THE RELATIONSHIP BETWEEN REGULATION AND FINANCIAL PERFORMANCE OF RWANDA COMMERCIAL BANKS

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DECLARATION

This research project is my original work and has not been presented for examination in any other University.

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This research project has been forwarded for examination with my approval as the University supervisor.

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DEDICATION

I dedicate this study to my dear family members for all the support given all the time as I prepared and worked on this project.

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ABSTRACT

The objective of this study was to establish the relationship between Regulation and Financial Performance of commercial banks in Rwanda. The study had three specific objectives of establishing how capital requirement ratio, liquidity ratio and management efficiency ratio affect financial performance of commercial banks in Rwanda. The study adopted a descriptive research design which assisted to examine the relationship between regulation and financial performance of commercial banks. The sample size as well as the population of the study was ten commercial banks. The response rate was eighty percent which comprised eight commercial banks. Data was gathered using a data collection schedule and analysed using SPSS 17. The findings of the study in some areas concur with past studies while in others it contradicts past findings by other scholars.

The overall finding and conclusion of the study was that all the measures of regulation used in this study are not significant redictors of financial performance of commercial banks in Rwanda. The capital requirement was found to be insignificant in explaining profitability of commercial banks in Rwanda. The liquidity ratio and management efficiency ratio were also found not to explain the profitability. Based on the findings another study can be conducted in Rwanda but should really explain what are the variables that. Other variables that affect financial performance of commercial banks.

Regulation is a key pillar of financial institution operations in Rwanda and by extension pillar to financial prosperity and stability. Every year banking system contribute a good percentage in the total budget of the country, the study recommends the Government of Rwanda to develop policy which will help banks to operate in a conducive environment and this can create financial stability of financial institution in Rwanda

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ABBREVIATIONS

BNR: BanqueNationale du Rwanda

CAPR: Capital Requirements

EM: Equity Multiplier

ROA: Return on Assets

ROE: Return on Equity

SPSS: Statistical Package for Social Science

USA: United State of America

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

In the last two decades of the 20th century, countries worldwide have had to face an unprecedented number of commercial bank failures. As a result, attention is turning to the need for more appropriate ways to improve the performance of national financial systems. Indeed, a substantial literature is already emerging on the causes and consequences of financial-mostly banking-crises, and on various reforms that might help prevent future crises. Although the proposed reforms differ in important respects, nearly all include changes in existing financial regulations and supervisory standards. This core of agreement is certainly understandable insofar as the financial crises in countries ranging from the United States and Japan to Korea and Mexico, to Chile and Thailand, to India and Russia, and to Ghana and Hungary have been blamed at least in part on "bad" regulation and supervision (Barth et al. 2006)

The special role that banks play in the economic system implies that banks should be regulated and supervised not only to protect investors and consumers but also to ensure systemic stability. More specifically, bank regulations exist for safeguarding the industry against systemic risk, protecting consumers from excessive prices or opportunistic behaviour and finally to achieve some social objectives, including stability (Llewellyn, 1999). Last but not least regulation is important for the efficiency of the banking industry. In this respect, it is noticeable that whenever regulation is implemented with the aim of restricting or limiting banking activities, the banks' conduct of business and the efficiency with which they operate will be affected. This in turn could induce banks to engage in riskier activities and /or to invest in ways to circumvent regulation. According to some studies, it could even ultimately affect economic growth (Jalilian et al., 2007).

The capital requirement is one of the bank regulations, which sets a framework on how banks and depository institutions must handle their capital. The Categorization of assets and capital is highly standardized so that it can be risk weighted. Capital adequacy has been the focus of many studies and regulator as it is considered to be one of the main drivers on any institution's

performance (Bourke, 1989). In contrast other studies argue that in a world of perfect financial market, capital structure and hence capital regulation is irrelevant (Modigliani and Miller, 1958). However, White and Morrison (2001) posited that the regulator ensures that banks enough of their own capital at stake. Financial performance is the primary goal of all commercial bank. Without financial performance the business will not survive in the long run.

Research on these types of issues, therefore, is critical because it will enable us to identify the particular mix of regulations and supervisory standards promote well-functioning of commercial banks in Rwanda and thus provide better guidance to policy makers on appropriate reforms. Already, ongoing research is significantly improving our understanding of the broad relationships between the type of legal system within a country and its banking sector

1.1.1 Bank Regulation and financial performance

One key component to any financial market is the banking system. Banks facilitate financial development by mobilizing and allocating funds to investment projects with the greatest long-term economic benefits. Moreover, it is widely acknowledged that a well structured banking system, defined by its supervisory practices, risk taking, and governance, promotes greater financial performance and economic stability (Caprio and Levine, 2006). Promoting sound banking practices, however, has proven to be difficult. Differences with respect to corruption, democracy, and legal origin, for example, create heterogeneous regulatory environments that impede the implementation of universally effective policies. The intent of this study is to empirically evaluate the association between a commercial banking regulation and its overall level of income and income growth.

Effective bank regulation has two main objectives: the first is to protect private interests of depositors, investors, and creditors; the second is to safeguard public or collective interest by promoting the integrity and reputation of financial services markets. The wave of deregulation of the financial services in the 1980s and the recent globalization of the industry have both counterbalanced by a rise in regulations and enforcement actions (Gully, 2005).

Giddy (1984) and Sheng (1999) provide four major reasons why banks should be regulated.

The first relates to monetary policy – the ability of banks to create money. Second, as channels of credit or investments, banks are involved in credit allocation. Third, banks are regulated to ensure healthy competition and innovation by preventing the formation of cartels. The fourth is for prudential regulation reasons and to mitigate the problem of asymmetric information. This view is supported by Howells and Bain (2004) who stated that the reason for bank regulation originates from the existence of asymmetric information – the fact that customers of the institutions (banks) are less informed and thus more at a disadvantage about the affairs of the banks than the bank itself.

Central Bank of Rwanda (2000), one of the major efforts at studying banks' performance in Rwanda agreed that 'inefficient supervisory action and inadequacy of regulatory framework' were among factors that could contribute to banking distress in Rwanda. It however, did not study whether or not regulation or supervision impacted on bank distress in Rwanda. It is against this background that this study tests to see whether or not the level of regulation, as enforced by the transaction based supervision, enhanced the performance of banks.

1.1.2 Determinants of performance of banks

Terance (1989) defines performance measurement as a way of ensuring that resources available are used in the most efficient and effective way. The essence is to provide for the organization the maximum return on the capital employed in the business. Financial performance for banks is very important because managers need to know how well the banks are performing.

Most studies divide the determinants of commercial banks performance into two categories, namely internal and external factors. Internal determinants of profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial statement variables and nonfinancial statement variables. While financial statement variables relate to the decisions which directly involve items in the balance sheet and income statement; non-financial statement variables involve factors that have no direct relation to the financial statements. The examples of non-financial variables within the this category are number of branches, status of the branch (e.g. limited or full-service branch, unit branch or multiple

branches), location and size of the bank. Haron, (2004), External factors are those factors that are considered to be beyond the control of the management of a bank. Among the widely discussed external variables are competition, regulation, concentration, market share, and ownership, scarcity of capital, money supply, inflation and size.

1.1.3Banking industry in Rwanda

Commercial banks sector in Rwanda is made of eleven Commercial banks licensed by the Central bank of Rwanda. However all the eleven commercial banks have formed the association of commercial banks in Rwanda with an objective of developing mechanism of ensuring professionalism and regulation of the banking sector.

The services offered by the banking operations include cheques and transfer orders processing, cash deposits and withdrawals, cheques certifications and cash deposits and withdrawals as well as opening and closing of accounts. During the first half of the year 2012, the cash operations decreased in volume by 8.5% and increased by 26.7% in value as compared to the same period. The volume of operations related to funds transfers processing decreased to 29.0% from 147.5 thousands operations in 2011 to 104.8 thousands of operations in 2012, while the value of those operations increased to 126.5% as compared to the same period in 2011. In the same period, the cheques processing increased by 67.0% in 2012 as compared to 2011 in terms of volume and 364.0% in value.

The main actors who are playing an important in the area of banking industry are the Regulatory authority (Central Bank of Rwanda), Second is the Ministry of finance , Third is the Network of Banking institutions which is the professional association which provides the framework for consultation with external institutional partners.

1.2 Statement of the Problem

The financial sector is one of the most heavily regulated sectors in the economy and banking is by far the most heavily regulated industry. Bank regulation typically refers to the rules that govern the behavior of banks, whereas supervision is the oversight that takes place to ensure that banks comply with those rules.The issue of financial regulation – particularly in relation to the banking sector – is often considered a controversial issue. Regulation is costly and can give rise

to moral hazard problems. In addition distortions between regulated and unregulated institutions can occur (Barth et al., 2006).

Barth et al. (2004) find that increasing the level of restrictions move together with crises. Similarly, more restriction comes with lower level of bank development. However, they do not provide a clear-cut explanation on the nature of relationship. While, we expect that regulators are ill-equipped with crises for a number of reasons, the direction of causality requires more work. It is our expectation that causality works both ways. Powerful regulators may not correctly find problems and cures for them. On the other hand, expected crises provide more reasons to control.

Barth et al., (2004) do not find a strong association between bank development and performance and official supervisory power, including the quality of regulatory power. This is understandable, because the stability of the rules of the game is more important than behaviors of players. In this vein, they find a positive relationship between supervisory tenure and bank performance, which reflects the effect of regulatory commitment on the industry.

Most of the studies done on the relationship between banks regulation and bank performance of commercial banks have been conducted in the developed countries. Banks in Rwanda are required to adhere to regulations set by Central bank of Rwanda. The management has to present the capital adequacy return reports, liquidity statement reports, Statement of financial of financial position and statement of deposit return as well as return on investment which compares financial assets to the bank's total assets and its core capital. Despite the role played by the central bank of Rwanda, there has been no local study conducted on the relationship between bank regulation and commercial bank performance, it is against this backdrop in the research that this study seeks to fill the existing research gap by conducting a study on to determine the relationship between bank regulation and financial performance.

1.3 Objective of the Study

The objective of the study is to establish the relationship between regulation and financial performance of commercial banks in Rwanda.

1.4 Importance of the Study

This study is for importance to the banking sector to gain understanding in the patterns of the bank regulations and the objective of performance of commercial banks in Rwanda. It is also be of benefit to the number of players in the Rwanda banking regulatory such as Central Bank of Rwanda in order to improve regulations in the industry . This study will contribute to the knowledge of Commercial banks of how maintain and sustain performance by following the rules of the industry. The study will advance the literature on bank regulation and is a basis for further research. Very few research and studies have been done assessing the regulation of banks in Rwanda. Findings for this study will help the Government of Rwanda in reforming banking regulation that pertains to the running of banking industry.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are theoretical review. The chapter is organized according to specific objectives in order to ensure relevance to the research problem. The review is undertaken to eliminate duplication of what has been done by other scholars and to provide a clear understanding of the existing knowledge base in the problem area.

2.2 Theoretical Review

In trying to explain the relationship between regulation and commercial banks performance, several theories have been advanced. Banking regulations have attracted both theoretical and empirical interest, and several studies attempt to assess whether and how the regulatory framework influences the performance and behavior of banks. The release of Basel II has generated a lively discussion and, while around 100 countries are currently planning to adopt the new framework by 2015, there is still an on-going debate as to its costs and benefits (Herring, 2005).

The following section will describe and discuss different theories such as Agency theory, economic theory and liquidity theory.

2.2.1 Agency Theory

Agency theory deals with two problems in agency relationship (Jensen and Mecling 1976). The first is the agency problem that arises when the goals of the principal and the agent are conflict and when it is difficult for the principal to verify what the agent is doing. The credit relationshipcan be likened toanagency relationshipby which the creditor(the principal)"says" some of his wealthto debtors(agents) who are committed tohimcapital repaymentsandinterest costswith the conditions establishedin a contractpreviously establishedbetween the two parties. One can thusinferadivergenceof interestbetween creditor and debtor.

The former want the repayment of capital borrowed and the latter want to maximize the profitability of it.

This problem is worse when information asymmetry is exaggerated. In the general finance system and in the bank regulation in particular, information asymmetry problems are bigger than in other sectors. Howels and Bain (2004) stated that the reason for bank regulation originates from the existence of asymmetric information the fact that the customers of banks are less informed and thus more at a disadvantage about the affairs of the banks than the bank itself.

2.2. 2 Economic Theory

Regulation consists of rulemaking and enforcement. Economic theory offers two complementary rationales for regulating financial institutions. Altruistic public theories treat rules as governmental instruments for increasing fairness and efficiency across the society as a whole. Agency cost theory recognizes that incentive conflicts and coordination problems arise in multi-party relationship and that regulation introduces opportunities to impose rules that enhance the welfare of one sector of society at the expense of another (Diamond and Dybvig, 1983). Each rationale sets different goals and assigns responsibility for choosing and adjusting rules differently. Altruistic assign regulation to governmental entities that search for market failures and correct them. It is taken for granted that we may rely on a well-intentioned government to use its discretion and choose actions for the common good. (Jensen and Michael, 1994).

Agency-cost theories portray regulation as a way to raise the quality of financial services by improving incentives to perform contractual obligations in stressful situations. These private benefits theories count on self-interested parties to spot market failures and correct them by opening more markets. In financial services markets for regulatory service create outside discipline that controls and coordinates industry behavior. Institutions benefit from regulation that: enhances customer confidence; increases the convenience of customer transactions; or creates cartel profit. Agency-cost theories emphasize the need to reconcile conflicts between the interests of institutions, customers, regulators and taxpayers (Edwards, 1997).

2.2.3 Liquidity Theory

Holmstom and Tirole (1998) provided a theory of liquidity in a model in which intermediaries have borrowing frictions. In their Model, a government has an advantage over private markets because it can enforce repayment of borrowed funds while the private markets because it can enforce repayment of borrowed funds while the private lenders cannot. They show that availability of government provided liquidity leads to a Pareto improvement where there is aggregate uncertainty. They further argue that the role of the government is thus to correct any inefficiencies arising from externalities and private information and possibility of hidden trades.

2.3 Objectives for Financial Regulation.

Llewellyn (1998) highlights three core objectives of regulation as; to sustain systemic stability; to maintain the safety and soundness of financial institutions and to protect the consumer. His argument is that the objectives depend on various market imperfections (especially externalities and asymmetric information which in the absence of regulations, produce sub-optimal results and reduce consumer welfare.

Banks have a pivotal position in the economy for two reasons: they are the only source of finance for a large number of borrowers (Bernanke, 1983) and, more importantly, the resultant financial disruption is likely to be more serious than would be the case with other sectors of the financial system.

2.3.1 Prudential Regulations

There is also a case for prudential regulation that is for safety and soundness by reducing the probability of banks failing, which is independent of any systemic dimension. There are costs associated with financial institution failures which are different from systemic costs. In the absence of one involved.

2.3.2 Minimum Capital

The first prudential standard is the minimum amount of liquid capital that banks should raise to entry the regulated market (Staschen, 2003). This requirement is an absolute measure of solvency and is usually established by primary regulation (Staschen, 2003). It is justified on the

grounds of influencing the structure of the financial system. It serves as a cushion in periods when the institution shows an unhealthy situation due to its own performance or to exogenous factors such as economic downturns (Christen et al., 2003).

Some argue that the high minimum capital requirements could act as barriers to market entry to possible new players that are not able to raise capital for the initial stages as a regulated institution (Janson, 1997). But, on the other hand, a high minimum capital requirement could help to mitigate moral hazard behavior among shareholders (Janson et al, 2004). In addition, a high minimum capital requirement is often seen as one tool for limiting the number of institutions that the supervisory body should be responsible for monitoring, especially if the supervisory resources are scarce (Schmidt, 2000).

2.3.3 Capital Adequacy

Capital adequacy refers to a relative measure: it establishes the maximum level of leverage that a financial institution is allowed to reach on its operations (Jansen, 1997). It is measured by the ratio of risk weighted assets relative to regulatory equity, which has been internationally recommended to be equal to12.5 times, or commonly known as a capital adequacy of 8% (Janson, 1997). Nonetheless, it has to be remembered that this prudential standard proposed by the Basel Committee was intended to be applied to international and large banking institutions from developed countries, and that it has been translated to several financial systems in developing countries despite the well-known differences in institutional risk profile, scale of operations and national economic environments (Guidottiet al, 2004; Janson, 1997)

2. 4 Empirical Evidence

A number of empirical studies have sought to estimate the effects of different regulatory determinants and show former some empirical findings within these areas. Specifically the sections will be concerned with the relationships between regulation and financial performance of financial institutions.

Eurlong (1992), Haubrich and Wachtel (1999), concluded that the capital regulations in credit Unions in the U.S. contributed to a decrease in lending that helped fuel a post –capital requirements credits crunch. Berger and Udell (1994) examine whether the risk –based capital

requirements put into place in the late 1980s contributed to the so-called "credit crunch "that occurred in the United States in the early 1990s. They find evidence that other sources of loan supply reduction or declines in loan demand in the early 1990s played much more prominent role in reducing financial institutions lending. In contrast, Peek and Rosengren (1995) conclude that there is considerable evidence, at least for New England, that both lower loan demand and a capital-crunch-induced decline in loan supply together brought about a decline in lending. Brinkmann and Horvihtz (1995) also find evidence of significant loan supply responses to the Basle I capital requirements. Wagstar (1999) reaches the same conclusion for Canada and the U.K. He fails to find support, however, for this result in the cases of Germany, Japan, and the U.S., where he concludes that a number of factors played a role in generating a credit crunch.

Benh-Khedhiri, Casu, and Sheik-Rahim (2005), study on profitability and interest rates differentials in Tunisian banking industry. More specifically, they focused on the determinants of credits unions' net interest margins as indicators of the sector's efficiency. The study seeks to establish the direct effects of capital regulations and capital requirements.

Not all researchers agree that capital regulation has had significant effects on Financial Institutions. Jackson el al. (1999) review a number of prior studies investigating how capital adequacy regulation influence actual capital ratio; such as Rime (2001). Jackson et al conclusion is that in the near term financial mainly respond to strict capital adequacy by reducing lending and that there is little conclusive evidence that capital regulation has induced financial institutions to maintain higher capital to assets ratios than the otherwise would choose if unregulated.

Hughes et al.,(2001) find that when capital is included in cost functions to derive scale economies, this generally has a positive influence in terms of generating returns to scale (constant returns tend to be found when capital is excluded from their cost function estimates). Others, such as Altunbas et al. (2000), Färe et al. (2004) also find that capital can significantly influence bank cost and profit efficiency measures. Altunbas et al. (2007) in their cross-country study of European banks, for instance, find that relatively inefficient banks appear to hold more capital, while evidence from the other literature is mixed. While this literature clearly indicates that capital influences bank efficiency it is difficult to extrapolate the expected direction of its

influence on performance, as it is very likely to depend on the relative changes of inputs and outputs in the production process over time.

The extent that bank productivity is related to the transformation of inputs like deposits to outputs like loans, capital requirements may affect productivity through various channels. The first channel is through the impact of capital requirements on bank lending, which is generally supported by the theoretical literature. For example, Kopecky and VanHoose(2006) argue that capital requirements influence bank decision-making in terms of both the quantity of lending and the quality of the loans made. Their theoretical model illustrates that the introduction of binding regulatory capital requirements on a previously unregulated banking system reduces aggregate lending, while loan quality may either improve or worsen.

For example, Thakor (1996) argues that in a competitive environment, an increase in the minimum capital requirement will result in higher loan-funding cost and lower profit from lending, since the bank is unable to pass this cost to borrowers. Thus, lending will be less attractive relative to investing in government securities, which do not require capital to be held against them. However, the mix of assets can have a substantial impact on productivity, if banks are not equally efficient in managing various categories of assets. Productivity can also be influenced through the impact of capital requirements on the liability side of banks' balance sheets. This is based on the fact that deposits and equity may be alternative sources of funds for regulators (Santos, 1999). Nevertheless, banks may be forced to substitute equity for deposits and issue new equity to meet capital adequacy requirements. Indeed, Santos (2001) points out that even though an increase in capital standards may improve bank stability, it may not be desirable since it decreases deposits. Obviously, this decrease in the level of deposits can have an impact on productivity. Furthermore, Besanko and Kanatas (1996) outline that in the case of the above scenario, where banks issue new equity, agency problems may arise, as it is likely that insiders (i.e. existing shareholders) will become less productive monitors. Differently phrased and from a corporate governance perspective, less monitoring may lead managers to allocate funds less efficiently.

Related empirical research that focuses on other aspects of banks' performance also seems to generate mixed findings. Barth et al. (2004) find that while stringent capital requirements are associated with fewer non-performing loans, capital stringency is not robustly linked to banking sector stability, development or performance, when controlling for banks. However, because capital is more expensive than deposits, banks will generally choose to operate with the minimum capital level specified by differences in regulatory regimes. Pasiouras et al. (2006) find a negative relationship between capital requirements and banks' soundness as measured by Fitch ratings. In contrast, Pasiouras (2008) reports a positive association between technical efficiency and capital requirements, although this is not statistically significant in all cases. The empirical results are yet again mixed. Barth et al. (2004) indicate that there is no strong association between bank development and performance and official supervisory power. However, the results of Barth et al. (2002) show those more powerful government supervisors are associated with higher levels of non-performing loans, while Barth et al. (2003) find that official government power is particularly harmful to bank development in countries with closed political systems.

Barth et al., (2004) summarize various reasons for which this can have a negative influence on bank performance. For example, politicians may use powerful supervisors to persuade banks to lend to favoured borrowers on advantageous terms. Furthermore, politicians and supervisors may use their power to benefit certain constitutes, attract campaign donations, and extract bribes (Djankov et al., 2002). Obviously, when banks are forced under the threat of a non-compliant discipline to direct their credit to politically connected firms, they cannot use risk-return criteria (Beck et al., 2006). In addition, Levine (2003) mentions that powerful banks may, under the political/regulatory capture theory, confine politicians and induce supervisors to act in the interest of banks rather than the interest of the society (Stigler, 1971).

The results of Pasiouras et al. (2006) also indicate a negative relationship between supervisory power and overall bank soundness (i.e. credit ratings). In contrast, after controlling for accounting and auditing requirements, Fernandez and Gonzalez (2005) report that in countries with low accounting and auditing requirements a more stringent disciplinary capacity of supervisors over management action appears to be useful in reducing risk-taking. Furthermore,

Pasiouras (2008) finds a positive and statistically significant impact of supervisory power on technical efficiency in most of his specifications.

On the basis of the above discussion, it seems likely that the performance of banks will be influenced by the power of the official supervisors, although, like in the case of capital regulation, it is again difficult to predict the precise direction of this relationship.

Most of the empirical studies tend to support the view that market discipline will have a positive impact on the banking industry. Barth et al. (2004) find that regulations that encourage and facilitate private monitoring of banks are associated with greater bank development and lower net interest margins and non-performing loans. Additional results from Barth et al. (2007) indicate that private monitoring has a negative impact on overhead costs and enhances the integrity of bank-firm relations. Pasiouras (2008) reports a robust positive and significant relationship between disclosure requirements and technical efficiency. Demirguc-Kunt et al. (2008) find that countries where banks have to report regular and accurate financial data to regulators and market participants have sounder banks.

Finally, Beck et al. (2006) show that empowerment of private monitoring facilitates efficientcorporate finance and has a beneficial effect on the integrity of bank lending in countries with sound legal institutions. However, Barth et al. (2004) indicate that there is no evidence that regulations that foster private monitoring reduce the likelihood of suffering major banking crises. Furthermore, Pasiouras et al. (2006) find a negative relationship of credit ratings with disclosure requirements, which is however significant only at the 10% level and is not robust across their specifications. To this end, again we expect the productivity of banks to be related to the level of private monitoring although we cannot certain ex ante whether this will have a positive or negative relationship.

Barth et al. (2004) find a negative association between restrictions on bank activities and banking sector development and stability. Barth et al. (2001) also confirm that greater regulatory restrictions on bank activities are associated with higher probability of suffering a major banking

crisis, as well as lower banking sector efficiency. Lower restrictions on bank activities have also been associated with higher credit ratings (Pasiouras et al., 2006). In

Contrast, Fernandez and Gonzalez (2005) find that stricter restrictions on bank activities are effective at reducing banking risk, although the authors indicate that restrictions are only effective at controlling risk when information disclosure and auditing requirements are poorly developed.

Demirguc-Kunt et al. (2004) report a positive and significant association between net interest margins and restrictions on activities. Finally, Pasiouras (2008) finds no significant association of restrictions on activities with technical efficiency. Given the impact reported in the majority of the studies, we expect bank performance to be influenced by restrictions on their activities, although the extent and direction of this influence is difficult to predict.

Benson (2011) in his study of the impact of SASRA Regulations on SACCO financial performance in Kenya he found that capital requirements, and increase in management efficiency impacted positively to SACCO's profitability in the post capital regulation period. The study revealed that capital regulation affects financial performance in SACCOs. For the policy implications, the findings indicate the importance of reviving demand for credit using macroeconomics policies.

2.5 Measuring Bank Financial Performance

In order to be able to assess the effects that regulation had on the performance of banks, it is important to define performance in relation to banks. Two starting points to this could be taken. Either bank performance could be looked upon from a market perspective, by looking at stock returns and interpreting changes in these as the market's opinion of the performance and future prospects of the banks, or alternatively the starting point can be taken in accounting figures and using accounting returns as indicators of bank performance.

ROA is a widely used measure when stat-ing bank performance and it shows the percentage return on the banks average asset. It is connected with ROE through the equity multiplier, which portrays the levering up of ROE that is due to the bank having debt. A high equity multiplier is attained through a high asset to equity ratio and has a twofold effect. In periods of positive ROA

it en-hances the ROE, but in periods of negative ROA it further deteriorates ROE. The equity multiplier hence measures financial leverage and is both a measure of risk and profit, and high EM values indicate both high capital- and solvency risk. (MacDonald & Koch 2006)

2.6 Conclusion

The literature reviewed above noted that commercial bank could be examined in two main polar: bank regulation and financial sustainability. The term financial performance is mostly used interchangeably with other concepts like profitability, financial efficiency, financial performance (Ledgerwood, 1999; Hulme and Mosley, 1996). This study uses the term performance to mean the ability of commercial banks to exist indefinitely by generating returns ("ceteris paribus) while providing financial services.

The empirical studies identifies that there is a need of regulating Banks with emphasis on the impact of the regulations to Banks financial performance. Studies done by different authors such as Altunbas et al., (2007) find that capital can significantly influence bank cost and profit efficiency measures.Barth et al. (2004) find also a negative association between restrictions on bank activities and banking sector development and stability. Commercial Bank regulations giving varied results, some showing a strong relationship between the two variables but disapproved by other scholars. The study will concentrate on regulations determining reserve requirements, capital requirements, and deposits coverage of banks.

For Rwanda, as mentioned no one has done a study regarding commercial bank regulations. Thus this study is justified by this lack of empirical study at the country level on the relationship between commercial bank regulations and its performance.

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapterpresent the research design and methodology that was used to carry out the research. It present the research design, the population, sample size and sampling procedure, data collection, data analysis.

3.2 Research Design

Research design is a logical and systematic plan for directing a research study. It specifies the objectives of the study, the methodology and techniques to be adopted for achieving the objectives (Mugenda and Mugeenda, 2003). Descriptive Research was the investigation in which quantity data was collected and analysed in order to describe the specific phenomen in its current trends, current events and linkages between different factors at the current time. A descriptive research design assisted to examine the relationship between bank regulation and financial performance of commercial banks in Rwanda.

3.3 Population and Sample

The target population was ten commercial banks registered at the central bank of Rwanda (BNR) which supervise the activities of commercial banks in Rwanda. The list was obtained from the central bank of Rwanda. The researcher collected data from eight commercial banks the based in Kigali.

3.4 Data Collection

The study used secondary data for the purpose of analyzing the relationship between bank regulation and financial performance for commercial banks institutions. The secondary data was collected from the financial statements of the banks and books to collect information on annual earnings of the banks, profits and loss accounts and balance sheets of banks registered under Central Bank of Rwanda.

3.5 Data Analysis

The study used Statistical Package for Social Science (SPSS17) to analyze quantitative data. A set of key financial ratios was used to compute for 4 years to highlight the change of capital requirements. The patterns in the data have been identified and useful inferences have been studied with a regression approach.

The study explained financial performance (ROA) in the commercial banks supervised by central bank of Rwanda, using empirical model that includes a measure of capital regulations plus a number of other major determinants. The capital was explained by the ratio of net interest income over average total assets. The performance was represented by return on assets which shows the ability of commercial banks to generate profit from Banks assets. There are many variables that could be considered as proxies of return on asset. In this study the attention has been given to the capital regulation.

A linear regression model of financial performance versus regulation has been applied to examine the relationship between the variables. The model treats financial performance of commercial banks as dependent variable while independent variables are bank regulations. The significance of each independent variable has been tested. Fischer distribution test called F- test has been used to test the significance of the overall model at a 95% confidence level. This model was based on the study done by Benson Musyoka (2011) where he was analyzing the impact of SASRA regulations on SACCO financial performance in Kenya. The relationship equation represented in the linear equation below:

$PERF = B_o + B_1 S_1 + B_2 S_2 + B_3 S_3 + e$

Where

$PERF$ = ROA (Return on Assets)

B_o = Constant Term

B_1 = Beta Coefficient

S_1 = Capital requirement ratio

S_2 = Liquidity Ratio

S_3 = Management Efficiency ratio

e= Error Term

In this study three measures of capital regulation were used. The first one is the ratio of capital to total assets (CAPR) where CAPR is equal to Equity over total assets. To test the effects of capital ratio over time, the study saw the variation of capital ratio before and after the change of capital regulation.

Liquidity ratio equals to net loans over short term borrowing. Higher figures denote lower liquidity. This variable measures the risk of not having sufficient reserve of each cash to cope with withdrawal of deposits. Predictions vary regarding the effects of liquidity on the cost of intermediation and profitability.

Management efficiency is the ratio of earning assets to total assets. The higher the ratio the higher management efficiency. This means that managers will increase the cost of intermediation which will enhance profits.

3.6 Data Reliability and Variability

Validity indicate that the degree to which the instrument measures the constructs under investigation (Mugenda and Mugenda, (2003). This study used content validity because it measured the degree to which the population represents the contents that the test will be designed to measure. Reliability estimated the consistency of measurement, or more simply the degree to which an instrument measure the same way each time it is used under the same conditions with the same subjects.

CHAPTER FOUR

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Introduction

Raw data, descriptive statistics and data analysis are presented on this chapter. This study was quantitative in nature and used analysis of secondary data to arrive at various conclusions in order to address the research objectives.

4.2 Response Rate

The sample of the study was ten commercial banks which are registered by the central bank of Rwanda. This study managed to get data for eight commercial banks which represent 80% of all the commercial banks the other two commercial banks were the microfinance up 2011 they got a licence to operate as a commercial bank in 2012 the reason why we didn't include them into our analysis. Corroborative data was gathered from the annual reports of those commercial banks. These commercial banks that responded are also the largest in terms of asset size and they constituted more than 98% of the total assets of the ten commercial banks.

4.3.Data Presentation

The data that was collected was for four years for the period 2009 to 2011. Raw data is presented first then followed with correlation and regression analysis.

Table 4.1: Four Year Mean of Dependent and Independent Variables

Name of Bank	Mean ROA(%)	Mean capital requirement(%)	Mean liquidity	Mean man. efficiency
BCR	6.43	12.58	44.84	67.25
KCB	5.09	14.06	42.04	-4.46
BANK OF KIGALI	5.22	18.84	50.02	58.42
FINA BANK	6.87	13.53	51.46	52.08
ACCESS BANK	5.05	12.86	99.49	4.31
ECOBANK	7.77	12.81	55.03	10.28
COGEBANK	6.57	11.94	45.05	61.22
BPR	10.56	13.87	41,57	9.08
AVERAGE	**6.69**	**13.81**	**55.41**	**32.27**

4.3.1 Descriptive statistics

Table 4.1 shows the average of the dependent and independent variables over a period of four years (2009 -2012). The data shows that return on assets for BANQUE POPULAIRE DU RWANDA had the highest average of 10.56% and the lowest being 5.05% of ACCESS BANK. A positive returns on assets for the period of four years shows that there was an average profit for the period.

BANK OF KIGALI has the highest ratio of capital requirement for the four year with 18.84% while the lowest was COGEBANK with 11.94%. ACCESS BANK had the highest ratio of liquidity with 99.49% while KENYA COMMERCIAL BANK had an average ratio of 42.04%.This means that ACCESS BANK denote lower liquidity. RWANDA COMMERCIAL BANK had the highest average ratio of management efficiency of 67.02% compared to KENYA COMMERCIAL BANK which had the lowest ratio of -4.46%.

The following section discusses the raw data for the respective variables for each of the MFIs.

Table 4.2: Return on Assets Trend –Percentage

Name of Bank	2009	2010	2011	2012
BCR	4.06	4.69	7.92	9.07
KCB	3.06	4.97	5.38	6.98
BANK OF KIGALI	7.08	3.51	3.61	6.71
FINA BANK	7.34	8.72	5.57	5.86
ACCESS BANK	6.52	4.97	4.83	3.89
ECOBANK	4.77	8.67	8.74	8.91
COGEBANK	5.65	6.75	6.8	7.11
BPR	9.63	8.97	11.21	12.45

Table 4.2 shows the trend of returns on assets. BCR, KCB,ECOBANK,COGEBANK and BPR had the best trend of return on assets and also had steady improvement over the four years. BANK OF KIGALI, FINA BANK and ACCESS BANK had positive return on assets with some years experiencing declining trend.

4.3 Mean Capital Requirement-Percentage

Name of Bank	2009	2010	2011	2012
BCR	10.11	12.85	13.33	14.03
KCB	12.41	14.61	16.11	13.12
BANK OF KIGALI	15.54	16.12	21.39	22.34
FINA BANK	13.43	15.45	12.16	13.11
ACCESS BANK	9.54	12.45	11.91	17.57
ECOBANK	14.87	10.61	12.64	13.14
COGEBANK	10.15	11.78	12.16	13.67
BPR	13.83	14.02	13.4	14.24

Table 4.3 shows the trend on average capital requirement ratio. BANK OF KIGALI had a consistent growth over the years. This shows that the capital has been growing over the years. The rest of the commercial banks had unstable growth of capital with some years increasing while in other years decreasing. This shows that the total assets have been increasing too much compared to the equity hence reducing the capital requirement ratio.

4.4 Mean liquidity-Percentage

Name of Bank	2009	2010	2011	2012
BCR	50.91	50.36	33.28	44.84
KCB	48.51	45.67	40.04	33.97
BANK OF KIGALI	27.57	43.9	60.8	67.81
FINA BANK	51.97	57.71	50.05	46.12
ACCESS BANK	110.11	114.53	88.73	84.62
ECOBANK	64.07	48.07	51.5	56.5
COGEBANK	45.71	42.34	52.56	53.41
BPR	37.62	46.05	35.58	47.05

Table 4.4 shows the trend liquidity ratio over the four year period. ACCESS BANK had the highest liquidity ratio in 2009 and 2010 but all the banks had a positive liquidity ratio, the higher the liquidity ratio the lower the liquidity.

4.5 Management Efficiency- Percentage

Name of MFI	2009	2010	2011	2012	Mean Trend
BCR	59.16	68.86	69.34	71.64	**67.25%**
KCB	-2.61	-2.62	-2.91	-9.73	**-4.46%**
BANK OF KIGALI	87.51	29.2	29.5	87.5	**58.42%**
FINA BANK	34.63	30.57	65.53	77.62	**52.08%**
ACCESS BANK	-21.26	15.1	12.33	11.08	**4.31%**
ECOBANK	9.27	10.1	11.51	10.24	**10.28%**
COGEBANK	56.78	60.5	61.51	66.12	**61.22%**
BPR	7.13	9.25	7.29	12.67	**9.08%**
AVERAGE	**28.82%**	**27.62%**	**31.76%**	**40.89%**	**32.27%**

Table 4.5 shows the trend of management efficiency ratio. RWANDA COMMERCIAL BANK had the highest of management efficiency. KENYA COMMERCIAL BANK had the lowest management efficiency ratio of -4.46%.

4.4 Regression Analysis

Table 4.6: Pearson Correlation Coefficients

	ROA	Capital R.	Liquidity	Man. Efficiency
ROA	1			
Capital R.	-.238	1		
Liquidity	-.381	-.137	1	
Man. Efficiency	-.146	.148	-.325	1

Correlation coefficient indicates the degree of linear relationship between two variables. Table 4.6 shows the Pearson correlation coefficients between the variables. Returns on assets had the negative correlation (-23.8%) with the capital requirement which means that they are insignificant. Return on assets and liquidity efficiency had highest negative correlation of -38.1%. Then return on asset had a negative correlation with management efficiency of -14.6%. The only positive correlation exists between capitalrequirement and management efficiency of 14.8% while other correlation were negative. The negative correlation shows that there is insignificant correlation between two variables.

Table 4.7: Analysis of Variance - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.990	3	2.330	.559	.670
Residual	16.678	4	4.170		
Total	23.668	7			

Table 4.7 shows that variations in the performance (return on assets) can be explained by the model to the extent of 6.990 out of 23.668 or 29.5% while other variables not captured by this model can explain of the 70.5% (16.678 out of 23.668) of the variations in return on assets. The F value of the model produces a p-value of 0.670 which is significantly different from zero. A p-value of 0.670 is greater than the set level of significance of 0.05 (0.670>5%) for a normally distributed data. This means that the model is not significant in explaining performance of the eight Commercial banks. This calls for a further study which can include other determinants of performance.

Table 4.8: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	12.996	5.869		2.214	.091
Capital R.	-.228	.365	-.267	-.627	.565
Liquidity	-.049	.043	-.505	-1.133	.321
Man. Efficiency	-.017	.027	-.270	-.605	.578

The regression output is laid on Table 4.8. The beta coefficients to be used in this study are the unstandardized coefficients. The results indicate that a unit change (1%) in the capital requirement causes a decline of -0.228 (-22,8%) change in the return on assets of the eight commercial bank. This indicates that Capital requirement does not have an influence on financial performance (return on assets) of the eight Commercial banks which means that capital requirement is not a predictor of financial performance of eight commercial banks in Rwanda. Liquidity is also not a predictor of financial performance or return on assets. A unit change (1%) in liquidity leads to a decline of -0.49 (-49%) unit change in profitability of the eight commercial banks. A unit change in management efficiency leads to a negative change of -0.17 (-17%) change in the financial performance (return on assets) of the eight commercial banks. This make us hold our null hypothesis that financial performance may be under influence of other factors than capital requirement, liquidity and management efficiency used in our model.

In terms of significance of each of the predictors, a t-test statistics has been used to generate a p-value or coefficient of significance. A scan of the p-values of all the three predictors shows that none of the p-values is less than 0.05. This means that capital requirement (p-value of $0.565>0.05$), liquidity (p-value of $0.321>0.05$) and management efficiency (p-value of $0.578>0.05$) are not significant in explaining financial performance of the eight commercial banks in Rwanda. This is the key finding of this study.

Table 4.9: Model Summary – Goodness of Fit

Indicator	Coefficient
R	0.543
R Square	0.295
Adjusted R Square	-0.233
Std. Error of the Estimate	2.04194

The key test for the study used a regression equation model in the form of

PERF= $B_o+B_1S_1+B_2S_2+B_3S_3+e$. Table 4.9 shows the output for model fitness. The R coefficient of 0.543 indicates that the predictors of the model which are capital requirement ratio, liquidity ratio andmanagement efficiency ratio have a correlation of 54.3% with the dependent variable of return on assets. The R square also called coefficient of determination of 0.295 indicates that the model can explain only 29.5% of the variations in the return on assets of the eight commercial bank in Rwandaand that there are other factors which can explain 70.5% of the variations in return on assets. This shows that the independent variables (capital requirement ratio, liquidity ratio, and management efficiency) of this study are not significant predictors of the performance of the eight commercial banks in Rwanda.

4.5 Summary and Discussion of Findings

Regarding the descriptive statistics,ithas been shown that the average of the dependent and independent variables over a period of four years (2009 -2012) were positive . The data has shown that return on assets for BANQUE POPULAIRE DU RWANDA had the highest average and the lowest being of ACCESS BANK. Descriptive statistics revealed also that the trend of returns on assets of BCR, KCB,ECOBANK, COGEBANK and BPR had the best trend of return on assets and also had steady improvement over the four years. BANK OF KIGALI, FINA BANK and ACCESS BANK had positive return on assets with some years experiencing declining trend.

It has been shown in the analysis that the trend on average capital requirement ratio of BANK OF KIGALI had a consistent growth over the years. This revealed that the capital grew over the four years. Descriptive statistics has shown that the rest of the commercial banks had unstable growth of capital with some years increasing while in other years decreasing.ACCESS BANK had the highest liquidity ratio in 2009 and 2010 but all the banks had a positive liquidity ratio, the higher the ratio the lower the liquidity. Descriptive statistics revealed that RWANDA COMMERCIAL BANK had the highest management efficiency ratio and KENYA COMMERCIAL BANK had the lowest management efficiency ratio.

The Pearson correlation coefficients between the variables revealed that Returns on assets had a negative correlation with the capital requirement. It has been revealed again that Return on assets and liquidity efficiency had the highest negative correlation. Finally, return on asset had a negative correlation with management efficiency. The only positive correlation existed between capital requirement and management efficiency.

Annova showed that variations in the performance (return on assets) could be explained by the model to the extent of 29.5% while other variables not captured by this model could be explainedto the extent of 70.5% of the variations in return on assets. In terms of significance of each of the predictors, a t-test statistics has been used to generate a p-value or coefficient of significance. Then the result has shown that capital requirement ratio, liquidity ratio, management efficient ratio are not significant in explaining financial performance of the eight commercial banks in Rwanda.

The general objective of this study was to find out whether Regulation has relationship with the Financial Performance for the commercial bank in .One of the role of bank regulation is to promotethe integrity and reputation of financial services markets. It has the determinants in the study such as capital requirement ratio, liquidity ratio as well asmanagement efficiency ratio. Financial Performance was measured by the Return on Assets of each commercial bank in Rwanda. The first objective was to establish how the capital requirement ratio had a relationship with financial performance or return on asset in Rwanda. The study finds a negative relationship between capital requirement and financial performance or return on assets of eight commercial banks in Rwanda. These findings corroborate the results of a study done by Altunbas et al. (2007) in their cross-country study of European banks, for instance, find that relatively inefficient banks appear to hold more capital.Not all researchers agree that capital regulation hasn't had significant effects on Financial performance. Benh-Khedhiri, Casu, and Sheik-Rahim (2005), study on profitability in Tunisian banking industry. The study seek to establish the direct effects of capital regulations and capital requirements on profitability of banks in Tunisia.

The second objective was to establish whether the liquidity determined the financial performance or return on assets of commercial banks in Rwanda. It was found out that liquidity had a negative relationship with return on assets of commercial banks in Rwanda. These findings agrees with a

study done by Benson (2011) using 30 observations where it was concluded that higher percentage of liquidity is associated with a lower financial performance of MFIs in Kenya..

The third objective of the study was to test how management efficiency impact on the financial performance of the commercial banks in Rwanda. In terms of significance testing, it was found that management efficiency ratio in commercial bank in Rwanda was not a significant factor in explaining profitability. These findings are inconsistent with a study that was done in Kenya by Benson (2011) who concluded that management efficiency was a key factor to the profitability of Kenyan MFIs.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The objective of this study was to establish the Relationship between regulation and Financial Performance of Rwanda commercial bank. The study had three specific objectives of establishing how capital requirement ratio, liquidity ratio as well as management efficiency affect profitability of commercial bank in Rwanda.

The study adopted a descriptive research design which assisted to examine the relationship between Regulation and financial performance of commercial banks in Rwanda. The sample size as well as the population of the study was ten commercial banks. The response rate was eighty percent which comprised eight commercial banks. Data was gathered by analysing financial statements of commercial banks from 2009 to 2012 and the data was analysed using SPSS 17. The findings of the study in some areas concur with past studies while in others it contradicts past findings by other scholars.

The descriptive statistics revealed during the four periods that the mean ROA for the commercial banks for the four years has is a positive rate the same as the mean of capital requirement ratio, the mean of liquidity as well as the mean of management efficiency.

The Correlation analysis revealed that there is a little correlation among the independent variables and the Regression results has shown that capital requirement and management efficiency are positively and not significantly related to the Financial Performance of commercial banks in Rwanda while the liquidity is negatively and not significantly related the financial performance measured bythe Return on Assets of commercial bank in Rwanda.

5.2   Conclusions

Regarding the findings of this study some few key conclusions can be given. On a general point of view it can be concluded that Capital requirement ratio, Liquidity ratio, as well as management efficiency ratio no evidence explain financial performance of commercial banks in Rwanda.

Capital requirement may not explain the financial performance due to the fact that the total asset increase more than the equity of the commercial banks in Rwanda and this can lead to the to the low rate of profitability of the commercial banks. If we look at the equity of all the commercial banks has been increasing but this does not contribute to the increase of return on assets may be because of the increase of total assets in the particular period.

Liquidityratio has shown that it does not at all explain financial performance of commercial banks in Rwanda. This could be attributed to the increase of net loans compared to the short term borrowing. Higher figures denote lower liquidity. This variable measures the risk of not having sufficient reserve of each cash to cope with withdrawal of deposits. Predictions vary regarding the effects of liquidity profitability.

The negative relationship between management efficiency and financial performance is most likely to have been come from the highest increase of total assets in that period. Particularly in this period the cost of construction was very high to almost all the commercial banks in Rwanda consequently this has increased the total assets of the banks. Once the total are assets are very this has contributed to the variation of the ratio of management efficiency, briefly this could be the cause a negative relationship between management efficiency ratio and return on asset in that particular period.

5.3   Limitations of the Study

The study faces limitations. Obtaining of data from commercial banks was a great challenge and the management in some few commercial banks was not cooperative, the researcher managed to obtain the data for eight commercial banks that were operating as commercial banks since 2009.

Some banks provided data which was in Ksh and some were in francs so this caused a problem of having different currencies. This was resolved by converting all the figures into the same currency which is francs. A rate of 7.6 Rwandan francs to one shilling. This happened with Fina bank and Kenya commercial bank.

The study was further constrained by limited financial and time resources. The researcher had scheduled time and budget that enable the study to be completed using the budget drawn and within the required time of the study

In some financial institutions it was difficult to meet senior managers in order to allow us to get data from the finance department; they use to tell us "come after one week" this problem has been mitigated by dealing directly with finance department workers.

5.4 Policy Recommendation

Regulation is a key pillar of financial institution operations in Rwanda and by extension pillar to financial prosperity and stability. It is therefore important for the Government of Rwanda to develop policy and legal environment that is conducive to association of financial institutions. It is recommended that the commercial banks should not extremely restricted because this can create information asymmetry and consequently it leads to the poor performance of the bank. In Rwanda every year banking system contribute a good percentage of the total budget of the country, poor regulation can lead to the decrease of the contribution provided by the banking system every year.

Financial specialists will be able to appreciate the challenges that may influence financial performance of commercial in Rwanda. Many specialists may assume that all financial institutions have uniform set of factors that influence profitability. This study offers a set of factors that can always be tested which conducting financial appraisal of commercial banks . The auditors also carry out several financial tests during their audit works. Many auditors carry out

straight tests and calculations on the contribution of various components of the income statement to the profits. It would be much better for the auditors to use more advanced analysis like the one used in this study and they will be able to provide more informed guidance in their work. They can use the correlation analysis and the regression analysis to enhance the output of their work.

5.5 Suggestions for Further Studies

This study is not exhaustive in showing and explaining the determinants of regulation in commercial banks that can contribute to the financial performance. Further studies will therefore be of great use in explaining what really determines the financial performance of commercial banks.

Other researchers who are really interested may do a research of regulation and its impact on financial performance with an aim of doing cross countries comparative study and met analytical evaluation.

Another study can be conducted in Rwanda but should expand the variables. Other variables that could be included are the market discipline, supervisory power, initial capital stringency competition from commercial banks. This kind of study will have an advantage of having many variables.

The study also recommends that a further study should be carried out to determine how capital requirements canincrease financial stability in commercial banks in Rwanda. This will offer a broad analysis on impact of capital regulation on financial performance in Rwanda.

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Appendix I:List of Commercial banks in Rwanda

- Access Bank Rwanda (ABR)

- Bank of Kigali (BK)

- Commercial Bank of Rwanda (BanqueCommerciale du Rwanda) (BCR)

- BanquePopulaire du Rwanda SA (BPR)

- CompagnieGénérale de Banque (Cogebanque)

- Ecobank (Rwanda) (EBR)

- Fina Bank (Rwanda) (FBR)

- Kenya Commercial Bank (KCB)

- Urwego Opportunity Bank (UOB)

- Equity Bank

Appendix II: DATA

	BANK NAME	Return on Assets				LIQUIDITY				Man. Efficiency				Capital Requirement			
		2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
1	BCR	4.06	4.69	7.92	9.07	50.91	50.36	33.28	44.84	59.16	68.86	69.34	71.64	10.11	12.85	13.33	14.03
2	KCB	3.06	4.97	5.38	6.98	48.51	45.67	40.04	33.97	-2.61	-2.62	-2.91	-9.73	12.4	14.61	16.11	13.12
3	BANK OF KIGALI	7.08	3.51	3.61	6.71	27.57	43.9	60.8	67.81	87.51	29.2	29.5	87.5	15.54	16.12	21.39	22.34
4	FINA BANK	7.34	8.72	5.57	5.86	51.97	57.71	50.05	46.12	34.63	30.57	65.53	77.62	13.43	15.45	12.16	13.11
5	ACCESS BANK	6.52	4.97	4.83	3.89	110.11	114.53	88.73	84.62	-21.26	15,10	12,33	11.08	9.54	12.45	11.91	17.57
6	ECOBANK	4.77	8.67	8.74	8.91	64.07	48.07	51.5	56.5	9.27	10.1	11.51	10.24	14.87	10.61	12.64	13.14
7	COGE BANK	5.65	6.75	6.8	7.11	45.71	42.34	52.56	53.41	56.78	60.5	61.51	66.12	10.15	11.78	12.16	13.67
8	BPR	9.63	8.97	11.21	12.45	37.62	46.05	35.58	47.05	7.13	9.25	7.29	12.67	13.83	14.02	13.4	14.24