a response variable and one or more explanatory variables; The data were obtained from the questionnaires are the primarily quantitative analyzed to identify the most statistically significant effect of the financial leadership (Management efficiency, Management systems, and Management capacities) with the variables of financial leadership and working capital of commercial banks in Rwanda.

III.9 Test of Hypotheses

According to (Creswell & Garrett, 2008) the ANOVA was used to determine whether there are significant differences between independent variable's pillars of financial leadership such as (Management efficiency, Management systems, and Management capacities) on working capital of commercial banks in Rwanda at a selected probability level; The conclusion is based on the p-values where, if the null hypothesis is rejected then the overall model is significant and if null hypothesis fails to be rejected the overall model is insignificant. The null hypothesis

with a p-value greater than 0.05 was rejected and the p-value less than 0.05 we failed to be rejected.

III.10 Statistical and econometric technique

Both econometrics and statistics allowed the researcher to analyze, present, and interpret data; the output was leading the researcher to show the effect analysis between financial leadership and working capital of commercial banks in Rwanda.

IV Data analysis and interpretation of the Effect analysis of Financial leadership and working capital of financial banks of Rwanda

IV.1 Response Rate

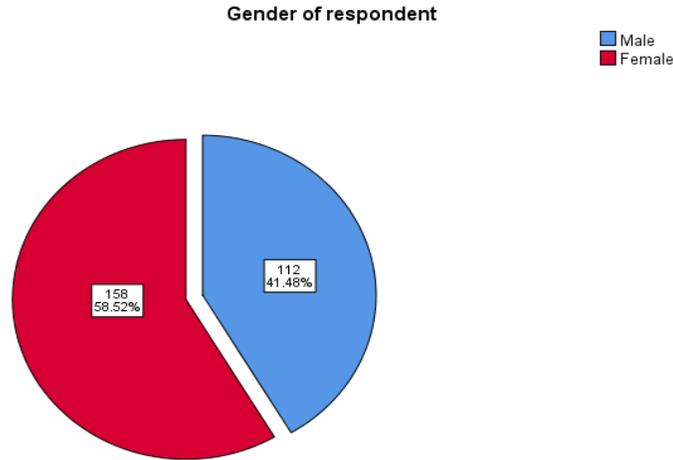
The survey was conducted in 2020 covering commercial banks in Rwanda. 270 structured questionnaires were distributed to the DGs, CEOs, Directors, Head of Units, Specialists, Experts, and Professionals. Out of the 270 questionnaires, 270 were filled and returned. This represented a 100% response rate. This response rate is considered excellent to make conclusions for the study. (Mugenda & Mugenda, 2003), observed that a 50% response rate is adequate, 60% good 70% rated very well, and above 95% excellent.

The response rate of 100% is therefore excellent. The recorded high response rate can be attributed to the data collection procedure, where the researcher obtained a research permit from the Ministry of Education of Rwanda, Directorate general of Science, Technology, and Research. Then, pre-notified the potential participants of the intended survey utilized a self-administered questionnaire where the respondents completed the questionnaires. The questionnaires were picked shortly after following up calls to clarify queries as well as prompt respondents to fill the questionnaires.

IV.2 Demographic information

This section presents the demographic characteristics such as gender, level of education, year worked in the organizations, organization size, and the number of years' institutions and organizations that have been inexistent.

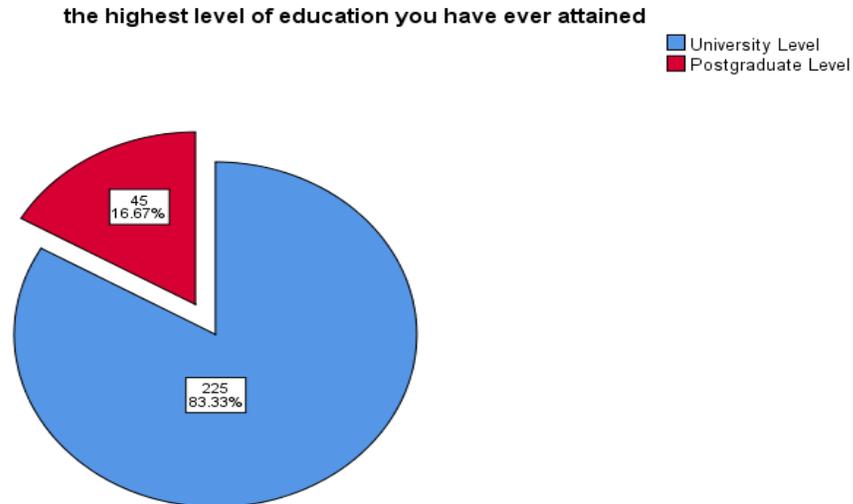
IV.2.1 Respondents Gender distribution



Source: Primary data, 2020
Figure 4. 1: Gender of the Respondents

In Figure 4. 2; out of 270 respondents who returned all the questionnaires distributed 41.48% were males and 58.52% were females. This implies that females were the majority of the researcher’s respondents who were implying that they are the majority heading the commercial banks in Rwanda.

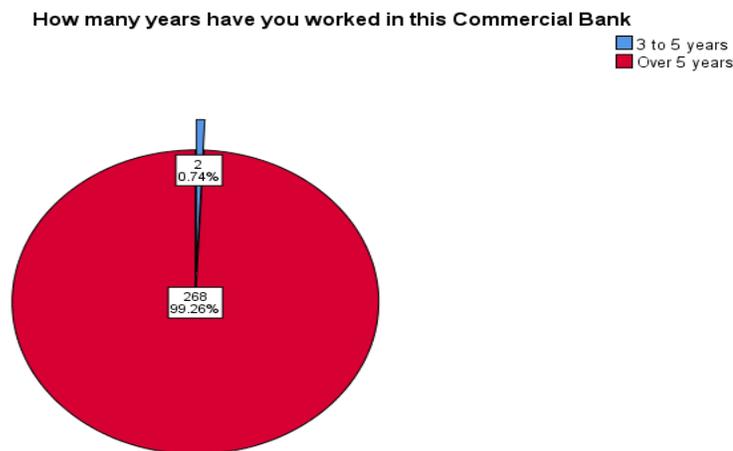
IV.2.2 The Level of Education



Source: Primary data, 2020
Figure 4. 3: Level of Education

In Figure 4. 2; The Respondents’ qualifications varied greatly with a higher proportion of employees having university-level education at 83.3%, Post University at 16.7% which demonstrate that the respondents of the commercial banks were skilled with knowledge

IV.2.3 The Working Experiences in the commercial Banks



Source: Primary data, 2020
Figure 4. 4: Institution Working experience

In Figure 4. 3; The years worked distribution was that majority had worked for over 5 years 99.2%, while 0.8% of respondents worked with those commercials between 3 and 5 years as in Figure 4.3 the workforce is relatively high as some institutions and organizations have been newly established by the Rwandans.

IV.2.4 Type of Commercial Banks Institutions or Organizations

Table 4.1: Type of commercial banks

	Frequency	Percent
Accepting Deposits Commercial Bank	0.0	0.0
The lending of Funds Commercial Bank	2	0.8
Mixt Commercial Bank	268	99.2
Total	270	100.0

Source: Primary data, 2020

In table 4.1 above, 99.2% of respondents were from the Mixt Commercial Bank, 0.8% were from The lending of Funds Commercial Bank and 0.0% were from Accepting Deposits Commercial Bank prospectively equal proportion.

IV.2.5 Life of institutions

Table 4.2: Life of institutions

	Frequency	Percent
6 to 10 years	4	1.5
11 to 15 years	265	98.1
Over 15 years	1	0.4
Total	270	100.0

Source: Primary data, 2020

The results from table 4.2 indicate that 98.1% of respondents indicated that their Commercial Banks have been in operation for years between 11 and 15 years, 1.5% between 6 to 10 years, 0.4% for over 15 years

IV.2.5 Commercial banks faced financial leadership component

Table 4.3: Opinion on financial leadership component.

	Frequency	Valid Percent
Yes	295	97
No	05	3
Total	270	100.0

Source: Primary data, 2020

The findings from Table 4.3 show that 97% of respondents said that their institutions faced the commercial bank face one of these three financial leadership components (Management efficiency, management systems, management capacities, and prudential regulations) towards the working capital of commercial banks.

IV.3 The contribution of Management efficiency on working capital of commercial Banks in Rwanda.

This section focuses on the results of the research on the relationship between financial leadership and financial performance

IV.3.1 The financial leadership supported by its pillar of Management efficiency with Investment Management and Operation management is improving positively the working capital of commercial banks in Rwanda.

The Respondent’s perception of the financial leadership supported by its pillar of Management efficiency with Investment Management and Operations management is improving positively the working capital of commercial banks in Rwanda. Their responses were summarized in the table below.

Table 4.4: The financial leadership supported by its pillar of Management efficiency with Investment Management and Operation management

	Frequency	Percent
Strongly agree	50	18.5
Agree	88	32.6
Disagree	130	48.1
Strongly disagree	2	0.7
Total	270	100.0

Source: Primary data, 2020

The results from table 4.4 indicate that among 270 respondents, 48.1% of respondents disagreed the statement that the perception to the financial leadership supported by its pillars of Management efficiency with Investment Management and Operation management is improving positively the working capital of commercial banks in Rwanda, 32.6% agreed that the perception to financial leadership supported by its pillar of Management efficiency with Investment Management and Operation management is improving positively the working capital of commercial banks in Rwanda, 18.5 strongly agreed the perception to financial leadership supported by its pillar of Management efficiency with Investment Management and Operation management is improving positively the working capital of commercial banks in Rwanda and 0.7% strongly agreed the statement that financial leadership supported by its pillar of Management efficiency with Investment Management and Operation management is improving positively the working capital of commercial banks in Rwanda

IV.3.2 Investment Management as part of Management efficiency should improve the working capital of commercial banks in Rwanda

The Respondent’s perception of Investment Management as part of Management efficiency should improve the working capital of commercial banks in Rwanda remain constant. Their responses were summarized in the table below

Table 4.5: Investment Management as part of Management efficiency should improve the working capital of commercial banks in Rwanda

	Frequency	Percent
Strongly agree	33	12.2
Agree	123	45.6
Disagree	114	42.2
Total	213	100.0

Source: Primary data, 2020

In table 4.5. Shows that, among 270 respondents 45.6% agreed with the statement that Investment Management as part of Management efficiency should improve the working capital of commercial banks in Rwanda, 42.2% disagreed with the statement while 12.2% strongly agreed that Investment Management as part of Management efficiency should improve the working capital of commercial banks in Rwanda.

IV.3.3 The Management efficiency brought new strategies which assist in the achievement of commercial banks performance in Rwanda

This question brought was to check the perception of respondents to The Management efficiency brought new strategies which have stopped delay in payment of checks between banks; time wasted, fraud-related happen to the commercial Banks.

Table 4.6: The Management efficiency brought new strategies which assist in the achievement of commercial banks performance in Rwanda

	Frequency	Percent
Strongly agree	19	7.0
Agree	141	52.2
Disagree	110	40.7
Total	270	100.0

Source: Primary data, 2020

Among 270 respondents, 52.2% supported the statement that the Management efficiency brought new strategies which assist in the achievement of commercial banks performance in Rwanda, 40.7% disagreed with the statement while 7% strongly supported the statement The Management efficiency brought new strategies which assisting on the achievement of commercial banks performance in Rwanda.

IV.4 The The impact of management system on working capital of commercial Banks in Rwanda;

This section focuses on the results of the research on the relationship between the management system and the working capital of commercial Banks in Rwanda

IV.4.1 The management system well oriented assisted by the improvement of Current Asset and Current liability as indicators of working capital of commercial banks

The respondent perception of the management system well oriented assisted by the improvement of Current Assets and Current liability as indicators of the working capital of commercial banks. Their responses are summarized in the table below.

Table 4.7: The management system well oriented assisted by the improvement of Current Asset and Current liability as indicators of working capital of commercial banks

	Frequency	Percent
Strongly agree	6	2.2
Agree	253	93.7

Disagree	9	3.3
Strongly disagree	2	0.7
Total	270	100.0

Source: Primary data, 2020

In this table 4.7, Among 270 respondents, 93.7% of the respondents agreed with the statement that the management system well oriented assisted by the improvement of Current Asset and Current liability as indicators of working capital of commercial banks, 2.2% of the respondents strongly agreed, 3.3% disagreed on the statement that the management system well oriented assisted by the improvement of Current Asset and Current liability as indicators of working capital of commercial banks, and 0.7% strongly disagreed on the same statement that the management system well oriented assisted by the improvement of Current Asset and Current liability as indicators of working capital of commercial banks.

IV.4.2 The Responsibilities and duties require knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda

During the research, there was an assessment on The Responsibilities and duties requiring knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda:

Table 4.8: The Responsibilities and duties require knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda

	Frequency	Percent
Strongly agree	41	15.2
Agree	188	69.6
Disagree	40	14.8
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

The results from table 4.8 indicate that 69.6% of respondents agreed that the Responsibilities and duties require knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda, 15.2% strongly agreed that The Responsibilities and duties require knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda, 14.8% disagreed on the statement, 0.4% strongly disagreed that The Responsibilities and duties require knowledge well oriented on management system supporting its component of Information Management system and Online Financial control projections are affecting the working capital of commercial banks in Rwanda

IV.4.3 Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market.

During the research, there were assessments on Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market.

Table 4.9: Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market.

	Frequency	Percent
Strongly agree	129	47.8
Agree	95	35.2
Disagree	46	17.0

Total	270	100.0
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Source: Primary data, 2020

The results from the table 4.11 indicate that 47.8 % of respondents’ Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market, 35.2% agreed that Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market. while 17% disagreed with the statement that a Strong management system plays a critical role in ensuring Banks stay financially adaptable and able to build resilience and sustainability in today’s fierce market.

IV.5. The effect of management capacities on working capital of commercial Banks in Rwanda.

This section aims to establish the views of respondents on the effect between management capacities on working capital of commercial Banks in Rwanda. Table 4.10 shows the respondents' perspectives on the strategy.

IV.5.1 The management capacities supported by Leadership capacity building management and Research and Development assist in the improvement of working capital with special skills and pieces of knowledge

Table 4.10: The management capacities supported by Leadership capacity building management and Research and Development assist in the improvement of working capital with special skills and knowledge

	Frequency	Percent
Strongly agree	131	48.5
Agree	129	47.8
Disagree	8	3.0
Strongly disagree	2	0.7
Total	270	100.0

Source: Primary data, 2020

The results from table 4.10, among 270 respondents, 48.5% strongly agreed supported the statement that the management capacities supported by Leadership capacity building management and Research and Development assist in the improvement of working capital with special skills and pieces of knowledge, 47.8% agreed that The management capacities supported by Leadership capacity building management and Research and Development assist in the improvement of working capital with special skills and pieces of knowledge, 3% disagreed and 0.7% strongly disagreed that The management capacities supported by Leadership capacity building management and Research and Development assist in the improvement of working capital with special skills and knowledge.

IV.5.2 Research and Development under development capacities are used to strengthen the efficiency of the working capital of commercial banks

The researcher tried to find out different sights of respondents on how the Research and Development under development capacities are used to strengthen the efficiency of the working capital of commercial banks

Table 4.11: The Research and Development under development capacities are used to strengthen the efficiency of the working capital of commercial banks

	Frequency	Percent
Strongly agree	144	53.3
Agree	106	39.3
Disagree	19	7.0
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

From table 4.11 above, out of 270 respondents, 53.3% of respondents strongly agreed that The Research and Development under development capacities are used to strengthen the efficiency of the working capital of commercial banks, 39.3% of the respondents agreed that The Research and Development under development capacities are used to strengthen the efficiently of the working capital of commercial banks, 7% of respondents disagreed and only 0.7% of respondent strongly disagreed that the Research and Development under development capacities are used to strengthen the efficiently of the working capital of commercial banks.

IV.5.3 Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda

The Respondents’ perception of Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda. Their responses are summarized in the table below.

Table 4.12: Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda

	Frequency	Percent
Strongly agree	119	44.1
Agree	127	47.0
Disagree	20	7.4
Strongly disagree	4	1.5
Total	270	100.0

Source: Primary data, 2020

In the table 4.12 above, 44.1% of the respondent strongly agreed on the concept that Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda, 47.0% of the respondents agreed that Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda, 7.4% of respondents disagreed on the concept while 1.5% strongly disagreed on the Leadership capacity of building management increases the capacity of the building of the commercial banks in Rwanda

IV.7. The effect of Prudential regulations on the financial leadership and working capital of commercial banks in Rwanda.

This section focuses on the results of the research on moderating the effect of Prudential regulations on the financial leadership and working capital of commercial banks in Rwanda.

IV.7.1. The Prudential regulations well oriented is supporting the working capital of commercial banks

It is interesting to find out the perception of different respondents on the Prudential regulations well oriented in supporting the working capital of commercial banks

Table 4.13: The Prudential regulations well oriented supporting both financial leadership and working capital of commercial banks

	Frequency	Percent
Strongly agree	109	40.4
Agree	135	50.0
Disagree	25	9.3
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

The data presented in Table 4.18 above indicate that 50% of respondents agreed that The Prudential regulations well oriented are supporting the working capital of commercial banks, 40.4% strongly agreed on the same statement, 9.3% disagreed that the Prudential regulations well oriented are supporting the working capital of commercial banks while 0.4% of respondents strongly disagreed that The Prudential regulations well oriented are supporting the working capital of commercial banks.

IV.7.2. The strong Monetary Policy prescribed by the Central Bank regulates the management of working capital of commercial banks

The researcher was also interested in finding out how the strong Monetary Policy prescribed by the Central Bank regulates the management of the working capital of commercial banks. The findings were summarized in the table below.

Table 4.14: The Strong Monetary Policy prescribed by the Central Bank regulates the management of working capital of commercial banks

	Frequency	Percent
Strongly agree	34	12.6
Agree	210	77.8
Disagree	25	9.3
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

In the table 4.14, Among 270 respondents, 77.8% agreed that the strong Monetary Policy prescribed by the Central Bank regulates the management of working capital of commercial banks, 34 responds or 12.6 % strongly agreed to the concept that The strong Monetary Policy prescribed by the Central Bank regulates the management of working capital of commercial banks, 9.3% of respondents disagreed to the concept while 0.4% of respondents strongly disagreed the concept that The strong Monetary Policy prescribed by the Central Bank regulates the management of working capital of commercial banks.

IV.7.3 The Monetary regulation under the Prudential regulations should stay the main component assisting the working capital of commercial banks in Rwanda.

The Respondents gave their view on areas of the Monetary regulation under the Prudential regulations should stay the main component assisting in the regulation of the working capital of commercial banks in Rwanda.

Table 4. 15: The Monetary regulation under the Prudential regulations should stay the main component assisting in the regulation of the working capital of commercial banks in Rwanda.

	Frequency	Percent
Strongly agree	37	13.7
Agree	208	77.0
Disagree	24	8.9
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

The results from table 4.15 indicate that 77% of respondents agreed with the statement that The Monetary regulation under the Prudential regulations should stay the main component assisting in the regulation of the working capital of commercial banks in Rwanda, 13.7% of respondents strongly agreed with the statement that The Monetary regulation under the Prudential regulations should stay the main component assisting in the regulation of the working capital of commercial banks in Rwanda, 8.9% of respondent disagreed the statement while 0.4% strongly disagreed the statement that The Monetary regulation under the Prudential regulations should stay the main component assisting in the regulation on working capital of commercial banks in Rwanda.

IV.7. The importance of the working capital on the performance of Commercial Banks in Rwanda

This section focuses on the results of the research in moderating the importance of the working capital on the performance of Commercial Banks in Rwanda

IV.7.1. The Prudential regulations well oriented is supporting the working capital of commercial banks

It is interesting to find out the perception of different respondents on The Prudential regulations well oriented in supporting the working capital of commercial banks.

Table 4.16: The Prudential regulations well oriented is supporting the working capital of commercial banks

	Frequency	Percent
Strongly agree	109	40.4
Agree	135	50.0
Disagree	25	9.3
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

The data presented in Table 4.16 above indicate that 50% of respondents agreed that the importance of the working capital on the performance of Commercial Banks in Rwanda, 40.4% strongly agreed with the same statement, 9.3% disagreed that the importance of the working capital on the performance of Commercial Banks in Rwanda while 0.4% of respondents strongly disagreed that the importance of the working capital on the performance of Commercial Banks in Rwanda.

IV.7.2. The Current Asset (CA) is a strong indicator of working capital in making the performance of commercial banks.

The researcher was also interested in finding out how The Current Asset (CA) is a strong indicator of working capital in making the performance of commercial banks. The findings were summarized in the table below.

Table 4.17: The Current Asset (CA) is a strong indicator of working capital in making the performance of commercial banks in Rwanda.

	Frequency	Percent
Strongly agree	34	12.6
Agree	210	77.8
Disagree	25	9.3
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

In the table 4.17, Among 270 respondents, 77.8% agreed that the Current Asset (CA) is a strong indicator in making the performance of commercial banks in Rwanda., 34 responds or 12.6 % strongly agreed to the concept that The Current Asset (CA) is a strong indicator of working capital in making the performance of commercial banks in Rwanda, 9.3% of respondents disagreed to the concept while 0.4% of respondents strongly disagreed with the concept that the Current Asset (CA) is a strong strong indicator of working capital in making the performance of commercial banks in Rwanda.

IV.7.3 The Current liability (CL) is a strong indicator of working capital as a strong indicator of working capital in making the performance of commercial banks in Rwanda.

The Respondents gave their view on areas of The Current liability (CL) is a strong indicator of working capital in making the performance of commercial banks in Rwanda.

Table 4. 18: The Current liability (CL) is a strong indicator of working capital in making the performance of commercial banks in Rwanda.

	Frequency	Percent
Strongly agree	37	13.7
Agree	208	77.0
Disagree	24	8.9
Strongly disagree	1	0.4
Total	270	100.0

Source: Primary data, 2020

The results from table 4.20 indicate that 77% of respondents agreed with the statement that The and Current liability (CL) is a strong indicator of working capital make the achievement of commercial banks, 13.7% of respondents strongly agreed with the statement that the Current liability (CL) is a strong indicator of working capital to achieve commercial banks performance while 0.4% strongly disagreed the statement that The Current liability (CL) is a strong indicator of working capital to achieve commercial banks performance.

IV. Inferential Statistics on effect analysis of Financial leadership and working capital of commercial banks in Rwanda

The researcher used this module to provide his contribution based on the findings and the module given in the Methodology.

4.8.1. Joint Model Summary: contribution of effect analysis of Financial leadership and working capital of commercial banks in Rwanda in terms of Current Asset (CA)

Regression analysis was used to establish the effect analysis of Financial leadership and working capital of commercial banks in Rwanda in terms of Current Asset (CA)

Precisely, the following linear model was used:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$$

Where; *Y* stands for Current Asset (CA) while β_0 is the intercept (a constant), $\beta_1, \beta_2, \beta_3$ and β_4 are the slopes associated to the independent variables $X_1, X_2,$ and X_3) and ϵ is the error term which is assumed to be independent, identical and normally distributed random variable with a zero mean and a constant variance. In this study, X_1 denotes Management efficiency, X_2 denotes Management systems, and X_3 denotes and Management capacities. The findings were tabulated as shown in Table 4.21

Table 4. 19: The effect analysis of Financial leadership and working capital of commercial banks in Rwanda in terms of Current Asset (CA)

Dependent Variable: working capital of commercial banks in Rwanda in terms of Current Asset (CA)					
Sample: 270					
Included Observations: 270					
I. Variable: WC	Coefficient		Std. coefficient	t-statistics	Prob.
	B	Std. Error	Beta		
1(Constant)	1.899	0.731		2.583	0.000
Management efficiency	0.541	0.052	0.311	4.66	0.001

Management systems	0.633	0.061	0.031	0.537	0.040
Management capacities	0.831	0.062	0.091	1.343	0.180
R	0.847		Mean dependent variable	3.52	
R-squared	0.718		S.D. dependent variable	2.132	
Adjusted R-squared	0.704		Durbin-Watson statistics	0.162	
F-statistics	13.991		Standard Error of Estimate	0.65	
Prob (F-statistic)	0.002				

Source: Survey Data 2020

- a. Predictors: (Constant), Management capacities, Management efficiency, and Management systems
- b. Dependent Variable: Current Asset (CA)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85.684	4	21.421	13.991	.002 ^b
	Residual	405.722	265	1.531		
	Total	491.406	269			

- a. Dependent Variable: Current Asset (CA)
- b. Predictors: (Constant), Management capacities, Management efficiency, and Management systems

Source: Survey Data 2020

Table 4.19 displays the summary of the model used which assessed its best fit to the data and its coefficient estimates in an attempt to investigate the effect between financial leadership and working capital in terms of Current Asset (CA). From table 4.19, column 2, it is observed that R² which is the models' goodness of fit for the regression line obtained is 0.718 which means that 71.8% of the variation in the dependent variable-Current Asset (CA) is being explained by the variation in the independent variable- financial leadership with only 28.2 % of the variation in the dependent variable being attributed to the error-term introduced in the theoretical model or other variables other than financial leadership explaining working capital of commercial banks.

$$Y_{\text{Current Asset (CA)}} = 1.899 + 0.541X_1 + 0.633X_2 + 0.831X_3 + 0.002E$$

Where Y as a Current Asset (CA), X_1 is Management efficiency, X_2 is Management systems, X_3 is Management capacities. From the above equation, it can be observed in column 2 that there is a positive unstandardized beta coefficient. From the above equation, it can be observed in column 2 that there is a positive unstandardized beta coefficient of 0.541 for X_1 (Management efficiency), 0.633 for X_2 (Management systems), and 0.831 for X_3 (Management capacities).

This indicates that a unit change in Management efficiency should increase in mean the working capital in terms of Returns on Assets of the Commercial Bank in Rwanda by 0.541 units from 1.899 when keeping Management systems and Management capacities constant; A unit change in Management systems should increase in mean the working capital in terms of Returns on Assets of the Commercial Bank in Rwanda by 0.633 units from 1.899 when keeping Management efficiency and Management capacities constant lastly A unit change in Management capacities should increase working capital in terms of Returns on Assets of the Commercial Bank in Rwanda by 0.831 units from 1.899 when keeping Management efficiency and Management systems constant

However, the model indicates that Management capacities ($\beta=0.831$) contribute more, followed by Management systems ($\beta=0.633$) and lastly Management efficiency ($\beta=0.541$) respectively in contributing to the increase of the working capital of commercial banks in Rwanda. With a p-value of $0.002 < 0.05$, This indicates that the model used is the best fit for the data used, given all assumptions of normality underlying the model, in column 6, it can be concluded by said that financial leadership has a statistically effect analysis on working capital of commercial banks in Rwanda ($F=3.991$, $R^2 = 0.718$, $Sig=0.002$ at $\alpha=0.05$).

Table 4.19 displays also the standard error of the estimate, which read, in column 5, 0.132 that is a measure of standard deviation around the fitted line. This measure suggests that about 95% of the prediction error in financial leadership is less than $\pm 1.96 (0.132) = 1.26$. It can be further observed that, from the current findings, this effect analysis can be extended to 0.01, or 99.99% confidence interval, since a p-value of 0.002 remains much less than 0.01 or a 1% as a level of effect.

Table 4- 20: The effect analysis of financial leadership and working capital of Commercial banks in terms of Current liability (CL)

Dependent Variable: Working capital of commercial Banks in Rwanda (Current liability (CL))					
Sample: 270					
Included Observations: 270					
I. Variable: WC	Coefficient		Std. Coefficient	t-Statistics	Prob.
	B	Std. Error	Beta		
1(Constant)	97.025	6.792		14.286	0.000
Management efficiency Management systems, X_3 is Managment capacities	0.502	0.480	0.186	2.631	0.031
Management systems	0.755	0.721	0.059	0.973	0.040
Management capacities	0.878	0.576	0.122	1.698	0.019
R	0.811		Mean dependent variable		1.796
R-squared	0.811		S.D. dependent variable		0.678

Adjusted R-squared	0.6421	Durbin-Watson statistics	1.776
F-statistics	5.264	Standard Error of Estimate	0.2416
Prob(F-statistic)	0.003		

- a. Predictors: (Constant), Management capacities, Management systems, and Management efficiency
- b. Dependent Variable: **Current liability (CL)**

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2780.863	4	695.216	5.264	.003 ^b
	Residual	34998.654	265	132.070		
	Total	37779.517	269			

Source: Survey Data 2020

Table 4.20 displays the summary of the model used which assessed its best fit to the data and its coefficient estimates in an attempt to investigate the relationship between Financial leadership and working capital of commercial banks in terms of Current liability (CL). The correlation coefficient denoted in table 4.20, column 2 by R, between the variables under study, precisely between Financial leadership and working capital of commercial banks is

- 0. 811. From a statistical point of view, since R=0. 811 is quite close to 1, this finding suggests that there is a positive and indeed strong association between the variables studied. Same column 2, it is observed that R² which is the model goodness of fit for the regression line obtained is 0.811. This means that 81.1% of the variation in the dependent variable- Current liability (CL) is being explained by the variation in the independent variable- financial leadership with only 18.9% of the variation in the dependent variable being attributed to the error-term introduced in the theoretical model or other variables other than current liabilities explaining working capital of commercial banks.

Concretely, this suggests that any input in terms of financial leadership would lead to more working capital of commercial Banks of Rwanda. From table 4.20, column 2, it is observed that the computed F statistic (2, 270) is 5.264 and in column 2, the p-value for the overall regression effect is (p = 0.003), which is less than 0.05 the level of significance. This indicates that the model used is a best-fit for the data used, given all assumptions of normality underlying the model; The Durbin-

Watson statistic of 1.776 < 2 which indicates that there is a positive serial of correlation among the observation; the same table illustrated that the regression equation deduced to understand this effect which was:

$$Y_{\text{Current liability (CL)}} = 97.025 + 0.502X_1 + 0.755X_2 + 0.978X_3 + 0.003E$$

Where Yon Current liability (CL) illustrates the involvement of X₁ as Management efficiency, X₂ as Management systems, X₃ as Management capacities. From the above equation, this indicates that a unit change in Management efficiency should increase in mean the working capital in terms of Current liability (CL) of the Commercial Bank in Rwanda by 0.502 units from 97.025 when keeping Management systems and Management capacities constant; A unit change in Management systems should increase in mean the working capital in terms of Current liability (CL) of Commercial Bank in Rwanda by 0.755 units from 97.025 when keeping Management efficiency and Management capacities constant and finally a unit change in Management capacities should increase in mean the working capital in terms of Current liability (CL) of the Commercial Bank in Rwanda by 0.978 units from 97.025 when keeping Management efficiency and Management capacities constant.

However, the statistic model indicates that Management capacities (β=0.978) contribute more, followed by Management systems (β=0.755) and lastly Management efficiency (β=0.502) respectively in contributing to the working capital in terms of Current liability of Commercial Bank in Rwanda. With a p-value of 0.003 < 0.05, this indicates that the model used is the best fit for the data used, given all assumption of normality underlying the model; in column 6, it can be concluded that financial leadership has an econometric and statistically effect on working capital of

commercial Bank (Management efficiency) in Rwanda ($F=5.264$, $R^2 = 0.811$, $Sig=0.003$ at $\alpha=0.05$). This measure suggests that about 95% of the prediction error in the working capital of commercial banks is less than $\pm 1.96 (0.256) = 0.402$. It can be further observed that, from the current findings, this significance can be extended to 0.01, or 99.99% confidence interval, since a p-value of 0.003 remains much less than 0.01 or a 1% as a level of effect.

V. Conclusion and Recommendations

V.1 Conclusion

From the findings, it was observed that the majority of respondents were from the Mixt Commercial Bank at 99.6%. The findings also revealed the majority of respondents being Female at 58.52%, the majority of 99.2%, have been in their positions for over 5 years. The highest level of education for the majority of respondents is a university degree with 83.3%, with each institution surveyed having a combined workforce was between 50 to 199 (78.2%); The study established many findings and they are summarized per objective.

The research findings demonstrate that Management capacities have a strong effect where the econometric and statistical analysis shows a strong effect on the working capital of commercial banks in Rwanda with ($\beta=0.831$) on Current Asset (CA), ($\beta=0.978$) on Current liability (CL). Based on these findings, the researcher approved the first hypothesis of this study with the assumption of H_{00} and reject the second one of H_{03} ; The Same findings demonstrate that the Management systems play a positive effect on the working capital of Commercial banks in Rwanda. The econometric and statistical analysis shows the positive contribution of Financial leadership on the working capital of Commercial banks in Rwanda with $\beta=0.827$ on Current Asset (CA) and ($\beta=0.755$) on Current liability (CL). the researcher approved the first hypothesis of this study with the assumption H_{00} and rejected the second one H_{02} ; The researcher findings demonstrate that the Management efficiency has a good effect on the working capital of commercial banks in Rwanda where the econometric and statistical analysis shows the ties contribution of Management efficiency with ($\beta=0.541$) on Current Asset (CA), ($\beta=0.502$) on Current liability (CL). The researcher approved the first hypothesis of this study with the assumption of H_{00} and reject the second one of H_{01}

V.2. Recommendation

The Researcher recommends that a Monitoring of Rwanda's Financial leadership regularly should be taken into consideration to understanding trends, patterns in the Financial sector and provides an opportunity to highlight emerging issues on performance of commercial banks; This is of fundamental importance to achieve Rwanda's Financial performance of commercial banks in Rwanda and eliminate the low level of using Financial leadership of working capital of commercial banks in the country.

The Researcher recommends that Central Bank's Rules and Regulations on financial leadership digs should be more friendly and attractive to local and foreigners' commercial Banks. This will mobilize their initiative in different businesses supported by commercial banks' market directive and prices (equilibrium aspect) and encourage the community to be determined and

oriented hence not sitting down and waiting for the community' welfare support; overly, they will then pay the dues and taxes revenue.

The Researcher recommends that Rwandan Financial institutions and Civil Society, in general, keep the focus on the Country' Visions by determining the specific targets to assist Rwanda to transform into a middle-income nation where Rwandans are healthier, educated, and generally more prosperous by involves the managing of capital investment towards a long-term program of proper management of Current Asset (CA) and Current liability (CL).

The Researcher recommends that the competition and consumption protection policy in its nature should promote equality by providing a fair business framework and with efficient and effective implementation in where economic operators are to get the same opportunities and chances to compete with each other.

The Rwandan Central Bank "BNR" should monitor and supervise Commercial Banks in Rwanda to ensure financial reporting, legal and regulatory requirements are met by the banks and transparent periodic reporting to stakeholders on Corporate Governance, Risk Management, and Internal Controls are undertaken.

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