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TABLE OF CONTENTS

EDITORIAL

On behalf of the scientific editorial board, I extend my deep appreciation to the contribution made by lecturers and researchers that has led to the successful compilation of this publication. The completion of this volume stemmed from their will, initiative and performance as lecturers and researchers. KIGALI INDEPENDENT UNIVERSITY ULK has always paid regards to promoting education and impacting the complete development of Rwanda through coupling teaching and research. In the same context, the 37th volume of ULK Scientific Journal is now out with 5 papers which tackle issues of national and regional concern. The authors of articles in this issue suggest a number of recommendations worth taking into account by both policy makers and practitioners.

The first article by Dr. Zikamabahari Jean de Dieu is entitled The Impact of Amicus Curiae on Justice Delivery under International Criminal Tribunals. The article briefly discusses the history and development of amicus curiae, and whether the role of amicus curiae in international criminal Tribunals has diverged from its traditional concept. The article addresses the submission of briefs and the applicability of amicus curiae before ICTY and ICTR and ICC. While concluding, the author put it that the article explored the role that traditional amici curiae or 'friend of the court' play in ensuring that justice is not only dispensed but is administer fairly. The central theme

of the article is that the 'bystander' who often has an indirect interest in the case at hand, initiates an attempt to draw the presiding court's attention to matters of fact or law within his or her knowledge..

The paper by Dr. Gasheja Faustin aims at examining empirically the relationship between total equity and financial performance of commercial banks in Rwanda.

The conclusion in the paper by Dr. MASENGO Fidèle discloses that the current Rwandan legislation is very progressive when compared to the situation that prevailed before it. It goes further to say that Rwanda is now ranked amongst the few African countries that have modern legislation on arbitration. However, in light of what has been discussed in this paper, there is a need of revisiting our legislation in order to adjust and update it. In this line, the aspect of separability may also need to be reviewed to elaborate more the matter relating to the consequences caused by the principle.

The second article by Dr. GASHEJA Faustin, the impact of lending rate on demand for credit in Rwanda, used co-integration and Error Correction Models and found out that the lending rate does not impact the demand for credit in Rwanda both in long and in short run. The same models revealed that the demand for credit in Rwanda is highly impacted by the real GDP.

The last but not least, the article by RWAMUCYO et al, had the express purpose of evaluating the effect of exchange rate volatility on macroeconomic variables in Rwanda from 1985 to 2015. Precisely, the paper showed the behaviour of Rwanda exchange rate against the United States Dollar and the effect of exchange rate volatility on Economic growth (GDPG) and Consumer price index (CPI).

It is our firm belief that the volume 37 will contribute significantly to the betterment of our nation since the issues tackled therein are all about our day to day life.

Dr. Sekibibi Ezechiel
Vice Chancellor of ULK

THE IMPACT OF *AMICUS CURIAE* ON JUSTICE DELIVERY UNDER INTERNATIONAL CRIMINAL TRIBUNALS

By:

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Abstract

The amicus curiae mechanism fills lacunae that exist in the common law system, that is, it allows representation of interests beyond those of the primary parties. While the amicus curiae is now accepted as a partisan advocate rather than a neutral informer in domestic courts such as in the United States, Canada and United Kingdom, it has also found favour in proceedings before international courts and tribunals. This article briefly discusses the history and development of amicus curiae, and whether the role of amicus curiae in international criminal Tribunals has diverged from its traditional concept.

The article addresses the submission of briefs and the applicability of amicus curiae before ICTY and ICTR and ICC. Focus will be, however, on provisions enabling the acceptance of amicus curiae briefs by both statutes of the ICTR and ICTY. It will also consider, the influence, if any, of amicus curiae on decisions of the tribunals.

List of abbreviations

FRY	Federal Republic of Yugoslavia
ICC	International Criminal Court
ICJ	International Court of Justice
ICLR	International Criminal Law Review
ICTR	International Criminal Tribunal for Rwanda
ICTY	International Criminal Tribunal for the Former Yugoslavia
RPE	Rule of Procedure and Evidence
UN	United Nations
WTO	World Trade Organisation

I. INTRODUCTION

The term '*amicus curiae*' is commonly known as 'friends of the court'.[2] The traditional concept of *amicus curiae* is generally described as a neutral 'bystander' who, without a direct interest in the litigation, of his or her own initiative, brings to the attention of the court matters of fact of law within his or her knowledge.[3] Furthermore, court-appointed *amicus curiae*, are given a specific duty by the court to submit oral or written legal arguments which are otherwise unaddressed or unrepresented by the parties, in order to assist the court.[4]

In both of these cases the primary role of *amicus curiae* is to assist the court in deciding a matter before it.

The genesis of *amicus curiae* was known in Roman law.[5] Incorporated into the English common law, the *amicus curiae* are cited in numerous seventeenth century cases, where references are made to government and private representatives.[6] The development of *amicus* participation

may be seen in large part as a result of common law procedures

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2 C Chikin and R Makenzi 'International organizations as friends of the court' in L. Boisson de Chazournes *et al. International Organizations and international Dispute Settlement: Trends and Process* (2002) 136

3 S., Krislov, 'The *Amicus Curiae* Briefs: From Friendship to Advocacy' (1963) *The Yale Law Journal* 694-695

4 S Williams and H. Woolaver 'The Role of the *Amicus Curiae* Before International Criminal Tribunals' (2006) 6 *ITCLR* 155

5 E Angell, 'The *Amicus Curiae*: American Development of English Institutions' (1967) 16 International & Comparative Law Quarterly, 1017

6 *Cf. Beard v. Travers (1949) 1 Vesey Sen. 313, 27 Eng.Rep. 1052*, and other cases noted in S Krislov (supra note 2) 695

that made third-party intervention by way of suggestions.[7] Today, such appearances are frequently to be found in proceedings before international courts and tribunals.[8]

The use of the *amicus curiae* in the international criminal tribunals has permitted them to moderate the effect of restrictive rules on standing or third party intervention,[9] and has provided these tribunals with useful information and further arguments that have not been advanced by the parties to the dispute.

This article is mainly concerned with the submission of *amicus curiae* briefs in the International Criminal Tribunals. It is submitted that the practice of permitting *amicus curiae* brief has been included in the Rules of Procedure and Evidence (RPE) of the International Criminal Tribunal for the former Yugoslavia

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7 See E. Angell (supra note 3) 1017 at 1018

8 For example the International Court of Justice (ICJ) permits the appearance of *amicus curiae* in both contentious and advisory proceedings. See article 34(2) and article 66 (4) of Statute of the International Court of Justice Adopted on 26 June 1945 available at http://www.icjcij.org/documents/index.php?p1=4&p2=2&;   Rule 37(2) of European Court of Human Rights Rules of Procedure available at http://www.echr.coe.int/NR/rdonlyres/ D1EB31A8-4194-436E-987E-65AC8864BE4F/0/RulesOfCourt.pdf ; Rules of Procedure and Evidence, Official Records of the Assembly of the States Parties, 1st session, 3-10 September 2002, Doc. ICC-ASP/1/3 (Part II-A), 9 September 2002

Rule 37(2) of European Court of Human Rights Rules of Procedure available   at   http://www.echr.coe.int/NR/rdonlyres/D1EB31A8-4194-436E-987E-65AC8864BE4F/0/RulesOfCourt.pdf; Articles 12 and 13 of the WTO Dispute Settlement Understanding on rules and procedures governing the settlement of disputes available at http://www.wto.org/english/tratop_e/dispu_e/dsu_e.htm

9 For instance, before the ICJ and the WTO standing has normally only been available to states.

(ICTY),[10] and the International Criminal Tribunal for Rwanda (ICTR), and international criminal Court (ICC).[11]

The RPE, which is common to these tribunals, provide that 'a Chamber may, if it considers it desirable for the proper determination of the case, invite or grant leave to a State, organization or person to appear before it and make submissions on any issue specified by the Chamber'.[12] Hence, the test for the admissibility of *amicus curiae* briefs before the international criminal tribunals is that it will be 'desirable for the proper determination of the case'.[13]

Even though the abovementioned tribunals can admit *amicus curiae* submissions, several questions need to be addressed. What exactly is the juridical nature of this friend of the court? What special interest or expertise relevant to the case should the *amicus curiae* hold? Should the *amicus* intervention be limited

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10   The International Criminal Tribunal for the former Yugoslavia (ICTY) is a United Nations court of law dealing with war crimes that took place during the conflict in the Balkans in the 1990's. This ad hoc international criminal tribunal was established in 1993.

11   The International Criminal Tribunal for Rwanda (ICTR) is an ad hoc tribunal established in November 1994 by the United Nations Security Council in order to prosecute people responsible for the Rwandan genocide and other serious violations of the international humanitarian law in Rwanda, or by Rwandan citizens in nearby states, between 1 January and 31 December 1994. Since 1 995 it has been located in *Arusha*, Tanzania. See also, Rule 103 of the ICC Rules of Procedure and Evidence, available at https://cesice.univ-grenoble-alpes.fr/actualites/2017-06-08/amicus-curiae-international-criminal-court.

12   ICTY, Rules of Procedure and Evidence, IT/32Rev. 34 adopted 11 February 1994, as amended on 11 February 2005 ('ICTY Rules')

13   Krislov, *op cit*, 694 - 695.

to the matters relevant to the special interest or expertise identified? Principally, what role does the *amicus* play in the administration of justice?

This article examines the applicability of *amicus curiae* before the international criminal tribunals and how the mechanism has impacted on the administration of justice. It further discusses the role of *amicus curiae* before these courts, including: how and when *amicus curiae* are granted permission to appear; how *amicus curiae* are used by these international criminal tribunals; the influence, if any, of *amicus* briefs on the administration of justice.

II. *Amicus curiae* in international criminal tribunals

The ICTY, and ICTR both are the United Nations tribunals. The ICTY is an international *ad hoc* tribunal established in 1993 to prosecute serious crimes committed during the war in the Territory of the Former Yugoslavia.[14] The ICTR is also an international *ad hoc* tribunal established in November 1994 by United Nations Security Council, in order to prosecute people responsible for the genocide against the Tutsi and other serious violations of the international law in Rwanda, or by Rwandan citizens in neighbouring states, between 1 January and 31 December 1994.[15]

The ICTY and ICTR Statutes contain no provision for the

14 United Nations Security Council S/RES/827 (1993) Distr. General 25 May 1993.

15 UN Security Council Resolution 955 S-RES-955(1994) on 8 November 1994.

acceptance of *amicus curiae*. Nevertheless, they are both given the statutory power in article 15 of the ICTY statute and article 14 of the ICTR statute, to create their own rules.[16] In this respect, the ICTY and ICTR established Rules of Procedure and Evidence[17] which can allow third parties or *amicus curiae* to submit their briefs in court proceedings.

III Rule of Procedural and Evidence (RPE)

Since the adoption of their Rules 74, the ICTR and ICTY both have an explicit right to seek and receive *amici curiae*. The common Rule 74 provides that a Chamber may, if it considers it desirable for the proper determination of the case, invite or grant leave to a state, organization or person to appear before it and make submissions on any issue specified by the Chamber.[18]

It gives wide discretion to a Chamber to grant permission to any individual or group to appear as *amicus curiae* on the sole test that it be desirable for the proper determination of the case. It should be noted that *amicus curiae* submission is not dependent

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16 Article 14 of Statute of the International Criminal Tribunal for Rwanda as adopted by UN Security Council Resolution S/RES/955 (1994) of 8th November 1994; article 15 of Statute of the International Tribunal for the Former Yugoslavia (adopted 25 May1993 by Resolution 827).

17 CTY, Rules of Procedure and Evidence, U.N. Doc. IT/32/Rev.7 (1996), entered into force 14 March 1994, amendments adopted 8 January 1996; ICTR Rules of procedure and Evidence, adopted 29 June 1995, as amended on 21 May 2005 ('ICTR Rules').

18 Rule 74 *Amicus Curiae* available at http://www.icty.org/x/file/Legal%2520Library/Rules_procedure_ evidence/IT032Rev50_en.pdf.

upon the consent of the parties, nor are the circumstances in which an *amicus curiae* may appear strictly regulated. *Amicus curiae* can be submitted in one of two ways: by invitation or by spontaneous application.

The relevant request or invitation can be made at any stage, including in appellate proceedings, and this has been accepted in the ICTY and ICTR. *Amicus curiae* application shall be filed with the Registrar, who shall provide copies to the Prosecutor and the defence. It should be submitted in writing or orally.[19] For instance, in the *Radovan Karadzic* case, Human Rights Watch submitted a written *amicus* brief and the oral hearings were based on Rule 61 RPE.[20] Similarly, the ICTR permitted the UN Secretary-General's representative to make written and oral submission as *amicus curiae* in the *Akayesu* proceedings.[21]

IV. Submission of amicus curiae by invitation

The ICTY and ICTR Trial or Appeal Chamber may, if it considers it desirable for the proper determination of the case, invite organisation or person to appear before it and make submissions on matter of law or of fact.[22]

Under Rule 10 deferral proceedings, ICTY has issued an order inviting certain individuals, states, organisations, or individual

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19 Rule 74 of the RPE

20 *Radovan Karadzic* and *Ratko Maldic* case No. IT-95-5/18-R61 Order made on 26 June 1996 (F)

21 *Prosecutor v. Akayesu*, Judgement, Appeal Chamber, 10 December, case N. ICT -96-4T,2 September 1998

22 ICTY, Rules of Procedure and Evidence.

to appear as *amici curiae* in several cases.[23] For instance, interested states have been invited by ICTY to make submissions as *amicus curiae* in relation to domestic investigations and proceedings in respect of the same crimes. It has been common practice in the *Prosecutor v. Krsmanovic* case,[24] in the *Prosecutor v. Tadic* case,[25] and in the *Prosecutor v. Mrksic et al*, the Government of the Federal Republic of Yugoslavia (FRY) was also invited to appear but declined to do so.[26]

In the review proceedings under Rule 61 in *Karadzic et al.*,[27] the ICTY Trial Chamber invited submissions from the Special Rapporteur of the United Nations Commission on Human Rights to appear as *amicus curiae* to make a presentation on the status of human rights and the campaign of ethnic cleansing of Bosnia and Herzegovina since 1992 as well as on the disappearances following the events in Srebrenica.[28]

The ICTY appeal Chamber, when considering the request for review of the Trial Chamber's decision, also invited *amicus curiae* from states, organisations and persons on the issues raised by

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23 ICTY Rule 10 of the Rules of Procedure and Evidence.

24 In *Prosecutor v Krsmanovic* Case No. IT-96-19-MISCI, Judge Jorda invited representatives of BiH to submit an *amicus* brief on the detention of Colonel Krsmanovic as a witness under Rule *90bis:* Order for *Amicus Curiae* to appear, 20 March 1996.

25 *Prosecutor v Dusko Tadic* Case No. IT-94-1

26 *Prosecutor v Mrksic et al.* Case No. IT-95-13/1, the FRY was invited to participate in the deferral proceedings but failed to appear: T981209ed, p. 1

27 Review of the Indictments Pursuant to Rule 61 of the Rules of Procedure and Evidence, 11 July 1996 available at http://www.icty.org/x/cases/rajic/tdec/en/60913612.htm

28 See submission of Mrs Rehn, 5 July 1996, T960705it

the Trial Chamber's decision. In this respect nine *amici curiae* were submitted before appeals Chamber.[29]

As in the ICTY, the ICTR Trial and Appeal Chambers have requested *amici curiae* submission, notably in the *Bagosora* case, *Akayesu* and *Ntuyahaga* cases. In *Prosecutor v. Jean Paul Akayesu*,[30] the *amicus curiae* were submitted by International Women's Human Rights Law Clinic and the Centre for Constitutional Rights. In appeal, *amicus curiae* were submitted by International Criminal Attorneys Association. In *Prosecutor v. Theoneste Bagosora*,[31] *amicus curiae* were submitted by Eric David, Professor of international law at the University of Brussels. In *Prosecutor v. Ntuyahaga*,[32] *amicus curiae* were submitted by the Government of Belgium.

V. Submission of amicus curiae by spontaneous application

The second process is that an individual, state, or organisation can apply to the Registry on their own initiative for permission to act as *amicus curiae*. The Trial Chambers of ICTY and ICTR Tribunals have received several requests from a variety of

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29 See for example, the Judgment on the Request of the Republic of Croatia for Review of the Decision of Trial Chamber II of 18 July 1997, 29 October 1997. Briefs were received from: The People's Republic of China; The Government of the Kingdom of the Netherlands; the Governments of Canada and New Zealand; the Government of Norway; R. Wedgwood; Max Planck Institute for Comparative Public Law and International Law; Jurists sans Frontieres and A. Pellet; C. Bruce; and H. Roggemann.

30 *Prosector v. Akayesu* Judgement.

31 *Prosecutor v.Bagosora* Case N. ICTR-96-7-I

32 *Prosecutor v. Ntuyahaga* Case N. ICTR-98-40-T

sources including non- governmental organisations and states, for leave to appear as *amici curiae* under rule 74 of the RPE.

Such applications must comply with a Registry directive, which requires the applicant to include, amongst others, details regarding the nature of the information or analysis the applicant proposed to submit, the reasons for believing the applicant's submission will aid in the proper determination of the case or issue and identifying and explaining any contact or relationship the applicant has, or had, with any party to the case.[33]

The ICTY receives spontaneous *amicus curiae* applications from states, organisations and individuals, in a number of contexts and at different stages of proceedings. *Amicus* briefs have been accepted in relation to the interpretation of various provisions in the statute;[34] protective measures for witnesses;[35] the rights of witnesses and evaluation of evidence in rape and sexual assault cases;[36] and the privilege to be accorded to war correspondents.[37]

33 Information Concerning the Submission of *Amicus Curiae* Briefs, 27 March 1997, IT/22

34 In the *Prosecutor v Dusko Tadic* case, the Government of the United States of America and Jurists sans Frontieres were given leave to submit *amicus curiae* concerning preliminary objections to the tribunal's jurisdiction: Order 25 July 1995 (US brief); I September 1995 (JSF brief). See, the *Prosecutor v Dusko Tadic* Case, Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction, 10 August 1995 (TC) and 2 October 1995 (*Amicus Curiae*)

35 In *Prosecutor v Dusko Tadic* case, Professor Christine Chinkin was granted leave to appear as *amicus curiae* in relation to protective orders sought by the Prosecution.

36 *Prosecutor v Furundzija* case No. IT-95-17/1, S. Aitchison, K. Askin and T. Phelps were granted leave to appear as *amicus curiae*, as were eleven scholars of international law in a combined brief: Orders of 10 and 11 November 1998

37 *Prosecutor v Brdjanin and Zupljanin* case No. IT-99-36, the Trial Chamber had

Contrary to the ICTY, there have been far fewer spontaneous applications for *amicus* status to the ICTR.[38]

Some illustration of *amicus curiae* by spontaneous application may be found in the *Semanza* and *Akayesu* cases. In the *Semanza* case, the Trial Chamber considered the Belgium's request to appear as *amicus curiae* to make submissions concerning the scope of article 3 common to the four Geneva Conventions and Additional Protocol II. It argued that these provisions were applied unnecessarily restrictively in previous judgments of the ICTR.[39] In the *Prosecutor v. Akayesu* case,[40] the Trial Chamber permitted UN Secretary-General's representative to make written and oral submission as *amicus curiae*. The *amicus curiae* explained the scope of the lifting of General Dallaire's immunity by the UN Secretary-General.[41] Later General Dallaire presented evidence to the ICTR. Akayesu also benefitted from third party participation to reassert his right to appoint counsel of his own choice.[42]

When the Chamber rejected Akayesu's choice of counsel, an international organisation for defence lawyers requested

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ordered a subpoena to be issued to a war correspondent to give evidence.

38 S Williams and H. Woolaver (supra note 3) 173

39 *Prosecutor v. Semanza* case N. ICTR-97-20-T 9 February 2001, § 10

40 *Prosecutor v. Akayesu* Judgement.

41 Order Granting Leave for *amicus curiae* to Appear, 12 February 1998

42 The International Association for Defence Attorneys applied to the Appeals Chamber to submit an *amicus* brief defending Akayesu's right to have his choice of counsel.

to submit an *amicus* brief to the Chamber in a bid to protect Akayesu's right to appoint his own lawyer. The Appeals Chamber overturned the Trial Chamber's decision and allowed Akayesu to appoint his own counsel.

VI *Amicus curiae* and the International Criminal Court (ICC)

Article 51 of the Rome Statute which establishes the International Criminal Court (ICC) empowers the judges of the court to draw up Rules in cases of emergency. This includes the appointment of *amicus curiae* when a Chamber considers it necessary. This is found in the Rule 103 of the ICC Rules of Procedure and Evidence.[43] The *amicus* may be an individual, state or organisation that may be invited to submit information orally or in writing. In this respect, Pre-Trial Chamber II in the *Al Bashir case*[44] and Trial Chamber III in the

43 The Rule 103 of the ICC Rules of Procedure and Evidence https://www.icc-cpi.int/iccdocs/pids/legal-texts/rulesprocedureevidenceeng.pdf.

44On 8 December 2016, Pre-Trial Chamber II ("Chamber") issued a decision ("Decision") convening a hearing on 7 April 2017, to receive submissions on fact and law from the ICC Prosecutor, the Republic of South Africa, and the United Nations ("UN") on the following two issues: (i) whether South Africa failed to comply with its obligations under the Statute by not arresting and surrendering Omar Al Bashir to the Court while he was on South Africa's territory [from 13 to 15 June 2015 to attend an African Union summit] despite having received a request by the Court under articles 87 and 89 of the Statute for the arrest and surrender of Omar Al Bashir; and, if so, (ii) whether circumstances are such that a formal finding of non-compliance by South Africa in this respect and referral of the matter to the Assembly of States Parties to the Rome Statute and/or the Security Council of the United Nations within the meaning of article 87(7) of the Statute are warranted. The Chamber noted that these issues are "of general importance" and accordingly "consider[d] it appropriate to permit, under rule 103 of the Rules, all interested States Par-

Bemba case[45] issued decisions inviting *amicus curiae* submissions pursuant to Rule 103 of the ICC Rules of Procedure and Evidence with respect to Article 87(7) proceedings against the Republic of South Africa and reparations for victims.[46]

VI. The jurisprudential contribution on the clarification of *amicus curiae* submission

The test for the admissibility of *amicus curiae* before the ICTR and ICTY may be found in their respective jurisprudences. By analysing the jurisprudence, it is possible to argue that the conditions of admissibility of *amicus curiae* before ICTR have been much more clarified than is the case for ICTY jurisprudence. First, it can be seen that in order for an *amicus curiae* to be <u>deemed admissible by the ICTR, the relief sought must</u> be

ties" to make written submissions on this matter. See Decision convening a public hearing for the purposes of a determination under article 87(7) of the Statute with respect to the Republic of South Africa, ICC-02/05-01/09-274.

45 Earlier that year, on March 21, Trial Chamber III issued its Judgment pursuant to Article 74 of the Rome Statute (RS) and the Decision on Sentence, Article 76 RS. The Chamber then addresses the requirements for reparations, that the Appeals Chamber has formulated certain principles that can further be expanded upon and specified. The Chamber requests the parties and the Registry and the Trust Fund for Victims to submit observations on (a) the application and interpretation of the principles set out by the Appeals Chamber in the *Lubanga case* to the case at hand; (b) the criteria and methodology to be applied in assessing the victims, their harm, and Mr. Bemba's scope of liability; (c) the types and modalities of reparations; (d) whether experts may be appointed to assist in these issues; (e) other issues. The Chamber then invites organisations to apply for leave to file submissions on the matter of reparations in the Bemba case. See Order Requesting Submissions Relevant to Reparations of 22 July 2016, Doc. ICC-01/05-01/08-3410.

46   https://cesice.univ-grenoble-alpes.fr/actualites/2017-06-08/amicus-curiae-international-criminal-court

within its jurisdiction, and not within that of the Prosecution or Defence. This was made clear in the *Ntagerura, Bagambiki*, and *Imanishimwe* case.[47] In this case, the Coalition for Women's Human Rights in Conflict Situations sought leave to submit an *amicus curiae* brief requesting the Trial Chamber to call upon the Prosecutor to amend the indictment to include charges of sexual violence.[48] The Trial Chamber rejected their application. The reasons given by the Chamber rejecting the application was that "the Chamber is completely without authority to grant the relief sought in the *amicus* application, as a matter of law."[49] It emphasises that article 15 of the ICTR Statute ensures the independence of the Prosecutor from any other organ of the ICTR.[50]

A second rule that can be discerned from the ICTR's decisions regarding *amicus* briefs is that the brief must deal with an issue that is relevant to the case at hand. In the *Musema* case African Concern sought leave to submit an *amicus* brief considering in part the restitution of property under article 23(3) of the ICTR Statute and Rules 88 and 105 of the RPE. The Trial Chamber stated that where an *amicus curiae* granted leave to make submissions on the procedural elements and substantive

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47 *Prosecutor v Ntagerura, Bagambiki, and Imanishimwe* Case No. ICTR-96-46T

48 See *Amicus curiae* Respecting the Need to include Sexual Violence Charges in the Indictment, Coalition for Women's Human Rights in Conflict Situations, available at http://www.womensrightscoalition.org.

49 Decision on the Application to File an *amicus curiae* according to Rule 74 of the Rules of Procedure and Evidence Filed on Behalf of the NGO Coalition for Women's Human Rights in Conflict Situations, 24 May 200.

50 Article 15 of ICTR Statute.

backdrop of Rules 88 and 105 of the Rules, the submissions must be relevant to the case, and such as to be of assistance for the proper determination thereof.[51]

As result, the Trial Chamber held that the brief was inadmissible as the question of restitution of property was not relevant to the case as there were no charges of the unlawful taking of property contained in the indictment.[52] It is clear that in order for an *amicus* brief to be admissible to the ICTR, it must have relevance to a live issue in the instant case.

A third rule is that applications for leave to appear as *amicus curiae* will be granted much more readily if the submissions are dealing with legal, and not factual arguments. For example, in the *Semanza* case, the Belgian government sought to make submissions as to international law and the interpretation of the Geneva Conventions. Permission was granted by the Trial Chamber, even though there was objection to the application by the Defence. The Trial Chamber emphasised, however, that the submissions were to deal with legal interpretation but not with respect to the particular circumstances of this or any other case.[53]

A last rule on the admissibility of *amicus curiae* briefs to the ICTR is that they must not be used merely to advertise the views or causes of the applicant. In the *Musema* case, the Prosecutor

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51 See the Decision on an Application by African Concern for Leave to Appear as Amicus Curiae, 17 March 1999, para 13.

52 *Prosecutor v Musema* Case No. ICTR-96-13-A

53 *Prosecutor v Semanza* Case N. ICTR-97-20-T

objected to African Concern's *amicus curiae* brief, arguing that "the main purpose of the application is for African Concern to have a platform to promote its interests as regards restitution in Rwanda."[54]

From the judgments of the ICTY, it is difficult to discern a clear test for acceptance of *amicus curiae*, as the Trial Chambers often do not indicate their reasoning, it appears that a brief is more likely to be accepted where that brief relates to a specific issue raised by the proceedings, but with respect to that the issue is novel and has not previously been considered, the material is not already before the ICTY through other means, including but not always the submissions of the parties, and the information is not directed at broader or structural issues affecting the ICTY itself or a number of cases.[55]

In light of the above mentioned, some *amici curiae* have been denied. In the *Prosecutor v. Tadic* case,[56] the application of Milan Bulajic to address the Tribunal regarding the historical and political context of the conflict in the former Yugoslavia;[57] the application by Croatia to address the Tribunal on the nature of the conflict;[58] and an application by Human Rights Watch to

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54 *Prosecutor v Musema* Case N. ICTR-96-13-A

55 S Williams and H. Woolaver pp 154 -170

56 See, Order Denying Leave to appear *amicus curiae*, 3 May 1996

57 In the *Prosecutor v. Dusko Tadic* Case, The Chamber noted the objection of the OTP to the request and indicated that it did not consider that the submissions would assist the Tribunal in the proper determination of the case at this stage of proceedings. See, Order Denying Leave to Appear as *Amicus Curiae*, 25 November 1996

58 Order on Croatia's Request to Appear as *amicus Curiae*, 24 May 1996

submit a brief in Rule 61 proceedings,[59] have been rejected.

In sum, while the tribunals under scrutiny have not been liberal in requesting third parties to make *amicus curiae* submissions and have not expressly stated to what extent these briefs have impacted on their decisions, it is evident that states, individuals, legal experts and organisations have insinuated themselves into cases before the tribunals as *amicus*. This article has further shown that sometimes the *amicus* have managed to avert injustice. For instance, Akayesu would have been denied his right to hire counsel of his own choice if the International Association for Defence Attorneys was not participate in his case as *amicus curiae*.

VII. CONCLUSION

This article has explored the role that traditional *amici curiae* or 'friend of the court' play in ensuring that justice is not only dispensed but is administer fairly. The central theme of the article is that the 'bystander' who often has an indirect interest in the case at hand, initiates an attempt to draw the presiding court's attention to matters of fact or law within his or her knowledge. *Amici curiae,* whether court appointed or those who bring spontaneous submissions on their own volition to the court, address the court by way of written or oral briefs with

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59 It appears that Human Rights Watch submitted a request to appear as *amicus curiae* in the Rule 61 proceedings in *Prosecutor v. Karadzic et al.*, that was rejected by the Trial Chamber on 21 June 1996

the express aim of assisting the court arrive at an equitable and just decision.

It has been demonstrated that the submission of *amicus curiae* before ICTY and ICTR may be before both *ad hoc* tribunals by invitation or spontaneous application. They have all adopted a common Rule 74, the Rule of Procedure and Evidence titled '*amicus curiae*'. The common Rule 74 gives wide discretion to a Trial Chambers to grant permission to any states, individual or Organisations to appear as an *amicus* on the sole test that it be desirable for the proper determination of the case. It was argued that the RPE underlined the admissibility test of *amicus curiae* submissions to the ICTY and ICTR is that the brief is 'desirable for the proper determination of the case'. Furthermore, it was submitted that where *amicus curiae* interventions are permitted, it is generally up to the tribunal concerned to determine the criteria which a potential *amicus* has to fulfil, and the conditions upon which a submission may be filed.

To buttress the argument, the article has discussed the cases where *amicus curiae* have been involved. In the jurisprudence of the ICTY, it is found that there is no clear principles for when on and what basis *amici curiae* are given leave to appear or invited to assist the court. Submission of *amicus* brief is generally based in its Rule 74 RPE. However, jurisprudence of the decisions of ICTR laid down some rule regulating the admissibility of *amicus curiae* as discussed earlier.

In this article it was argued that there is no uniform international practice of *amicus curiae* submission before international criminal tribunals. While the rules relating to *amicus curiae* before ICTY and ICTR are the same, each Tribunal may specify procedural conditions to the submission of *amicus* briefs such as time limits for submissions, length and form of submissions, content, and whether the *amicus curiae* can make written statement only or may also participate in any oral proceedings.

From the analysis in this article, it may be inferred that the work and instrument of *amicus curiae* should be publicised extensively. This stems from the fact that neither the ICTY Chambers nor the ICTR Chambers note the contributions of *amicus curiae* to proceedings. It is submitted that elsewhere in the article that *amicus* can be used to bolster the justice system particularly in poor communities where only a fraction of the population can afford legal representation.

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CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN RWANDA

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Abstract

In this research, researchers tried to find the relationship between capital structure and the financial performance of commercial banks in Rwanda. It is mandatory to maintain an adequate amount of capital for bank to operate its daily basis transactions as well as reduce the probability of the bankruptcy. Bank is the most crucial part of the financial institutions as well as the whole economy because they are dealing with the money of lots of depositors. So that failure of a bank can harm the prospect of the overall economy than any other form of financial institutions. The necessity of adequate capital also implies when we closely observe that how much Basel 2 provides greater emphasis on the adequacy of the capital for a bank as well as the mandatory other regulations for banks that they must have to follow. "More precisely, our study in this research basically focuses on the relationship between capital structure and the performance of the commercial banks. To define our concept in a more concrete way researchers use different variables as proxy.

Net profit after tax, total loans and advances, total asset, and customer deposit are proxy of performance we know that they are most fundamental performance indicators. "Moreover, we actually define the capital structure with total equity. Based on our used proxy on liquidity, net profit, asset quality and gross loans from correlation analysis researchers find that total equity is positively related to the performance of Commercial banks in Rwanda. This positive relationship is found by supporting our alternative hypothesis.

Operations Terms: Capital structure, Financial Performance and Commercial Banks.

INTRODUCTION

In the books of Lama, (2014) shows the two different theories of Jansen and Mecking and Myers where they say that The agency cost theory is premised on the idea that the interests of the company's managers and its shareholders are not perfectly aligned. They emphasized the importance of the agency costs of equity arising from the separation of ownership and control of firms whereby managers tend to maximize their own utility rather than the value of the firm.

These conflicts may occur in situations where managers have incentives to take excessive risks as part of risk shifting investment strategies. This leads us to Jensen's (1986) ''free cash flow theory'' where as stated by Jensen (1986, p. 323) ''the problem is how to motivate managers to disgorge the cash rather than investing it below the cost of capital or wasting it on organizational inefficiencies.'' Thus high debt ratios may be used as a disciplinary device to reduce managerial cash flow waste through the threat of liquidation (Grossman & Hart, 1982) or through pressure to generate cash flows to service debt (Jensen, 1986). In these situations, debt will have a positive effect on the value of the firm. Agency costs can also exist from conflicts between debt and equity investors. These conflicts arise when there is a risk of default. The risk of default may create what Myers (1977) referred to as an ''underinvestment'' or ''debt overhang'' problem. In this case, debt will have a negative effect on the value of the firm.

According to Lama, (2007), in achieving a return on equity (ROE), firms can use a variety of techniques and strategies. One strategy is through capital structure. The relationship between capital structure and ROE is indeed of considerable importance to all firms. The capital structure decision is especially important to banks because they are sensitive to changes in financial leverage due to their low level of equity capital to total assets. Moreover, the capital structure of banks is highly regulated. Capital structure decisions are not only important for managers and regulators, but are also of interest to shareholders.

In deciding on its capital structure, banks should take into consideration regulatory requirements, its soundness and the rate of return to equity holders. Equity holders are especially interested in the banks' capital structure because it is detrimental to their rate of return and safety of their investments in the bank. A high-leveraged bank is a more risky bank, however, according to conventional wisdom; it is expected to pass high returns to its shareholders. Therefore, the capital structure decision imposes a risk-return trade-off for the bank. Banks are required to maintain a minimum capital ratio by regulatory authorities and rating agencies. However, banks have the tendency to substitute capital with debt to maximize their return on capital and satisfy their investors, which is in contradiction to Modigliani and Miller's (1958) irrelevance theorem. The belief that banks can increase their performance by substituting capital with debt is not the result of ignoring the risk impact of leverage.

The many theoretical arguments that the economic literature provides argue for a desirability of higher leverage for banks. The main problem of this research was to evaluate the impact of capital structure to the financial performance of commercial banks in Rwanda.

The following Null and Alternative Hypotheses have been tested

✓ There is no statically significant relationship between total equity and the performance of commercial bank

✓ This main null hypothesis leads as to mention other 3 null sub-hypothesis to test

✓ There is no statically significant relationship between total equity and net profit after taxes of commercial banks in Rwanda.

✓ There is no statically significant relationship between total equity and liquidity of commercial banks in Rwanda.

✓ There is no statically significant relationship between total equity and assets quality of commercial banks in Rwanda.

Alternative Hypotheses

Here, researchers again provide the main alternative hypothesis of the null hypothesis which is based on the capital adequacy and bank profitability. The hypothesis is:

✓ There is statically a significant relationship between total equity and the performance of commercial bank

This alternative main hypothesis leads to test 3 others individual alternative sub-hypothesis

✓ There is statically significant relationship between total equity and net profit after taxes of commercial banks in Rwanda.
✓ There is statically significant relationship between total equity and liquidity of commercial banks in Rwanda.
✓ There is statically significant relationship between total equity and assets quality of commercial banks in Rwanda

Research Objectives

The purpose of this study was to empirically examine the relationship between total equity and financial performance of commercial banks in Rwanda.
The specific objectives were:
➢ To show the statistical relationship between total equity and profitability of commercial banks in Rwanda
➢ To show the statistical relationship between total equity and liquidity of commercial banks in Rwanda
➢ To show the statistical relationship between total equity and asset quality of commercial banks in Rwanda.

LITERATURE REVIEW

There are many studies carried out on capital structure and financial performance of commercial banks all over the world. In this part, the researchers present same studies related to the topic. Vani (2012) said that Commercial bank is a financial institution

where people deposit money and valuable assets, get loans for commercial purposes and transact other financial related issues. The commercial banks offer variety of accounts depending on a particular bank, some of the services includes; banking experts in developed countries defines a commercial bank as a profit-oriented financial institution. To obtain the profit of commercial banks perform the inter mediation function. Because permitted raise funds in the form of deposits, commercial banks also called depository financial institutions. Based on its ability to create money (demand deposits), commercial banks may also be known as the creator of commercial bank demand deposits.

The main functions of commercial banks are accepting deposits from the public and advancing them loans. However, besides these functions there are many other functions which these banks perform. All these functions can be divided under the following heads: 1. Accepting deposits, Giving loans, Overdraft, Discounting of Bills of Exchange, Investment of Funds, Agency Functions and Miscellaneous Functions.

In his book Moorad (2011), said that Bank capital is the equity of the bank. It is important as it is the cushion that absorbs any unreserved losses that the bank incurs. By acting as this cushion, it enables the bank to continue operating and thus avoid insolvency or bankruptcy during periods of market correction or economic downturn. When the bank suffers a loss or writes off a loss-making or otherwise economically untenable

activity, the capital is used to absorb the loss. This can be done by eating into reserves, freezing dividend payments or (in more extreme scenarios) a write-down of equity capital. In the capital structure, the rights of capital creditors including equity holders are subordinated to senior creditors and deposit holders.

Bank capital performs several very important functions. It absorbs losses, promotes public confidence, helps restrict excessive asset growth, and provides protection to depositors and the deposit insurance funds. Risk Management Manual of Examination Policies (2015).

Total capital is comprised of equity capital; reserves; retained earnings; preference share issue proceeds; hybrid capital instruments; and subordinated debt. Capital is split into Tier 1 capital and Tier 2 capital. The first three items comprise Tier 1 capital while the remaining items are Tier 2 capital. The quality of the capital in bank reflects its mix of Tier 1 and Tier 2 capital.

Tier 1 or 'core capital' is the highest quality capital, as it is not obliged to be repaid; moreover, there is no impact on the bank's reputation if it is not repaid. Tier 2 is considered lower quality as it is not 'loss absorbing'; it is repayable and also of shorter term than equity capital. Assessing the financial strength and quality of a particular banking institution often requires calculating key capital ratios for the bank and comparing them with market averages and other benchmarks. Analysts use a number of ratios to assess bank capital strength. Risk Management Manual of

Examination Policies (2015).

The Modigliani-Miller Theorem

The theory of business finance in a modern sense starts with the Modigliani and Miller (1958) capital structure irrelevance proposition. Before them, there was no generally accepted theory of capital structure. Modigliani and Miller start by assuming that the firm has a particular set of expected cash flows. When the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. The investor can create any leverage that was wanted but not offered, or the investor can get rid of any leverage that the firm took on but was not wanted.

As a result, the leverage of the firm has no effect on the market value of the firm. Their paper led subsequently to both clarity and controversy. As a matter of theory, capital structure irrelevance can be proved under a range of circumstances.
There are two fundamentally different types of capital structure irrelevance propositions. The classic arbitrage-based irrelevance propositions provide settings in which arbitrage by investors keeps the value of the firm independent of its leverage. In addition to the original Modigliani and Miller paper, important contributions include papers by Hirshleifer (1966) and Stiglitz (1969). The second irrelevance proposition

concludes that "given a firm's investment policy, the dividend payout it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders" (Miller and Modigliani, 1961). In other words, in perfect markets, neither capital structure choices nor dividend policy decisions matter.

The 1958 paper stimulated serious research devoted to disproving irrelevance as a matter of theory or as an empirical matter. This research has shown that the Modigliani-Miller theorem fails under a variety of circumstances. The most commonly used elements include consideration of taxes, transaction costs, bankruptcy costs, agency conflicts, adverse selection, lack of separability between financing and operations, time-varying financial market opportunities, and investor clientele effects. Alternative models use differing elements from this list. Given that so many different ingredients are available, it is not surprising that many different theories have been proposed. Covering all of these would go well beyond the scope of this paper. Harris and Raviv (1991), provided a survey of the development of this theory as of 1991. As an empirical proposition, the Modigliani-Miller irrelevance proposition is not easy to test.

With debt and firm value both plausibly endogenous and driven by other factors such as profits, collateral, and growth opportunities, we cannot establish a structural test of the theory by regressing value on debt.

But the fact that fairly reliable empirical relations between a number of factors and corporate leverage exist, while not disproving the theory, does make it seem an unlikely characterization of how real businesses are financed. A popular defense has been to argue as follows: "While the Modigliani-Miller theorem does not provide a realistic description of how firms finance their operations, it provides a means of finding reasons why financing may matter." This description provides a reasonable interpretation of much of the theory of corporate finance. Accordingly, it influenced the early development of both the trade-off theory and the pecking order theory.

The Static Trade off Theory: STT

Theories suggest that there is an optimal capital structure that maximizes the value of the firm
in balancing the costs and benefits of an additional unit of debt, are characterized as models of trade-off. Consider the optimal debt from various points of view; the trade-off model can be secondly categorized into the following three types: models of trade-off which are respectively connected to the bankruptcy costs and agency costs, (Tarek, 2014).

Trade off models related to agency costs

Jensen and Meckling (1976), based on the common knowledge that the debt had been widespread before the existence of subsidies tax on interest payments, given positive bankruptcy costs, they argue that there must be other important determinants

of capital structure that have not been identified. According to the subject of capital structure, two agency conflicts will be identified: the first kind of conflict between shareholders and managers and the second between shareholders and creditors, (Tarek, 2014).

Agency conflict between shareholders and managers

This kind of conflict results from the divergence of interest between shareholders and managers who do not have full ownership of the firm. In the corporation, mangers do not possess all the residual power. When the owner-manager has no full ownership of the subsidiary, which means that there is an external shareholder, its objective is not to maximize the value of the firm but to maximize its own action. The less ownership the manager possesses, the more there is a severe divergence between his interests and those of shareholders, Tarek (2014).

Here we can check the advantage of financing through indebtedness how and it's related to the agency problem. By increasing the debt and with the constant actions of managers, the action of the director of equity increases and the loss of conflict decreases.

In addition, with more debt, companies must pay more cash as interest and free cash flow will decrease. Therefore, the liquidity available to managers to engage in some activities that affect the profit maximization will also decrease, Jensen (1986). Besides, by the debt financing, the control of the company can be limited to a few agents in bringing together a part of capital

debt financing, such as bank loans or bond sales, reducing the cost of agency management, (Tarek, 2014).

In addition for Harris and Raviv (1990a), the disciplinary role of debt is suggested. For managers still do not behave to serve the interests of their investors. In this context, when a company is about to liquidate, directors may choose not to liquidate the reputation and for other considerations. The debt can serve as a disciplining device by giving the creditors the power to force the company into liquidation, (Tarek, 2014).

The agency relationship between shareholders and creditors
The second type of conflict is between creditors and shareholders for a loan agreement fact by shareholders for additional investment. When an investment yields great profits, shareholders can obtain the major part of earnings. But when the investment fails, the creditors also suffer the loss. Accordingly, shareholders may prefer to invest in very risky projects. Risky projects have for consequence the decrease of the debt value. It is the agency costs of debt financing. However, if the debt issuers can predict the behavior of supporter's equity risk, if to risk too much or not, they can adequately assess to transfer the costs again to the supporters of equity. Thus, Jensen and Meckling argue that optimal capital structure can be achieved by finding the point where the total cost of agency is minimized, (Tarek, 2014).

An extension of agency problems was given by Myers (1977). When a society confronted with bankruptcy, the shareholders have no incentive to contribute new capital to investments by increasing the value of investments because the yields of these placements will go mainly to creditors but in t he meantime, shareholders undertake the whole cost. In this situation, more debt financing, the more serious agency costs of debt, (Tarek, 2014).

Trade off models related to bankruptcy costs For Baxter (1967), The costs incurred by financial distress have been identified as non-trivial and could pay off the tax advantages of debt financing. We can see the basic idea of this theory. The debt has advantages and disadvantages for corporation: benefits come from tax savings of debt clarified by MOMI (1963) and disadvantages come from the increasing probability of bankruptcy for a company with higher debt so that the cost of failure is increased.

The prediction of the trade-off theory is that the optimal capital structure exists and is determined by the achievement of balance between tax benefits and costs of debt, considering other constant variables. Companies substitute debt with equity or equity with debt until the value of the firm is maximized. This is the original static trade-off theory which is derived from not taking into account the imposition and the nullity of bankruptcy costs in the theory of MOMI, (Tarek, 2014).

Financial Performance

Financial Performance in broader sense refers to the degree to which financial objectives being or has been accomplished and is an important aspect of <u>finance risk management</u>. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation, (Makram Nouaili, 2015).

Financial performance analysis is the process of determining the operating and financial characteristics of a firm from accounting and financial statements. The ability of an organization to analyze its financial position is essential for improving its competitive position in the marketplace. Through a careful analysis of its financial performance, the organization can identify opportunities to improve performance of the department, unit or organizational level.

1. Goals of Financial Performance

The Goal of financial performance analysis is to determine the efficiency and performance of firm's management, as reflected in the financial records and reports. The analyst attempts to measure the firm's liquidity, profitability, and other indicators that the business is conducted in a rational and normal way ensuring enough returns to the shareholders to maintain at least its market value.

2. Regulations imposed on Commercial Banks

In his research Marcia, (2004) gives five types of regulation seek to enhance the performance and value of commercial banks and thus the viability of the commercial banking industry. These include (1) entry regulations, (2) safety and soundness regulations, (3) credit allocation regulations, (4) consumer protection regulations, and (5) monetary policy regulations.

3. Determinant of Financial Performance

Makram, (2015) said that in the economic and financial literature, two key indicators were advanced to measure the banking performance. It is about the profitability of the assets (return on assets and return on equities) and the net margin interest. Nevertheless, the consensus is far from being fully met around the question of the impact of certain variables on bank profitability as it is measured.

Whereas the predicted effect of some factors has found certain unanimity within the circle of the economists, controversies remain at the level of the expected impact of other variables. Accordingly, it is legitimate to consider that they exit with the theoretical polemic would be only empirical. Banking performance is related to internal determinants (specific banks) and external variables (macro-economic and macro financial) which reflect the economic and legal environment in which the bank operates.

Makram Determinants of Financial Performance

Internal Determinants include the following elements:

- ∝ Size, capitalization (CAR),efficiency, ownership structure, the risk, Market share, Governance
- ∝ Macro-Financial Determinants include the following elements: Market concentration, Financial market maturity
- ∝ Macro-Economic Determinants include the following elements: Inflation, Business cycle

EMPIRICAL REVIEW

In his research on The relationship between capital structure and performance of Islamic banks conducted by Lama (2014) After control of the macroeconomic environment, financial market structure and taxation, results indicate that IBs' performance (profitability) responds positively to an increase in equity (capital ratio). The result is consistent with the signaling theory which predicts that banks expected to have better performance credibly transmit this information through higher capital. Optimal capital structure results of the IBs found a non-monotonic U-shaped relationship between the capital-asset ratio and profitability, supporting the efficiency risk and franchise value hypotheses.

In the research conducted by Lucy, (2014) on relationship between capital structure and performance of non-financial companies listed in the Nairobi Securities Exchange, Kenya

conclude that increased financial leverage has a negative effect on performance as measured by ROE of non-financial companies listed in the NSE, Kenya. The study therefore concluded that the Agency theory which postulates that financial leverage mitigates against the agency problem is not applicable among non-financial companies listed in NSE, Kenya.

The study established that as a company increases financial leverage the performance as measured by ROE declines contrary to expectations based on the agency theory.

The study further established that the performance of the firm improved using more current liabilities to finance assets increases the performance improves. This is probably because current liabilities are less costly than long-term debt. Additionally, the study found that increasing the proportion of current assets in relation to total assets enhanced performance as measured by both ROA and ROE.

In the study namely effect of capital structure on financial performance of firms listed at the Nairobi Securities Exchange conducted by Robert, (2013) found that the capital structure of the companies was measured by debt. Debt ratio was considered to be the long term debt divided by shareholders equity and long term debt. The findings from the study revealed that debt ratio had an inverse relationship on return on equity. Debt ratio (β=-0.472) indicates that with a 1 percent increase in Return on equity led to a 0. 472 percent decrease in debt ratio as indicated in the table of co-efficient. This result is consistent

with findings by Zeitun and Tian (2007) who also established that capital structure has a significant and negative impact on firm's performance.

From the study it was evident that at 95% confidence level, the debt ratio variable produced

statistically significant values (high t-values, $p < 0.05$). From statistical theory, if $p > 0.1$ then

the model is said not to be significant. This is concluded that a relationship could not be found among the model variables. From the co-efficient table, findings indicate that the p value for debt ratio was 0.034. 0.034 is found to be less than 0.05. The model was therefore significant at 95 % thus the findings can be accepted.

The result was also found not to be in agreement with Mwangi (2010) study on capital structure on firms listed at the Nairobi Stock Exchange on the relationship between capital structure and financial performance. Strong relationship was found to be between leverage and return on equity, liquidity, and return on investment. However, others find mixed results regarding the impact of capital structure on firm's performance. This can best be supported by the argument that borrowing introduces varying levels of risk to the company and on the return to shareholders.

Allan (2015) in his study conducted on the relationship between capital structure and financial performance of real estate firms

in Kenya found that total debt has a negative relationship with return on assets or real estate firms in Kenya for the period under study. The findings also revealed that long-term as well as short-term debt have a positive impact on return on assets (ROA) of real estate firms in Kenya for the period under study. From the findings the study concludes that capital structure decisions affect financial performance of real estate firms in Kenya therefore care should be taken by real estate fund managers in considering the level of debt. The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational subsidiaries, and also because of the effects of such a decision has on an organization's ability to deal with its competitive environment.

Nirajini (2013) conducted a similar study in Sri Lanka and Correlation analysis showed that debt asset ratio, debt equity ratio and long term debt correlated with gross profit margin, net profit margin, ROCE, ROA & ROE at significant level of 0.05 and 0.1. Finally concluded there is positive relationship between capital structure and financial performance. And also capital structure is significantly impact on financial performance of the firm. So every firm should make good capital structure decision to earn profit and carry on their business successfully.

Sohail, (2014) his study shows that there is weak positive correlations in gross profit and capital structure (.059) and also

have weak positive correlation in net profit and capital structure variables (.033). It shows the low financial cost in the companies. The correlation among ROI/ROCE and ROA with regarding capital structure is strongly positive (.73, .73 respectively).

Capital structure and financial performance has the overall positive relationship. (.354) shows the weak positive association and coefficient of determination is .125 with F is 28.060 and T-Value is -5.297. It shows the insignificant in sugar companies in KSE Pakistan. In a research conducted by Puwanenthiren, (2011) namely capital structure and financial performance: Evidence from selected business companies in Colombo Stock Exchange Sri Lanka by using Correlation analysis, he explained that, there is a weak positive relationship between gross profit and capital structure (0.360), at the same time, there is a negative relationship between net profit and capital structure (-0.110), it reflects the high financial cost among the firms.

ROI and ROA also has negative relationship with capital structure at -0.104, -0.196 respectively. It is focused on the overall point of view of the relationship between the capital structure and financial performance. There is a negative association at -0.114. Co-efficient of determination is 0.013. 'F' and 't' values are 0.366, -0.605 respectively. It is reflected the insignificant level of the Business Companies in Sri Lanka. Business companies mostly depend on the debt capital.

RESEARCH METHODOLOGY

The present study used secondary data for analysis. Secondary data is data that have been previously collected for some other project rather than the one at hand but found useful by the researcher. The financial statements which are made up of income statements and balance sheets of the sample banks were the main sources of data for this study. These were obtained from the annual reports of respective banks. Further, scholarly articles from academic journals, relevant text books on the subject and the internet search engines were also used. Specifically, the financial statements of the banks in the sample were collected for the period 2008-2016 and a cross sectional time series of three banks was used for the study.

Data

Data required for this study were secondary and sourced from selected commercial banks annual reports. The data collected from covers the period of 2008-2014 reporting years only. Therefore, from the population of commercial banks in the country (i.e. 12 banks) only three banks were selected, banks were used based for this purpose.

These banks are:

1. Bank of Kigali Ltd
2. I&M Bank Ltd
3. Banque Populaire du Rwanda.

The variables to be tested in the hypotheses are; Capital, asset quality, liquidity and bank profitability; Therefore, Capital was measured by using the amount of the average total equity of the selected bank's hold as reserve as proxy, profitability was measured by using profit after tax, liquidity was measured by asset and liability liquidity while the asset quality were measured by the Gross loans and total assets of the selected banks; The correlation analysis were employed as tool to empirically test for co relational relationship among the variables of interest by using SPSS 16.0.

Methods of data analysis

The quantitative research approach was employed to find out the findings of the research study. Since numerical and secondary data is used, quantitative approach is considered to be a suitable approach for the study. According to Leavy (2004), "statistical analyses are used to describe an account for the observed variability in the data". This involves the process of analyzing the data that has been collected. Thus the purpose of statistics is to summarize and answer questions that were obtained in the research. The upper level of statistical significance for hypotheses testing was set at 5%. All statistical test results were computed at the 2-tailed level of significance. Statistical analysis involves both descriptive and inferential statistics.

Descriptive statistics are used to describe and summarize the behavior of the variables in a study. They refer to the ways in which a large number of observations are reduced to interpretable numbers such as averages, maximum and minimum. Inferential statistics are used to draw conclusions about the reliability and generalize ability of the findings. In order to test the research hypotheses; the inferential tests used include the Correlation and regression Analysis.

➢ **Correlation**

Correlation analysis was carried out to identify the relationship between capital and performance. Here capital is the independent variable and performance is the dependent variable. From these independent and dependent variables, the following relationship is formulated. Performance of the banks is dependent upon the capital. It is represented as follows;

P = f (CS)

Which shows performance is the function of capital.

Where;

P = dependent variable (Perfomance)

Cs= Total equity

Here, dependent variable was measured with the help of average total equity and average of net profit, average total assets, liquidity and average gross loans.

FINDINGS AND RESULTS

The findings are discussed according to the objectives and hypothesis of the study.

There is no statically significant relationship between total equity and net profit after taxes of commercial banks in Rwanda.

Correlation analysis was carried out to identify the relationship between total equity and profit. Here total equity is the independent variable and profit after tax is the dependent variable. From these independent and dependent variables, the following relationship is formulated.

Profit of the banks is dependent upon the total equity. It is represented as follows;

ANI = f (AVTEQ)

Which shows average net income is the function of total equity?
Where;

 ANI = dependent variable (Average net Income)

AVTEQ= Total equity

Correlations

		ANI	ATEQ
ANI	Pearson Correlation	1	.936**
	Sig. (2-tailed)		.002
	N	7	7
ATEQ	Pearson Correlation	.936**	1
	Sig. (2-tailed)	.002	
	N	7	7

**. Correlation is significant at the 0.05 level (2-tailed).

The results obtain for the test of hypothesis one shows the p-value of 0.002 is less than critical value, this implies that the joint null hypothesis which states that there is no significant relationship between average total equity and average net profit is rejected.

This indicates that there is a significant relationship between total equity and bank's profit. In fact, the higher the level of owners equity of commercial bank's the more confident the bank will be in a case of unexpected loss and its eventuality. Therefore, for commercial banks in Rwanda to continue to be relevant in term of reported profit, there is need to adequately growth up their core capital. More so, the Pearson correlation is 0.95, this implies that 95% of selected bank's profit is as a result of core capital .Therefore, core capital is a good predictor for bank's profitability.

There is no statically significant relationship between total equity and liquidity of commercial banks in Rwanda.

Correlation analysis was carried out to identify the relationship between total equity and liquidity. Here total equity is the independent variable and average total liability liquidity and average total asset liquidity are the dependent variables. From these independent and dependent variables, the following relationship is formulated. Profit of the banks is dependent upon the total equity. It is represented as follows;

ATLL and ATAL = f (AVTEQ)

Which shows that the average of total assets and gross loans are the functions of total equity,

Where;

ATLL and ATAL = dependent variables (Average total liability liquidity (ATLL) and Average total asset liquidity (ATAL)

AVTEQ= Total equity

Correlations

		ATEQ	ATLL	ATAL
ATEQ	Pearson Correlation	1	.965**	.959**
	Sig. (2-tailed)		.000	.001
	N	7	7	7
ATLL	Pearson Correlation	.965**	1	.988**
	Sig. (2-tailed)	.000		.000
	N	7	7	7
ATAL	Pearson Correlation	.959**	.988**	1
	Sig. (2-tailed)	.001	.000	
	N	7	7	7

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

The results obtain for the test of hypothesis two shows the p-value of 0.001 is less than critical value, this implies that the joint null hypothesis which states that there is no significant relationship between average total equity and liquidity is rejected. This indicates that there is a significant relationship between total equity and bank's liquidity. In fact, the higher level of owner's equity of commercial bank's the more banks will be able to face the financial distress, to built confidence to customers and meets short term and long term obligation because the banks have sufficient liquidity.

Therefore, for commercial banks in Rwanda to continue to be relevant in term of reported liquidity ratio, there is need to adequately growth up their core capital. More so, the Pearson correlation is 0.96 for ATLL and 0.97 to ATAL, this implies that 96% of selected bank's ATLL is as a result of core capital and

97% is as a result of core capital .Therefore, core capital is a good predictor for bank's liquidity.

There is no statically significant relationship between total equity and assets quality of commercial banks in Rwanda

Correlation analysis was carried out to identify the relationship between total equity and asset quality. Here total equity is the independent variable and average total assets and average gross loans are the dependent variables. From these independent and dependent variables, the following relationship is formulated. Profit of the banks is dependent upon the total equity. It is represented as follows;

ATA and ATGL = f (AVTEQ)

Which shows that average total assets and gross loans are the functions of total equity.

Where;

ATA and ATGL = dependent variables (Average total assets (ATA) and Average total gross loans (ATGL)

AVTEQ= Total equity

Correlations

		ATEO	ATA	ATGL
	Pearson Correlation Sig. (2-tailed) N	1 7	.974** .000 7	.934** .002 7
ATA	Pearson Correlation Sig. (2-tailed) N	.974** .000 7	1 7	.968** .000 7
	Pearson Correlation Sig. (2-tailed) N	.934** .002 7	.968** .000 7	1 7

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

The results obtain for the test of hypothesis five shows the p-value of 0.002 and 0.000 is less than critical value, this implies that the joint null hypothesis which states that there is no significant relationship between average total equity and assets quality. This indicates that **there is a significant relationship between average total equity and assets quality**.

In fact, the higher the level of owners equity of commercial bank's the more growth assets and loans give to customers. More so, the Pearson correlation are 0.93 for ATGL and 0.968 for ATA, this implies that 93% of selected bank's loans give to customers is as a result of core capital and 97% of selected bank's assets is as a result of core capital .Therefore, core capital is a good predictor for bank's growth loans and assets.

Summary of Findings

This study intended to achieve our objectives which were to find out the level of statistical relationship between total equity and profitability of commercial banks in Rwanda, To show if there was a significant statistical relationship between total equity and liquidity of commercial banks in Rwanda, to show the significant statistical relationship between total equity and profitability of commercial banks in Rwanda and then to show the statistical relationship between total equity and asset quality of commercial banks in Rwanda.

There is no statically significant relationship between total equity and net profit after taxes of commercial banks in Rwanda.

The results obtain for the test of the above hypothesis showed the p-value of 0.002 which was less than critical value; this indicates that there is a significant relationship between total equity and bank's profit. In fact, the higher the level of owners equity of commercial bank's the more confident the bank will be in a case of unexpected loss and its eventuality. Therefore, for commercial banks in Rwanda to continue to be relevant in term of reported profit, there is need to adequately growth up their core capital. More so, the Pearson correlation is 0.95, this implies that 95% of selected bank's profit is as a result of core capital .Therefore, core capital is a good predictor for bank's profitability.

There is no statically significant relationship between total equity and liquidity of commercial banks in Rwanda.

The results obtain for the test of hypothesis two shows the p-value of 0.001 is less than critical value, this implies that the joint null hypothesis which states that there is no significant relationship between average total equity and liquidity is rejected. This indicates that there is a significant relationship between total equity and bank's liquidity. In fact, the higher level of owner's equity of commercial bank's the more banks will be able to face the financial distress, to built confidence to customers and meets short term and long term obligation because the banks have sufficient liquidity.

Therefore, for commercial banks in Rwanda to continue to be relevant in term of reported liquidity ratio, there is need to adequately growth up their core capital. More so, the Pearson correlation is 0.96 for ATLL and 0.97 to ATAL, this implies that 96% of selected bank's ATLL is as a result of core capital and 97% is as a result of core capital. Therefore, core capital is a good predictor for bank's liquidity.

There is no statically significant relationship between total equity and assets quality of commercial banks in Rwanda

The results obtain for the test of hypothesis three shows the p-value of 0.002 and 0.000 is less than critical value, this implies that the joint null hypothesis which states that there is no

significant relationship between average total equity and assets quality. This indicates that there is a significant relationship between average total equity and assets quality. In fact, the higher the level of owners equity of commercial bank's the more growth assets and loans give to customers.

More so, the Pearson correlation are   0.93 for ATGL and 0.968 for ATA, this implies that 93% of selected bank's loans give to customers is as a result of core capital and 97% of selected bank's assets is as a result of core capital. Therefore, core capital is a good predictor for bank's growth loans and assets.

CONCLUSION

The main objective of this study was to find out the relationship between Capital structure and financial performance of commercial banks in Rwanda, to measure the relationship between bank Capital structure and financial performance of commercial banks in Rwanda, correlation analysis was employed.

Based on the findings of this study, the followings conclusion was made:

∝ There is a significant relationship between total equity and bank's profit.

∝ There is a significant relationship between total equity

and asset quality.

∝ There is a significant relationship between total equity and liquidity.

In fact the higher the total equity the more the performance of commercial banks in Rwanda increases in all determinants.

RECOMMENDATIONS

Since capital has positive effect on bank profit, asset quality and liquidity, it can be instrumental in promoting bank soundness and safety. Hence, the study recommends that: banks' capital regulation must be anchored on a sound monitoring system which regularly assesses the economy and establishes the level of capital requirements by the banking sector; a prudently established new capital requirement must be promptly and rigorously enforced; there should be a constant review of minimum capital requirement of deposit money banks in Rwanda to the optimal level and commercial banks in Rwanda should be capitalized to enable them enjoy assess to cheaper sources of funds with subsequent improvements in profit levels. This would go a long way in helping the public maintain confidence in the banks since the latter can now accommodate the credit needs of customers and keep depositors' funds safe.

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THE SEPARABILITY PRINCIPLE UNDER RWANDAN ARBITRATION LAW

By:

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60 Dr. Fidele Masengo is a PhD holder in Law from University of Antwerp in Belgium in 2010, a Master Degree in Economic law from the University of Louvain in Belgium in 2003 and has a Bachelor in Law from the University of Rwanda obtained in 1998.

His background in both arbitration and law in general, includes, lecturing of arbitration law at various universities in Rwanda and East Africa, very rich experience in consultancy work in law, serving as ad hoc arbitrator, a very good experience as advocate and practice in arbitration case management. He has served to the First Board of Director of Kigali International Arbitration Center since its establishment in January 2012 up to September 2017. Since August 2015 up to now he is the Chief executive of the Centre where he assumes the position of General Secretary.

Prior to joining Kigali International Arbitration Center, Dr. Fidele Masengo has served as Deputy Chief of Party for a USAID Land Project in 2012-2015. He has also served as Head of Legal Department at Rwanda Utilities Regulation Agency in 2005 up to 2006. Since 1999 up to 2005, he has also served as Director of Administration of Justice and Director of Public Prosecution services within the Rwandan Ministry of Justice.

He has written articles, books, led Master thesis in law including arbitration law. He has attended many arbitration Conferences as key speaker. He has many certificates in arbitration including a "Certificate on International Arbitration" awarded by the American University in 2006.

Abstract

It is true that the past decades have witnessed an increased role of arbitration as an alternative means of commercial dispute resolution. The Government of the Republic of Rwanda, since 2000, has focused on developing a strong legal and institutional framework to enable the implementation of business regulation reforms including reforms and attention to Alternative Dispute Resolution processes.

In 2008, two important events came to enhance the arbitration regime in the Rwandan legal system. On one side, the first commercial courts were put in place by the Organic Law61, establishing the commercial courts and determining their organization, functioning and jurisdiction62 where business disputes were handled. Almost simultaneously, a law on arbitration was published63 in the form of 'Law on arbitration and conciliation in commercial matters'64. This modern and internationally acceptable legislation enables parties to conclude arbitration agreement.

This article analyses the separability principle introduced in the law on arbitration. The paper was prepared using desk review research. The researcher used analytical method whereby legal texts, textbooks, relevant court decisions as well as electronic sources that are in relation to the subject matter.

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61 n° 59/2007 of 16th December 2007.

62 Official Gazette no 5 of 01/03/2008

63 Law n° 005/2008 of 14/02/2008.

64 Official Gazette number special of 6/03/2008

INTRODUCTION

Arbitration is a private way of resolving disputes with binding effect that may arise from a contractual relationship or another kind of relationship. This alternative mode of dispute resolution is undoubtedly one of the oldest but still popular methods of settling dispute. When compared to litigation, the arbitration process is hailed notably for its confidentiality, flexibility and less time consuming.

Up to recently, the use of arbitration in solving commercial disputes is not well known in Rwanda due to the fact that it is fairly new concept and there is limited awareness among the general public. The legal framework governing arbitration is very recent in Rwanda. Several legal instruments were adopted these last years to regulate the matter. Among them are notably, Law No. 005/2008 of 14/02/2008 on Arbitration and Conciliation in Commercial Matters and Law No. 51/2010 of 10/01/2010 establishing the Kigali International Arbitration Centre and Determining its Organisation, Functioning and Competence.

The main purpose of the current legal framework was to provide a speedy and effective commercial dispute mechanism to reduce the workload/backlog of the courts.
The current legal framework offers a very interesting subject for researchers and practitioners who are called to apply it.

This article is focused to the separability principle. After this introduction, two sections are dedicated to an overview on the arbitration agreement and its effect (1 & 2). Section three analyses the separability principle by defining it, describing its content, studying its applicability under Rwandan law and its consequences.

A final conclusion closes the paper together with a summarized bibliography.

An Overview on arbitration agreement under Rwandan law Requirements for an Arbitration Agreement in Rwanda An agreement by parties to submit to arbitration any dispute or difference between them is the starting point of the process of an arbitration in both National and International arbitration.

There must first be a valid agreement to arbitrate which stands in Rwandan legal system as an agreement by both parties to submit to arbitration all or certain disputes which have arisen or which may arise between them in respect of a defined legal relationship, whether contractual or not. it should be noted that an arbitration agreement may be in the form of an arbitration clause in a contract or in the form of a separate agreement.65 Again, the law states that an arbitration agreement must be made in writing form66, responding to the legal contractual

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65 Law no 005/2008 of 14/02/2008, Supra, note 1,art.9 (1)

66 The word "writing" is being here used in its widest meaning to insinuate its content is recorded in any form –oral, conduct, electronic data interchange, Electronic mail, telegram, telex or telefax.

requirements (mutual assent, capacity to contract, object matter of the contract, and licit cause).

No arbitration clause can be valid if its substance involves criminal matters or affect legal status of individual (divorce settlement), some aspects of corporate entity such as bankruptcy and insolvency[67] or disrespect of public policy and moralities (values) of Rwanda[68]. Such agreement will be void or nullified.

In order to determine the validity requirements for an arbitration agreement, account should be taken to the specific conditions required by the applicable law. This is important, as the invalidity of an arbitration agreement is one of the grounds for requesting the setting aside of an arbitral award or challenging its enforcement. Notwithstanding other specific requirements laid down by specific legislation, the most features of an arbitration agreement are the ones described below.

1.1 Arbitration Agreement must arise out of mutual consent

The parties' consent is the basic requirement for the arbitration agreement. Their intention to submit to arbitration must unequivocally arise from the agreement. The Rwandan law relating to the contract requires that in their agreement the parties "undertake to submit to arbitration" their disputes. This expression means that: the agreement must contain a

67 Law No 42/1988 of 27/10/19988 Establishing Preliminary Title and Book I of the Civil Code Art. 8, *J.O.*
1989, p.9
68 Law no 005/2008 of 14/02/2008, Supra, note 1,art. 2 (2)

mandatory, rather than permissive, undertaking, and the agreement must provide for arbitration, rather than another process of dispute resolution. The agreement must have originated from the parties' free will.

This is known under the principle of party autonomy which has its source in the law of contracts. It is one of the pillars of international commercial arbitration. It is one of the reasons of choosing arbitration instead of litigation. In fact, this principle is seen as a foundation of every arbitration.

Party autonomy expresses freedoms or liberties to arbitration agreements. This principle means the will of the parties. Party autonomy expresses the fact that parties to an arbitration have wide control to decide how their case has to be conducted without any interference. Many provisions of the UNCITRAL Model law contain the principle of party autonomy in various wordings. In fact, many provisions have the sentence stating that 'Unless otherwise agreed by parties'.

The principle of party autonomy exists in all stages of the arbitral procedures from the negotiation of the contract, the arising of dispute, the selection of arbitrators during the arbitral proceedings such as signature by parties of terms of reference.

The principle includes notably the free choice of law, free choice of governing rules, venue, procedures, agreement on costs, selection of an arbitrator, number of arbitrators, language, seat, free decision on time to be used, and almost everything related

to the resolution of their dispute. The principle can be invoked as a ground for the removal of arbitrators, setting aside the arbitral award. Therefore, if one of them has acted induced by error or as a consequence of fraud, coercion

or undue influence or duress, there has been no real consent, the agreement to arbitrate is not valid.

1.2 The parties must have Legal Capacity

Parties to an arbitration agreement must have legal capacity. Otherwise the agreement is invalid. For a natural person, s/he must have twenty-one (21) years of age or emancipated to enter into valid arbitration agreement. The prohibited and the insane cannot also enter into a valid arbitration agreement69. For a moral person (corporation, States and its agencies, cooperative, association, etc), the contract they enter into becomes valid only if they have legal personality. Certain persons such as adjudicated incompetents have no legal capacity to contract while others such as minors, incompetent persons, and intoxicated persons have limited capacity to contract. All others have fully contractual capacity.

1.3 The Arbitration Agreement shall be in writing

An arbitration agreement is in writing if its content is recorded in any form, whether or not the arbitration agreement or contract has been concluded orally, in a written form basing

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69 Law no 07/2009 of 27/04/2009 regulating companies, art.176 (1,2) OG no 17 bis of 27/04/2009

on the conduct of the parties themselves, or based on any other means.

The requirement that an arbitration agreement be in writing is met by an electronic communication if the information contained therein is accessible so as to be used for subsequent reference. Electronic communication refers to any communication that the parties make by means of data messages. Data message refers to any information written, sent, received or stored by electronic, magnetic, optical and other means, including, but not limited to, Electronic Data Interchange (EDI), electronic mail, telegram, telex or telefax.

Furthermore, an arbitration agreement is in writing if it is contained in an exchange of statements of claim and defense in which the existence of an agreement is alleged by one party and not denied by the other. The reference in a contract to any document containing an arbitration clause constitutes an arbitration agreement in writing, provided that the reference is such as to make that clause part of the contract[70]. Briefly, the writing agreement must be followed by the signature of the parties, because without it however, it may be more difficult to prove that the party against whom it is invoked consented to it.

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70 Law no 005/2008 of 14/02/2008, Supra, note 1,art. 9 (2)

1.4 Arbitration Agreement must be based on an arbitral legal subject matter

The Arbitrability in Rwanda is addressed under Article 2(2) of the Law no 005/2008 of 14/02/2008 on Arbitration and Conciliation in Commercial matters which provides that the enforcement of any other Rwandan Laws by virtue of which certain disputes may not be submitted to arbitration shall not be prejudiced including the respect of the public policy and good morals of Rwanda. In this respect, the criminal matters and those which affect legal status of individual (divorce settlements) and corporate entity (such as bankruptcy and insolvency) are usually considered as not arbitrable[71].

I. Effect of an Arbitration Agreement

Article 18 (2) of the LAC 2008 recognizes the twin principles of "Kompetenz-Kompetenz" and separability of the arbitration agreement from the underlying contract.

The aforementioned article reads: An arbitration clause which forms the basic part of a commercial contract shall be treated as an agreement irrespective of the other terms of the basic contract. A decision of the arbitral tribunal indicating that the basic commercial contract is null

and void shall not entail ipso jure the invalidity of the arbitration clause. This means an arbitration clause survives the termination of the main contract. This is justified by the existence

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71 ICPAR, Institute of Certified Public Accountants of Rwanda, Foundation F1.2, Introduction to Law, first edition 2012, p.39

of two separate contracts: the primary contract concerning the commercial obligations of the parties and the secondary contract containing a dispute resolution by arbitration. This collateral contract may never come into operation; but if it does, it will form the basis for the appointment of arbitral tribunal and the resolution of any dispute arising out of the main contract.

II.The Separability Principle

Since it constitutes the core subject of this paper, this section will analyze the principle of the separability as described in Rwandan law and will assess its applicability in practice.

II.1 Definition of the Separability Principle

The doctrine has been defined as the doctrine of autonomy, severability or separability[72]. According to Schwebel's formula, parties concluding a contract containing an arbitration agreement are considered to form not one, but two agreements.[73] Consequently, an arbitration agreement forming part of a contract shall be treated as an agreement independent of the remaining terms of the contract. A decision by an arbitral tribunal declaring a contract as null will not automatically invalidate the arbitration agreement. An arbitral tribunal has the power to rule on its own jurisdiction (competence-competence principle), as well as to consider objections pertaining to the

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72 BORN B.G., International Commercial Arbitration: Commentary and Materials, Transnational publisher, Inc. & Kluwer Law International, 2001, p. 55.
73 Jean –Francois Poudret &Sebastien Besson, Comparative Law of International Arbitration, 2nd Ed., Thomson Seet & Maxwell, 2007, p.133

existence or validity of the arbitration agreement.[74]

The Law on arbitration and conciliation in commercial matters defines an arbitration agreement as follows: "an agreement by both parties to submit to arbitration all or certain disputes which have arisen or which may arise between them in respect of a defined legal relationship, whether contractual or not. An arbitration agreement may be in the form of an arbitration clause in a contract or in the form of a separate agreement."[75]

Rwandan law recognizes arbitration as a procedure for dispute settlement voluntarily applied by the parties[76]. It involves the appointment of an arbitrator or a jury of arbitrators (arbitral tribunal) to settle a legal, contractual or any other related dispute between them.[77]

II.2 Content of the Separability Principle

The definition of the arbitration and separability principle itself is raised by Taylor: the issue of separability of the arbitration clause from the underlying contract to which the clause is connected, the freedom of arbitrators to decide upon the scope of the authority conferred, etc.[78]

74 Van De Berg A.J., "Arbitration Advocacy in Changing Times" in International Council for Commercial Arbitration, 2011

75 See Article 9, 10 and 11, Rwanda Law no 005/2008 of 14/02/2008, supra n.5

76 Note that the terms "arbitration agreement" and "arbitration clauses" are often used interchangeably by judges and others, to generally refer to an arbitration clause within a contract.

77 Article 3, Supra no. 2.

78 Arthur Taylor , "International Commercial Arbitration : the Contribution

All of these components are crucial in formulating the separability principle and will be further explained below. An objection to an arbitrator's jurisdiction, on the grounds that the contract containing the arbitral clause is invalid or, for some other reason, does not bind the parties, raises difficult question about the nature of the arbitral clause and its relationship with the remaining terms of the agreement in which it is incorporated. Under the autonomy doctrine, outlined in part 1 above as an alternate term for the separability principle, the agreement to arbitrate contained in an arbitration clause is regarded as a separate agreement from the remainder of the contract between the parties. Consequently, it continues to exist when for all other purposes the contract itself is nullified.

Moreover, the arbitration clause may lead this separate contractual existence not only when the contract has come to an end by performance (that is to say, when it has been executed), but also when it has come to an end prematurely (terminated) as a result of a supervening event such as force majeure or illegality. Since the arbitration clause is the base on which the arbitration itself is founded, it must be capable of forming this separate contractual existence.

The majority of claims are arbitrated following termination of a contract. The arbitration regime would be undermined if the arbitration clause was held to have been terminated along with

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of French Jurisprudence", accessed at http://digitalcommons.law.lsu.edu/cgi/viewcontent.cgi?article=4988&context=lalrev (11/10/2015).

the contract in which it was incorporated. Indeed, it is at this juncture that it will be sought as a forum for the resolution of disputes between the parties."[79]

The fundamental legal principal governing international arbitration agreements is that of their autonomy. In definitive terms, the term 'autonomy' has a dual meaning:

first it is used in a traditional sense, i.e. to refer to the autonomy or separability of the arbitration agreement from the main contract to which it relates,

secondly, it refers to autonomy of the arbitration agreement from "all national laws". This is a different concept to the above, and relates to the selection of the rules on the basis of which the existence and validity of an arbitration agreement must be assessed[80].

The rules of the International Chamber of Commerce (ICC)[81] provide for the autonomy of the arbitration agreement, both where it is assumed that the main contract is void and where it

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79 AISTE S., International Arbitration: the Doctrine of Separability and Competence-Competence Principle, research paper, the Aarhus School of Business, 2003, p. 32.

80 GAILLARD E. & SAVAGE J. & Fouchard G., International Commercial Arbitration, 1999, Kluwer Law International Hague, 1999, p. 197.

81 The International Chamber of Commerce was founded in 1919 to serve world business by promoting trade and investment, open markets for goods and services, and the free flow of capital. The organization's international secretariat was established in Paris and the ICC's International Court of Arbitration was created in 1923.

is assumed to be non-existent. The arbitrator should not admit the case only if it is found that the arbitration agreement is either void or nonexistent.

The revision of the ICC Rules in 1998 reinforces the approach that the goal of the Court is to prima facie establish whether "an arbitration agreement under the Rules may exist".82 The UNCITRAL Model Law on International Commercial Arbitration of 1985, revised in 2006. also address the separability of the arbitration agreement[83].

II.3 Analysis of the Separability Principle under Rwandan Law

The intervention of the Rwandan legislator on arbitration agreements and specifically on the Separability Principle is enshrined within different laws, i.e. the law establishing an independent permanent legal institutional framework which is the Kigali International Arbitration Center (KIAC), the law on arbitration introduced in 2008, among others.

The separability principle in the Law governing arbitration, 2008

The law governing arbitration is clear that an arbitration

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82 See the ICC Rules of Arbitration as from January 2012; available at http://www.iccwbo.org/products-and-services/arbitration-and-adr/arbitration/icc-rules-of-arbitration/, Consulted on 14/10/2015.

83 UNCITRAL model law Article 8(1)

agreement must be written[84]. The reference in a contract to any document containing an arbitration clause constitutes an arbitration agreement in writing, provided that the reference is such as to render the clause as forming part of the contract. The parties to an agreement are free to choose an arbitrator or a jury of arbitrators to examine the issue to be interpreted.[85] At this period the Rwandan legislator recognised the separability principle[86] whereby the arbitration clause in a contract can exist independently from the remaining terms of the contract.

And the choice of arbitrators is for the parties to agree upon[87]. However, in the event of a party's failure to comply with the obligations related to the choice of arbitrator(s), the court shall intervene[88]. It is up to the nature of the event and for some contracts whose factors leading to invalidity are clear to absolutely nullify the contract. In this case, the arbitration clause will likely not survive the main contract as it is itself null.89

In the 1963 decision of *Socit Gosset v. Socitd Carpelli* the *Court de cassation*, the *Chambre civile* took the position that the arbitration

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84 Article 9, Arbitration Law of Rwanda.

85 Supra n.5

86 Also defined as the principle of autonomy.

87 Article 4 of Arbitration law of Rwanda

88 Article7 ibid.

89 Factors which may invalidate a contract in Rwandan law are the following: mistake, misrepresentation of facts, contract made under duress and non-performance of the contract on grounds of public order. See articles 46 -63 of the law No. 45/2011 of 25/11/2011 Governing Contracts (Official Gazette No.4bis of 23/01/2012)

agreement, whether concluded separately or included in the juristic act to which it relates, always presents, (except in exceptional circumstances), a complete juridical independence *(« une complète autonomie juridique »).*

This prevents the arbitration agreement from being affected by the possible invalidity of the offending act.[90] The decisions following Socit Gosset[91], have caused French authors to concur on a distinction between material separability (autonomie matérielle) from the principal contract, and legal separability (autonomie juridique ou de rattachement) from the law of the contract.[92]

In practice, Rwandan court decisions on separability are few and far between. Arguably, the operationalization of this principle will need to address issues of impartiality and independence by delegating to a body which is divorced from state interference.

The Separability principle as affirmed in the KIAC Arbitration Rules

In 2011, the Kigali International Arbitration Centre (KIAC) was established. Law n° 51/2010 of 10/01/2010 (the Law) determines its organisation, functioning and competence.[93] KIAC is a unique local arbitral facility for commercial dispute resolution. It is the first independent and permanent institution

90 Supra n.10
91 Hecht case of 1972, Menicussi case of 1975 and Dallico case of 1993.
92 Jean Francois Poudret, supra 7, p.132
93 OG No.9BIS of 28/02.2011

established by law to promote and provide a forum for the resolution of disputes through arbitration and other means of alternative dispute resolution[94].

It is worth noting that an arbitration organization forum was created by an individual lawyer some years ago[95] but this organization became obsolete because it was not trusted and used by disputants.

At the current time, KIAC is the only competent agency for arbitration in Rwanda for trade related matters and for other matters as set out in the Law[96]. Thus, KIAC has a monopoly on trade matters. This provision also repealed articles of the Arbitration Law of 2008 which related to ad hoc arbitration committees dealing with trade matters.[97] Courts will have jurisdiction to hear appeals from arbitral awards granted through KIAC, which will be further discussed below.

By virtue of Article 11, KIAC, through its Board of Directors, approves the internal rules and regulations of the Centre. KIAC also makes suggestions for ministerial orders to the Minister of Trade for the organisation and functioning of arbitration, requirements for arbitrators, procedures for registration of

94 Article 4 supra n.18

95 An advocate named Rwangampuhwe Francois created a nonprofit association called Centre d'Arbitrage et d'Expertise au Rwanda but did not operate for several reasons. First, the legal framework governing arbitration was not favorable. Second, the institution itself was not marketed and trusted by its potential users.

96 Article 5, Law n° 51/2010 of 10/01/2010 establishing the Kigali International Arbitration Centre.

97 These committees continue to deal with civil matters.

documents, fees guidelines, and model clauses for arbitration agreements.

The KIAC administers cases under KIAC Arbitration Rules ("KIAC Rules"). The KIAC Rules recognize the principle of separability:

"*Unless otherwise agreed, the Arbitral tribunal shall not cease to have jurisdiction by reason of any allegation that the contract is non-existent or null and void, provided that the Arbitral tribunal upholds the validity of the arbitration agreement. The arbitral tribunal shall continue to have jurisdiction to determine the parties' respective rights and to decide their claims and pleas even though the contract itself may be non-existent or null and void.*" [98]

From a comparative law perspective and taking into account international standards, this is in line with English arbitration law which states:

"*Unless otherwise agreed by the parties, an arbitration agreement which forms or was intended to form part of another agreement (whether in writing or not) shall not be regarded as invalid, non-existent or ineffective because that other agreement is invalid, or did not come into existence or has become ineffective, and it shall for that purpose be treated as a distinct agreement.*"[99]

Nevertheless, the separability principle may, in certain circumstances be unenforceable if a court considers that the

98 The KIAC Arbitration Rules were published in the Rwanda Official Gazette No 22 Bis of 28th May 2012
99 See Section 7 of the English Arbitration Act 1996

arbitration agreement is null and void or inoperative. The article of the Rwandan Arbitration Law[100] provides for this eventuality:

*"An ordinary court before which an action regarding an arbitration agreement is seized shall submit it to arbitration, if a party so requests, before submitting his or her statements on the substance of the dispute, unless **it finds that the agreement is null and void, inoperative or incapable of** being performed."*

Indeed, a party to an arbitration agreement may lodge an action with a court as regards the applicability of the said agreement, and the court may then issue a judgment in favor of or against the applicability of the separability principle. However, the Law on arbitration and conciliation in commercial matters does set out some guidance[101] whereby the action submitted to the court becomes null and void:

"Where an action referred to in Paragraph 1 of this Article has been brought in a court but before being heard, arbitral proceedings may nevertheless be commenced or continued, and a decision may be taken while the issue is pending before the court. In that case, the action submitted to the court shall be null and void."

In light of the foregoing, it is observed that Rwandan law does not mention criteria or guidelines that can assist with decisions on such issues, and particularly on the applicability of the

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100 Article 10, paragraph 1.
101 Article 10 paragraph 2, Arbitration Act.

separability principle.

The Competent jurisdiction to challenge arbitral awards

The Organic Law[102] Determining the Organization, Functioning and Jurisdiction of Courts, as modified and complemented to date in Article 106 on the jurisdiction in Civil, Administrative and Labour cases, is clear.

The High Court hears appeals on civil, administrative and labour cases heard in the first instance and in the second instance, by an Intermediate Court[103]. It also hears appeals[104] on arbitration decisions.[105] Our position here is to propose a legislative change in order to give jurisdiction to set aside to the High Commercial Court.

Jurisdiction over foreign arbitral awards

The Organic Law[106] determines the organization, functioning and jurisdiction of commercial courts. Article 13 sets out the jurisdiction of the Commercial High Court to hear in the

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102 n° 51/2008 of 09/09/2008.

103 But there are five conditions: when such cases do not set out whatsoever the basis for decisions, are based on non-existing laws or were pronounced by incompetent court; were rendered on proof, document or conclusions presented after the trial and when there is no resumption of the hearing; were rendered by a jury that is not constituted as provided; were pronounced by a judge who did not take part in hearings; were not tried in public and no hearing in camera was ordered.

104 The term appeal is an improper translation. It doesn't mean appeal in a legal term. It is to be rather understood as challenges to awards.

105 O.G. Special number of 10/09/2008 and the law Organic Law n ° 04/2009/ OL. of 29/07/2009 (O.G. special number of 30/07/2009).

106 n° 06/2012/OL of 14/09/2012.

first instance, complaints against decisions and judgements rendered by Foreign Courts on commercial, financial and fiscal cases which require the exequatur on the Rwandan territory. The examination of such judgements shall be conducted by considering:

whether the foreign judgment does not contradict public order and basic legal tenets of Rwandan public laws;
whether the case was finally heard and determined in accordance with the laws of the country in which the judgment was rendered;
whether a copy of the judgment is by all means authentic in accordance with laws of the Country in which the judgment was rendered; whether the right of defense was respected.

The Commercial High Court shall have appellate jurisdiction in cases heard in the first instance by commercial courts and decisions rendered by arbitrators.[107]

The case of KZ NOIR(R) Ltd v. KUBWIMANA et al[108] is a decision rendered by the Commercial Court. It was held that it is not directly about the implementation of the principle of separability, but indirectly it concerns an arbitration clause issue from a main contract where one party has requested a summary procedure for the court to take provisional measures regarding an arbitral award.

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107   OG No.45 of 05/11/2012
108   RCOMA 0232/14/HCC

KZ NOIR (R) Ltd entered into a contract with Kubwimana Chrysologue and Kubwimana Philippe, with a clause providing that any conflict relating to it shall be referred to arbitration. Both parties turned to arbitration but pending the decision on merits, KZ NOIR (R) Ltd filed the summary procedure to the Commercial Court of Musanze requesting provisional measures. The court rejected the claim on the grounds that there was no related main suit. KZ NOIR (R) Ltd appealed to the Commercial High Court stating that its claim should be admitted and examined because the main suit was pending before arbitration. On appeal, Kubwimana Chrysologue and Kubwimana Philippe argued that interim measures fall under the jurisdiction of the arbitrators who are competent to settle the matter.

The judge's decision was that provided that the court which annuls the appealed judgment does not hear it on the merits, the appeal shall be admitted by the competent court for a hearing on merits at the first instance, if only the plaintiff intends to continue the proceedings.[109]

Consequences of the Separability Principle

As highlighted by Aiste[110] there are consequences that follow from concluding that an arbitration agreement is separable from the main contract. Such consequences can be direct or indirect.

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109 KZ NOIR(R) Ltd v. KUBWIMANA ET AL, accessed at http://www.judiciary.gov.rw/fileadmin/Publications/Case_Law_Booklet/RWANDA_LAW_REPORTS__20_15__1_RLR.pdf (19 November 2015).
110 See supra n.11.

Direct consequences

Due to the separability principle of an arbitration agreement to its underlying contract, the arbitration clause and the underlying contract are to be evaluated independently one to each other. In this regard, the separability of the arbitration agreement from the main contract gives rise to two direct consequences:

Firstly, the arbitration agreement is unaffected by the status of the main contract. This gives rise to the doctrine of separability, the result of which is that the arbitration agreement is unaffected by the events affecting the main contract. Thus, the validity of the arbitration agreement is not dependent on the validity of the main contract. In a more practical way, an appointed arbitrator will have to arbitrate even if the underlying contract is void.

Secondly, the arbitration agreement may be governed by a law different from the law governing the main contract. However, this issue is very complex. It can give rise to many other issues. One may ask to know whether the principle of separability causes the laws that are applicable to the arbitration and main contract to be really different even in the situation where the arbitration clause is formulated together with the law governing the contract in the same sentence. The practice is to apply the law of the seat of arbitration to the arbitration agreement. Again, the problem arises when the law of the seat has not been determined by the parties in their agreement. Article 40 sets the Rwandan law by default.

Indirect consequences

There are four indirect consequences:

The first of the fundamental principles of arbitration law is that arbitrators have the power to rule on their own jurisdiction. This principle is often presented as a direct result of the separability doctrine. The principle of competence-competence is one of the leading principles in arbitration. The term is taken from 'Kompetenz – kompetenz' a well-known German legal terminology. The principle is written in many modern legislations. Both the Rwandan law and English arbitration statutes contain provisions relating to the rule of competence-competence. This means that an arbitrator has powers to decide on his own jurisdiction with regard to:

- Whether there is a valid arbitration agreement;
- Whether he has been properly appointed
- What matters have been properly submitted to his arbitration?

This principle is affirmed in many legislations. it is complemented by the doctrine of separability which considers an arbitration clause contained in a given contract as separate from the contract itself. It facilitates expeditious settlement of disputes by ensuring that pleas relating to jurisdiction are settled at the very beginning.

The competence-competence principle is recognized by the main international conventions on arbitration, by most modern arbitration statutes, and by the majority of institutional

arbitration rules. The 1958 New York Convention only deals with the conditions for recognition and enforcement of award, it does not cover the competence-competence principle. On the opposite, the 1961 European Convention provides clearly in art. V (3) that: "subject to any subsequent judicial control provided for under the lex fori, the arbitrator whose jurisdiction is called in question shall be entitled to proceed with the arbitration, to rule on his own jurisdiction and to decide upon the existence or the validity of the arbitration agreement or of the contract of which the agreement forms part. " The UNCITRAL Model Law provides in art.16 (3): "the arbitral tribunal may rule on a plea that the arbitral tribunal does not have jurisdiction either as preliminary question or in an award on the merits" and in the event of an action to set aside a partial award concerning jurisdiction "the arbitral tribunal may continue the arbitral proceedings and make an award"111.

Furthermore, the UNCITRAL Arbitration Rules provide that the arbitral tribunal shall have the power to rule on objections that it has no jurisdiction, including any objections with respect to the existence of validity of the arbitration clause or of the separate arbitration agreement.

The arbitral tribunal may rule on its own jurisdiction, including any objections with respect to the existence or validity of the arbitration agreement. For that purpose, an arbitration clause

111   X,   http://www.lawteacher.net/free-law-essays/commercial-law/competence-justifications-on-principle-commercial-law-essay.php

which forms part of a contract shall be treated as an agreement independent of the other terms of the contract. A decision by the arbitral tribunal that the contract is null and void shall not entail ipso jure the invalidity of the arbitration clause.

A plea that the arbitral tribunal does not have jurisdiction shall be raised not later than the submission of the statement of defense. A party is not precluded from raising such a plea by the fact that he has appointed, or participated in the appointment of, an arbitrator. A plea that the arbitral tribunal is exceeding the scope of its authority shall be raised as soon as the matter alleged to be beyond the scope of its authority is raised during the arbitral proceedings. The arbitral tribunal may, in either case, admit a later Plea if it considers the delay justified. The arbitral tribunal may rule either as a preliminary question or in an award on the merits. If the arbitral tribunal rules as a preliminary question that it has jurisdiction, any party may request, within thirty days after having received notice of that ruling, the court specified in article 6 to decide the matter, which decision shall be subject to no appeal; while such a request is pending, the arbitral tribunal may continue the arbitral proceedings and make an award112.

The defendant may raise the defense in the arbitral tribunal that the tribunal has no jurisdiction; this may happen after the court

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112 UNCITRAL Model Law on International Commercial Arbitration 1985 available at https://www.uncitral.org/pdf/english/texts/arbitration/ml-arb/07-86998_Ebook.pdf

has found that the arbitration agreement was not null and void, out of order or incapable of being performed; it more often arises because the arbitration has commenced preceding to any action in court.

How does Competence-Competence Principle apply?

When parties are before the arbitral tribunal and one challenges the jurisdiction of the tribunal, if the tribunal determines this challenge by deciding that it does indeed have jurisdiction then the other party can request that the tribunal continues to hear the merits of the case and the party who was objecting is not allowed to challenge this preliminary decision of the arbitral tribunal at this point. He has to wait until the award has been published to be able to do so as per the law on arbitration.

However, courts have been given ways of controlling the power of the arbitral tribunal because the parties are allowed to challenge the validity and the scope of arbitration agreements in judicial proceedings.

Once the arbitral tribunal is appointed it enjoys considerable autonomy. It can determine points of procedure where the parties have not done so themselves. It can rule on its own jurisdiction. It can also order interim measures to protect the subject matter of the dispute. There are some rules of procedure set out in the law, but in general the procedure is set by the parties or the tribunal. There is power for the tribunal to continue to act in the absence of co-operation by one party or

the other.

Once the award is given there is power to refer it back for correction. There are also limited powers of recourse to the courts to set aside an award made under an invalid agreement, contrary to the agreement or contrary to the public policy of the state. Where a tribunal has made a ruling on its own jurisdiction, there is a right of appeal on this point to the courts.

The second consequence is a combination of the principle of validity and the rejection of the choice of law method. The principle of separability was initially intended as a means of isolating the arbitration agreement from laws affecting the main contract. It has gradually acquired a new purpose. Some countries now use the principle of autonomy as the source for justifying the principle of the invalidity of international arbitration agreements, under which such agreements are not subject to the traditional choice of law method. The principle of autonomy thus denotes autonomy from the main contract, which can refer to autonomy from all national laws.

The third consequence is that the arbitration clause may survive termination or expiry of the main agreement. Parties infrequently commence arbitral proceedings after their main contract has expired or terminated. In most jurisdictions there is no general obstacle to this, provided that the claims arise from conduct during the term of agreement (or during the term of specific provisions that survived the agreement).

the fourth consequence is that the invalidity of the parties' main contract may not deprive an arbitral award of validity. If an arbitral tribunal or court concludes that the entirety of the parties' main contract was void, that conclusion would not necessarily deprive the parties of the arbitration agreement. Hence, the validity of the arbitrator's award.

CONCLUSION

The current Rwandan legislation is very progressive when compared to the situation that prevailed before it. Rwanda is now ranked amongst the few African countries that have modern legislation on arbitration. However, in light of what has been discussed in this paper, there is a need of revisiting our legislation in order to adjust and update it. In this line, the aspect of separability may also need to be reviewed to elaborate more the matter relating to the consequences caused by the principle. Before this review, judges can also play a key role in its interpretation especially by favoring the autonomy of parties. This can help to emphasize on the understanding that an arbitration clause is legally independent of the main agreement in which it is incorporated, directly or implicitly. The existence and the effectiveness of the doctrine of separability, according to J.F. Poudret, are determined in accordance with the common intention of the parties without any reference to *domestic law.113*

113   Jean Francois Poudret, supra n.5, p.145.

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ON EFFECTS OF EXCHANGE RATE VOLATILITY ON MACROECONOMIC VARIABLES USING ECONOMETRIC EFFECT OF: RWANDAN EVIDENCE (1985-2015)

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Abstract

Over the past years, it has been observed by countless economists on Rwanda economy that exchange rate volatility had in fact had a measurable influence on some major macroeconomic variables, such as GDP, CPI, etc. However, this influence has been measured using purely statistical methods. Consequently, subsequent results did not reflect the economic character of the effect measured.

The objective of this study was to analyze the effect of exchange rate volatility on macroeconomic variables in Rwanda period 1985 to 2015. Precisely, the paper showed the behavior of Rwanda exchange rate against United States Dollar and the effect of exchange rate volatility on Economic growth (GDPG) and Consumer price index (CPI).

To achieve these objectives the study focused on two research hypotheses. The first one proposed that the Rwanda exchange rate has highly volatilized against USD, while the second one stated that there was no direct effect of exchange rate volatility on macroeconomic variables in Rwanda.

Computation of standard deviation, Documentary Technique, Data Collection Techniques, Analytical Method, Comparative Method, Historical Method, Statistical Method and Econometric Method were used. Unfortunately, the study got different results compared to what we expected.

The study revealed that Rwanda nominal exchange rate had no direct effect on Consumer price index both in short run and long run. However, it influenced Economic growth both short run and long run

where appreciation of unit of nominal exchange rate raised Economic growth by 0.8497 units in long run. There was also less dispersion of data from the mean, which showed that the Rwanda nominal exchange rate had less volatilized throughout 1985 - 2015 period..

1. **INTRODUCTION**

Exchange rate is macroeconomic variable used in trade between countries where it is rare to see another economic variable that has drawn much attention as the exchange rate. (MUJYAMBERE, 2012)

Exchange rate refers to money demand and money supply on international market where countries can exchange their money in order to accomplish their improvement and their willingness (COLANDER, 2004). Therefore, we are experiencing changes in exchange rate known as nominal exchange rate, which is price of one currency in terms of another one.

As a result, in 2014 the Rwandan Francs (RWF) depreciated by 3.6% against the United State Dollars (USD) trading between RWF 694.37 per dollar against RWF 670.08 per dollar, by the end of December 2013 and lower compared with average depreciation of 6.1% in 2013 and December 2014. The RWF depreciation against the USD reached 5.2% by the end of September 2015, trading at RWF 730.54 per dollar from RWF 694.37 by the end of December 2014. The RWF has been under some pressures from the persistent wide trade deficit, the strengthening of

USD against most of currencies around the world as well as the speculation resulting from the depreciation of currencies of major trading partners in the EAC. However, through its policies and measures, including effective communication and market discipline, National Bank of Rwanda (BNR) managed to ensure that the stability of the currency being achieved. (BNR, 2015)

Growth in 2015 has been stronger than expected. It drove by strong activity in agriculture, construction, and services, with the projection for the year increased from 6.5 to 7.0 percent. Inflation of 2015, 2.5 percent remained well contained, although the monetary stance remained accommodative, with higher than expected credit growth. Fiscal policy has been broadly in line with expectations. Recent household survey results show good progress in poverty reduction.

However, the outlook for 2016 is darker. An external shock was unfolding: mining exports have almost halved in recent months, due to lower prices and demand in export markets. Combined with USD appreciation, this exerted strong downward pressure on the Rwandan Franc, and prompted a drawdown of international reserves by the banking system. Deterioration of the current account in 2015 expected to continue in 2016, including due to public infrastructure imports for the Kigali convention center and expansion of RwandAir's fleet. (www. imf.org, 2016)

2. History of Exchange Rate Regime in Rwanda

2.1 Gold Standard

In virtue of this convention, the Bank could no longer be in the colonial Treasury's debts exceeding some strictly fixed limits. It could still hold gold or foreign currency reserves of about 40 % the half of which in gold, of the amount of banknotes in circulation. The value in gold of the Franc was equal to that of the Belgian Franc (1 Fr = 0.418422gr (gram) of fine gold). This convention ratified by the decree of 14 November 1927, putting thus an end to the state of forced currency by re-establishing at sight payment banknotes. As a result of the economic crisis of the 1930's, the Belgian Franc was devaluated and, by the emergency decree of 1st April 1935, the Congolese Franc followed the pitch and, like the Belgian Franc, its gold parity was reduced to 0.0301264 grams of fine gold.

2.2 The Belgian Francs

On 30th May 1940, a parliamentary decree imposed the forced currency of banknotes of the Belgian Congo Bank on the whole colony and in Ruanda-Urundi. (www.bnr.rw)

2.3 Rwandan Francs

The Royal decree of 15th September 1960 put an end, from 22nd September of the same year, to the legal currency within the territories of Rwanda-Burundi of banknotes issued by the Central Bank of Belgian Congo and Ruanda-Urundi. The same decree specified that the exchange of banknotes of the Bank of

Belgian Congo and Ruanda-Urundi based on one Rwanda and Burundi Franc against one Congolese Franc but those currencies pegged under Belgian Francs.

Other legal texts, one dated 21st September 1960 and the other 6th March 1962, instructed the new institution to carry out through regulations, the control of exchanges, imports and exports.

The National Bank of Rwanda, established by the Law of 24th April 1964, came into force as from 19th May 1964 with the aim of fulfilling one of its main missions, namely the issuing of currency on the Rwandan territory. The BERB. Rights and obligations were ex officio transmitted to the Royal Bank of Burundi (BRB.) and to the National Bank of Rwanda (BNR). (www.bnr.rw)

2.4 Pegged Exchange Rate

During the fixed exchange rate system, foreign currencies of the banking system was held by the central bank, the later was the sole institution authorized to carry out exchange transactions. The exchange rate was initially pegged to the Belgian Franc, then to the American dollar and finally to the Special drawing rights (SDR). (BNR, Economic review, 2014:86)

The prevailing exchange rate system between 1980 and 1989 also regulated and characterized by the National Bank of Rwanda (BNR's) control over all exchange operations. All import operations subjected to a license authorizing foreign currency payments. Similarly, all exports subjected to a prerequisite declaration that implied for exporters the obligation to

repatriate their exports proceeds and this amount transferred to BNR. The same controls were applied to capital movements and BNR had to ensure that the operations were in line with the exchange policy regulations. The value of the RWF fixed by the President of the Republic and a law promulgated in February 1981 instituted a fixed exchange rate regime the Rwandan Franc pegged to the USD. (MUSONI, 2010:3)

2.5 Floating Exchange Rate

In 1995, the flexible exchange rate system introduced, along with new exchange policy regulations. The key innovations in the new exchange regulations were the liberalization of current account operations, market-driven exchange rates, the establishment of foreign exchange bureau, the authorization of direct investments in Rwanda, and the transfer abroad of income generated by such investments.

3. Foreign Exchange Intervention

The National Bank of Rwanda intervenes in the foreign exchange market, among other reasons, to defend the exchange rate and to achieve a desired amount of international reserves. The intervention in the foreign exchange market directly affects reserve money and hence has a direct impact on overall liquidity in the economy and the stance of monetary policy. (www.bnr. rw)

4. The Volatility of Rwandan Exchange Rate against USD

Volatility is a measure of uncertainty of the return realized on an asset and entails fluctuations in the exchange rates as measured by their absolute percentage changes. (WILLIAMSON, 1985)

Rwandan nominal exchange rate volatility
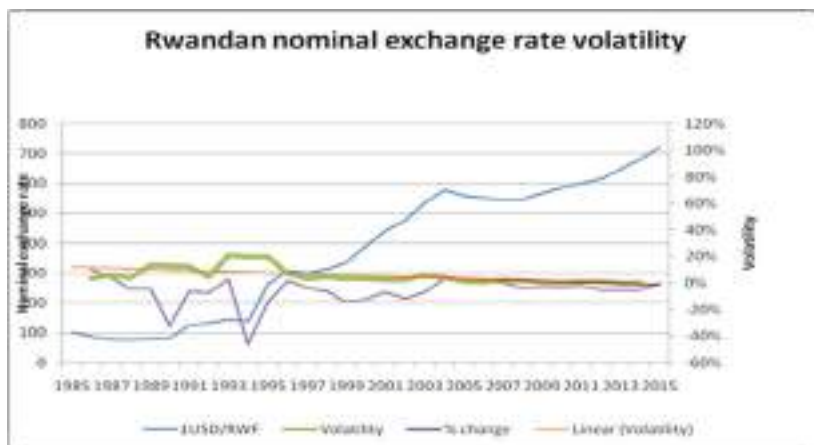
Figure 4.1 shows Rwanda nominal exchange rate volatility against USD.

From the above, two distinct periods of exchange rate regime can be observed. The first period started from 1985 and ended in late 1994. During this period, Rwanda was still under what was referred to as fixed exchange rate regime. From the figure clearly the curve of Rwanda nominal exchange rate moved around the trend line, suggesting less volatility in that period. The second period started in 1995 till late 2015. In this period Rwanda shifted from using fixed exchange rate regime to floating exchange rate regime. The figure above displayed the Rwanda nominal

exchange rate lying on the trend line, suggesting stability of the currency under study. This observation was a result of foreign inflows such as foreign aid and a moderate trade deficit.

From this graph, one concluded that the nominal exchange rate of Rwanda Franc exhibited less volatility in the period before the genocide against Tutsi, in 1994.

5. Measuring the magnitude of Volatility

The standard deviation method is the most traditional way of measuring volatility (Kenen and Rodrik, 1986; Caballero and Corbo, 1989). Under this approach, the Nominal Exchange Rate (NER) volatility is measured by computing standard deviation. Percentage change (t) is a mathematical concept that represents the degree of change over time. In terms of price it is usually calculated by taking today's price minus yesterday price divided by yesterday price.

+t2+t3+……. +tn)/n. Formula 5.1

Tn, t1, t2, t3…tn stands for percentage change at any time period

Pn, Pn-1 stands for price at any time period

This formula 5.1 showed the percentage change that was used to calculate the standard deviation.

$$s = \sqrt{1/N-1} \ \sum_{I=1}^{N}(X_I - \bar{X})^2$$

The formula 5.2 shows how the standard deviation of variables was calculated and the results presented in table below.

Where, s represents standard deviation, N is number of

repetition, i is assumption of 1 to N, and x_i is estimated mean.

CURRENCY		Period	Mean	Standard Deviation
1USD/RWF		1985-2015	0.076679	0.183414

The Rwanda nominal exchange rate has been less volatile based on the following findings using table 5.1

The standard deviation is especially a useful measure of variability when its distribution is assumed normal or approximately normal because the proportion of the distribution within a given number of standard deviations from the mean can be calculated easily:

A closer look at the three types of data used, it can be observed that 99.8% of the data lied between (0.473) and 0.625, which is 3standard deviation from the mean. However, 86.6% of those data in 3standard deviation lied in the area of 1standard deviation near the mean. This lead to conclude that there was less dispersion of data from the mean showed that the Rwandan Francs had been less volatile in period 1985 to 2015.

6. DATA AND METHODOLOGY

This study presented on the effect of exchange rate volatility on macroeconomic variables in Rwanda. Precisely, the effect of Nominal exchange rate on Economic growth (GDPG) and Consumer price index (CPI). The study was limited to the period 1985 to 2015 where the data were collected from World Bank website and the scarcity of data, the study focused on

above range. Econometrics (E-views7) has been used to process and analyze data.

6.1. Model Specification

Economic growth (GDP) is an increase in the capacity of an economy to produce goods and services, compared from one period to another, Consumer price index (CPI) measure a change in the purchasing power of a currency and the rate of inflation.

Net exports are the difference between country's exports and imports; Lending interest rate is the amount of interest you pay on principal of loan; Nominal Exchange rate (NEXR) is the relative price of one currency in terms of another. (Mankiw. 2003)

$$\text{GDPG} = \beta_0 + \beta_1 \text{NEXR} + \beta_2 \text{NX} + \square_t \ (1)$$

$$\text{CPI} = \beta_0 + \beta_1 \text{NEXR} + \beta_2 \text{LR} + \square_t \quad (2)$$

It is common practice in econometric to transform the data into logarithms in order to interpret their results in terms of percentage. However, the data, which are already in percentage, are not being transformed into logarithm form. In logarithmic form the models is:

$$\text{GDPG} = \beta_0 + \beta_1 \text{LNEXR} + \beta_2 \text{NX} + \square_t \ (1)$$

$$\text{CPI} = \beta_0 + \beta_1 \text{LNEXR} + \beta_2 \text{LR} + \square_t \quad (2)$$

Where LNEXR= Logarithm of nominal exchange rate at period t

$\square_t$ = present the error term in period t where β_0, β_1 and β_2 are parameters to be estimated

7. Results and discussion

7.1. Unit root Test

The unit root test is the first test to perform on time series data to see whether they are stationary or not. Most of economic time series data are not stationary because they usually have a linear or exponential time trend. (GUJARATI. N.2005). The Augmented Dickey-Fuller (ADF) tests and Phillips Perron are used to test stationary of time series in EVIEWS7.

Table 7.1. Unit root test

VARI-ABLES	MODEL	ADF(Augmented Dick fuller)			PP(Philipps Peron)	CONCLU-SION
		LAG	τ_t, τ, τ_μ	P (Probability)		
LNEXR	INTERCEPT	0	-0.747101	0.8194	-0.762874	The nominal exchange rate is not stationary at level
	TREND &IN-TERCEPT	0	-1.216405	0.8888	-1.360623	
	NONE	0	2.389129**	0.9947	2.228434**	
	INTERCEPT	0	-4.773864***	0.0006	-4.763566***	The nominal exchange rate is stationary at 1st difference to all test for unit root
	TREND &IN-TERCEPT	0	-4.795515***	0.0032	-5.845576***	
	NONE	0	-3.934891***	0.0003	-3.934891***	
GDPG	INTERCEPT	0	-6.942229***	0.0000	-6.932457***	The econom-ic growth is stationary at level to all test for unit root
	TREND &IN-TERCEPT	0	-7.209895***	0.0000	-7.223624***	
	NONE	0	-5.621294***	0.0000	-5.668490***	

CPI	INTERCEPT	0	-2.942156*	0.0524	-2.875289*	The consumer price index is not stationary at level
	TREND &IN-TERCEPT	0	-2.959586*	0.1595	-3.016674	
	NONE	0	-2.106828**	0.0357	-2.028285**	
	INTERCEPT	0	-5.751766***	0.0000	-5.761974***	The consumer price index is stationary at 1st difference to all test of unit root
	TREND &IN-TERCEPT	0	-5.707454***	0.0003	-5.959670***	
	NONE	0	-5.856830***	0.0000	-5.869386***	
NX	INTERCEPT	0	-4.265897***	0.0023	-4.26585897***	The net export is stationary at level to all unit root test
	TREND &IN-TERCEPT	0	-4.192359**	0.0134	-4.170645**	
	NONE	0	-0.787207	1.1234	-1.497751	
LR	INTERCEPT	0	-2.7665393*	0.0753	-2.765393*	The lending rate is not stationary at level
	TREND &IN-TERCEPT	0	-2.857073	0.1896	-2.855058	
	NONE	0	0.4893395	0.8146	0.262627	
	INTERCEPT	0	-5.854698***	0.0000	-7.053048***	The lending rate is stationary at 1st difference to all test of unit root
	TREND &IN-TERCEPT	0	-5.838401***	0.0003	-7.713542***	
	NONE	0	-5.873342***	0.0000	-7.066950***	

Table 7.1: Unit root test

The study found that the nominal exchange rate, Consumer price index and Lending rate are stationary at first difference to all test for unit root, while the economic growth and Net export are stationary at level to all test for unit root. The probability is tested to the following level of significance.

(***): stationary at 1%

(**): stationary at 5%

(*): stationary at 10%

7.2. Lag Length Selection Process

For an accurate run of the co-integration test, the lag length of the time series under study has been determined. Precisely, it has been found that lag 1 for GDPG, LNEXR and NX and lag 2 for CPI, LNEXR and LR were appropriate

7.3. Co-Integration Test

In literature, co-integration tests, e.g. Engle and Granger (1987), Johansen (1988), Johansen and Julius (1990), Pesan et al(2001) etc are used to ascertain the presence of potential long run equilibrium relationship between two or more variables. In the following lines, co-integration test for dependent variables in the model, that is, GDPG and CPI is performed and results are displayed below.

7.3.1. Co-integration test

Date: 08/21/16 Time: 12:23				
Sample (adjusted): 1987 2015				
Included observations: 29 after adjustments				
Trend assumption: No deterministic trend				
Series: GDPG LNEXR NX				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothe-sized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.641996	43.24311	24.27596	0.0001

At most 1 *	0.282710	13.45397	12.32090	0.0322
At most 2	0.123357	3.818003	4.129906	0.0602
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothe-sized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.641996	29.78913	17.79730	0.0005
At most 1	0.282710	9.635967	11.22480	0.0939
At most 2	0.123357	3.818003	4.129906	0.0602
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Normalized cointegrating coefficients (standard error in parentheses)				
GDPG	LNEXR	NX		
1.000000	-0.849716	0.251132		
	(0.34558)	(0.13185)		

Result 7.3.1. GDPG Co-Integration Test

The study found 2 co-integrated equations at the 0.05 level by Trace and 1 co-integrated equation by Maximum Eigen in result 7.3.1.

GDPG= 0.8497LNEXR-0.25NX. Equation 7.3.1

The study found that Nominal exchange rate (LNEXR) and Net export (NX) affect Economic growth (GDPG) in long run where

the appreciation of unit on nominal exchange rate raised GDPG by 0.8497 units while the increase of unit on NX decreased GDPG by 0.25 units ceteris paribus.

This reflect to international trade and value of Rwandan currency where the Rwandan currency continued to be under pressure due to low export revenues and high import demand with high demand for Dollars from different companies and government projects under the Public Private Partnership (PPP) frame work which needs to mobilize hard currency from domestic market.

7.3.2. CPI Co-Integration Test

Date: 08/28/16 Time: 11:56			
Sample (adjusted): 1988 2015			
Included observations: 28 after adjustments			
Trend assumption: No deterministic trend			
Series: CPI LNEXR LR			
Lags interval (in first differences): 1 to 2			
Unrestricted Cointegration Rank Test (Trace)			
		S	
Hypothe-sized		Trace	0.05
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.419254	24.02438	24.27596	0.0538
At most 1	0.266524	8.808034	12.32090	0.1806
At most 2	0.004602	0.129146	4.129906	0.7670
Trace test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothe-sized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.419254	15.21635	17.79730	0.1173
At most 1	0.266524	8.678888	11.22480	0.1355
At most 2	0.004602	0.129146	4.129906	0.7670
Max-eigenvalue test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
1 Cointegrating Equation(s):		Log likeli-hood	-102.8712	
Normalized cointegrating coefficients (standard error in parentheses)				
CPI	LNEXR	LR		
1.000000	35.53580	-14.84159		
	(11.7295)	(4.36561)		

Result 7.3.2. CPI Co-integration test

The study found that there was no co-integrated equation at the 0.05 level by Trace and no co-integrated equation by Maximum Eigen on result 7.3.2. It means that Nominal exchange rate (NEXR) and Lending rate (LR) did not affect CPI in long run.

7.4. Vector Error Correction Model (VECM)

VEC estimates the parameters of co-integrating VECMs. These models are employed because many economic time series appear to be 'first-difference stationary,' with their levels exhibiting unit root behavior. Conventional regression estimators have good properties when applied to covariance-

stationary time series, but encounter difficulties when applied to non-stationary or integrated processes. (Christopher.F.2013)

7.4.1. VECM Test of GDPG

Dependent Variable: D(GDPG)				
Method: Least Squares				
Date: 08/02/16 Time: 13:19				
Sample (adjusted): 1988 2015				
Included observations: 28 after adjustments				
D(GDPG) = C(1)*(GDPG(-1) - 3.14432126071*LNEXR(-1) + 1.11454159718*NX(-1) + 30.614125019) + C(2)*D(GDPG(-1)) + C(3) *D(GDPG(-2)) + C(4)*D(LNEXR(-1)) + C(5)*D(LNEXR(-2)) + C(6)*D(NX(-1)) + C(7)*D(NX(-2)) + C(8)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-1.858008	0.220326	-8.432997	0.0000
C(2)	0.123040	0.186420	0.660014	0.5168
C(3)	-0.145409	0.185135	-0.785422	0.4414
C(4)	15.63430	12.59077	1.241727	0.2287
C(5)	-91.70884	11.40191	-8.043284	0.0000
C(6)	1.520098	0.384001	3.958578	0.0008
C(7)	1.241074	0.267003	4.648160	0.0002
C(8)	5.849276	1.586519	3.686862	0.0015
R-squared	0.950171	Mean dependent var		0.214442
Adjusted R-squared	0.932731	S.D. dependent var		20.52394
S.E. of regression	5.323162	Akaike info criterion		6.416968
Sum squared resid	566.7210	Schwarz criterion		6.797598
Log likelihood	-81.83756	Hannan-Quinn criter.		6.533331
F-statistic	54.48159	Durbin-Watson stat		1.680592

Prob(F-statistic)	0.000000			

Results 7.4.1 GDPG VECM Test

The results 7.4.1 showed that the dependent variables (Nominal exchange rate and Net export) defined independent variable (Economic growth) by 95% as indicated by the coefficient of determination ''R''.

7.4.1.1. GDPG short run causality Wald test

This test used to find the short run relationship referring to probability of chi-square.

Wald Test:			
Equation: Untitled			
Test Statistic	Value	Df	Probability
F-statistic	16.89831	(4, 20)	0.0000
Chi-square	67.59325	4	0.0000
Null Hypothesis: C(4)=C(5)=C(6)=C(7)=0			
Null Hypothesis Summary:			
Normalized Restriction (= 0)	Value	Std. Err.	
C(4)	15.63430	12.59077	
C(5)	-91.70884	11.40191	
C(6)	1.520098	0.384001	
C(7)	1.241074	0.267003	
Restrictions are linear in coefficients.			

Results 7.4.1.1. GDPG Wald test

HO: C (4) =C (5) =C (6) =C (7) =0 means no short run relationship

H1: C (4) ≠C (5) ≠ C (6) ≠ C (7) ≠0 means there is short run hypotheses

GDPG=1.858008+91.70884 LNEXR (-2) -1.520098 NX (-1)-1.241074 NX (-2)

      (0.220326)   (11.40191)   (0.384001)   (0.267003)

As the probability of Chi-square 0.0% is, less than 5% means that we reject null hypotheses. Hence, there was short run relationship between Nominal exchange rate (NEXR), Net export (NX) and Economic growth (GDPG). An appreciation of unit on NEXR raised GDPG by 91.70884 units ceteris paribus in short run while the change of 1 unit on NX reduce GDPG by 1.520098 units on time lag 1 and by 1.241074 units by time lag 2.

7.4.2. VECM Test for CPI

Dependent Variable: D(CPI)			
Method: Least Squares			
Date: 08/28/16 Time: 12:25			
Sample (adjusted): 1988 2015			
Included observations: 28 after adjustments			
D(CPI) = C(1)*(CPI(-1) + 20.0248862583*LNEXR(-1)-12.7887776023*LR(			
-1) + 85.7308928839) + C(2)*D(CPI(-1)) + C(3)*D(CPI(-2)) + C(4)			
*D(LNEXR(-1)) + C(5)*D(LNEXR(-2)) + C(6)*D(LR(-1)) + C(7)*D(LR(-2)) + C(8)			
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.054236	0.195040	0.278075	0.7838
C(2)	0.068403	0.270892	0.252509	0.8032
C(3)	-0.127989	0.239468	-0.534472	0.5989
C(4)	-24.76934	17.14473	-1.444720	0.1640
C(5)	24.38022	19.44121	1.254048	0.2243

C(6)	-0.030316		1.851198	-0.016377	0.9871
C(7)	-1.439837		1.510224	-0.953393	0.3518
C(8)	0.308451		2.611398	0.118117	0.9072
R-squared	0.445943		Mean dependent var		-0.057676
Adjusted R-squared	0.252023		S.D. dependent var		10.20216
S.E. of regression	8.823402		Akaike info criterion		7.427648
Sum squared resid	1557.049		Schwarz criterion		7.808278
Log likelihood	-95.98708		Hannan-Quinn criter.		7.544011
F-statistic	2.299624		Durbin-Watson stat		1.546132
Prob(F-statistic)	0.068205				

CPI WALD TEST
Wald Test:

Equation: Untitled					
Test Statistic	Value	Df	Probability		
F-statistic	1.814692	(4, 20)	0.1656		
Chi-square	7.258770	4	0.1228		
Null Hypothesis: C(4)=C(5)=C(6)=C(7)=0					
Null Hypothesis Summary:					
Normalized Restriction (= 0)	Value	Std. Err.			
C(4)	-24.76934	17.14473			
C(5)	24.38022	19.44121			
C(6)	-0.030316	1.851198			
C(7)	-1.439837	1.510224			

Results 7.4.2. VECM Test for CPI and Wald test

Results 7.4.2. Showed that dependent variables (Nominal

exchange rate and lending rate) defined independent variable (Consumer price index) only at 44.5%. However, the probability value of Chi-Square 12.28 % is greater than 5% hence the study accept the null hypotheses means that NEXR and LR did not influence CPI in short run.

7.5. Diagnostic Tests

The diagnostic tests performed on our regression are residual tests and stability tests.

The residuals tests performed on the regression are the following:

   i.   Residual Histogram Normality Test

  ii.   Heteroskedasticity Test

 iii.   Serial correlation LM test

 iv.   Correlogram test for autocorrelation

7.5.1. Histogram normality test

The normality test is performed on residuals to examine whether they are normally distributed or not.

The test focuses on the following hypotheses.

H_o: Residuals are normally distributed

H_1: Residuals are not normally distributed

When probability is less than 5%, the decision to be taken is to reject null hypotheses in favor of the alternative hypotheses

When probability is greater than 5% the test does not have sufficient evidence to reject the null hypothesis at 5% level of significance.
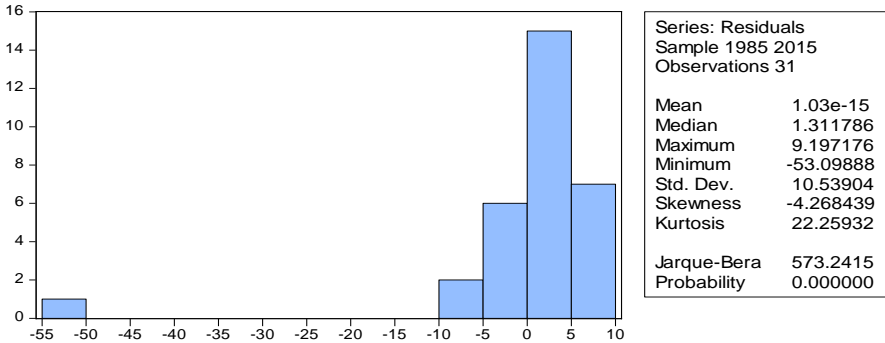

Series: Residuals	
Sample 1985 2015	
Observations 31	
Mean	1.03e-15
Median	1.311786
Maximum	9.197176
Minimum	-53.09888
Std. Dev.	10.53904
Skewness	-4.268439
Kurtosis	22.25932
Jarque-Bera	573.2415
Probability	0.000000

Figure :7.5.1.1. GDPG Normality Test

Results 7.5.1.1. GDPG normality test

Basing on Result 7.5.1.1. Probability is 0.000%, the normality test showed that the residuals were not normally distributed hence the alternative hypotheses is accepted.
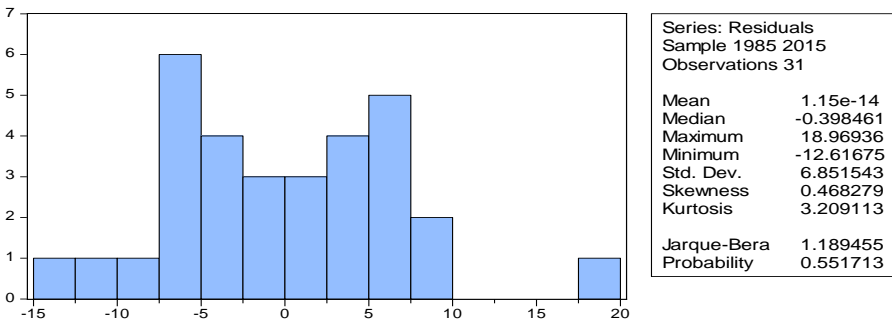

Series: Residuals	
Sample 1985 2015	
Observations 31	
Mean	1.15e-14
Median	-0.398461
Maximum	18.96936
Minimum	-12.61675
Std. Dev.	6.851543
Skewness	0.468279
Kurtosis	3.209113
Jarque-Bera	1.189455
Probability	0.551713

Figure 7.5.1.2 CPI Normality Test

Results 7.5.1.2. CPI Normality test

Basing on Result 7.5.1.2. Probability is 55.17%, the normality test showed that the residuals were normally distributed by accepting null hypothesis.

7.5.2. Heteroskedasticity

Heteroskedasticity is a diagnostic test also referred to as Arch test. In the process, the test are as follows:

Accept the null hypotheses, when chi square probability value is greater than 5% and reject it when probability is less than 5% by accepting alternative hypotheses.

7.5.2.1. GDPG Heteroskedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	0.021920	Prob. F(1,28)	0.8834
Obs*R-squared	0.023467	Prob. Chi-Square(1)	0.8782

Result 7.5.2.1. GDPG Heteroskedasticity Test

In this case, the test does not have sufficient evidence to suggest rejection of the null hypothesis at 5% level of significance hence there was no Arch effect.

7.5.2.2. CPI Heteroskedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	1.366839	Prob. F(2,26)	0.2726
Obs*R-squared	2.759015	Prob. Chi-Square(2)	0.2517

Result 7.5.2.2. CPI Heteroskedasticity Test

In this case, the test does not have sufficient evidence

to suggest rejection of the null hypothesis at 5% level of significance hence there was no Arch effect.

7.5.3. Serial Correlation

The test focuses on the following hypothesis:

H_O: There is no serial correlation

H_1: there is serial correlation.

The null hypotheses is accepted when probability value is greater than 5% and rejected when it is less.

7.5.3.1. GDPG Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.956157	Prob. F(2,26)	0.3975
Obs*R-squared	2.123856	Prob. Chi-Square(2)	0.3458

Result 7.5.3.1. GDPG Serial Correlation

According to chi-square probability, there was no serial correlation in the residuals as there is no enough evidence to reject null hypothesis.

7.5.3.2. CPI Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.383813	Prob. F(2,26)	0.2685
Obs*R-squared	2.982394	Prob. Chi-Square(2)	0.2251

Result   7.5.3.1.   CPI   Serial   Correlation

According to chi-square probability, there was no serial correlation in the residuals as there is no enough evidence to reject null hypothesis.

7.5.4. Correlogram Test

This test shows if the model contains residuals. This means that the errors of period t would affect the errors of next period (t+1). It specifies the lag on which the model can be auto correlated.

7.5.4.1. GDPG Correlogram Test

Date: 08/2521/16 Time: 21:3814:20						
Sample: 1985 2015						
Included observations: 31						
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. *| . |	. *| . |	1	-0.119	-0.119	0.4863	0.486
. | . |	. | . |	2	0.010	-0.005	0.4896	0.783
. | . |	. | . |	3	-0.062	-0.062	0.6294	0.890
. | . |	. | . |	4	-0.027	-0.043	0.6575	0.956
. *| . |	. *| . |	5	-0.125	-0.136	1.2717	0.938
. | . |	. | . |	6	0.004	-0.034	1.2725	0.973
. *| . |	. *| . |	7	-0.131	-0.147	2.0003	0.960
. *| . |	.**| . |	8	-0.204	-0.276	3.8516	0.870
. |*. |	. | . |	9	0.142	0.054	4.7895	0.852
. | . |	. | . |	10	0.036	0.012	4.8541	0.901
. | . |	. *| . |	11	-0.015	-0.073	4.8650	0.938
. | . |	. *| . |	12	-0.020	-0.090	4.8857	0.962
. | . |	. *| . |	13	0.006	-0.078	4.8879	0.978
. *| . |	. *| . |	14	-0.148	-0.202	6.2043	0.961
. | . |	. *| . |	15	0.042	-0.113	6.3166	0.974
. | . |	. *| . |	16	-0.013	-0.108	6.3279	0.984

Result 7.5.4.1. GDPG Correlogram Test

In the above auto correlation table, all the probabilities are greater than 10% level of significance up to the 16th lags. This

means that there was no autocorrelation of the errors.

7.5.4.2. CPI Correlogram Test

Date: 08/28/16 Time: 12:43						
Sample: 1985 2015						
Included observations: 31						
Autocorrela-tion	Partial Cor-relation		AC	PAC	Q-Stat	Prob
. |**. |	. |**. |	1	0.301	0.301	3.0988	0.078
. |* . |	. | . |	2	0.120	0.032	3.6099	0.164
. *| . |	. *| . |	3	-0.076	-0.133	3.8188	0.282
. *| . |	. *| . |	4	-0.197	-0.161	5.2928	0.259
. *| . |	. *| . |	5	-0.185	-0.076	6.6440	0.248
.**| . |	.**| . |	6	-0.284	-0.215	9.9354	0.127
. *| . |	. *| . |	7	-0.196	-0.095	11.566	0.116
.**| . |	.**| . |	8	-0.263	-0.247	14.636	0.067
.**| . |	.**| . |	9	-0.207	-0.208	16.626	0.055
. | . |	. *| . |	10	-0.028	-0.066	16.665	0.082
. | . |	. *| . |	11	0.070	-0.072	16.917	0.110
. | . |	.**| . |	12	0.061	-0.217	17.114	0.145
. |* . |	. | . |	13	0.161	-0.046	18.594	0.136
. |**. |	. | . |	14	0.265	0.063	22.820	0.063
. |* . |	. *| . |	15	0.145	-0.129	24.174	0.062
. | . |	. *| . |	16	0.051	-0.147	24.354	0.082

Result 7.5.4.2. CPI Correlogram test

in the above Correlogram table, some probabilities are less than 10% level of significance, which means that there was autocorrelation of the errors.

7.5.5. Stability Test

It is normal in empirical analysis to examine the stability property of the model over time. As such, parameter instability and structural change are inspected if there is a reason to suggest structure breaks in the underlying data generating process. (John.K.2014), an econometric analysis of the effects of exchange rate, domestic and foreign income on trade balance in Rwanda We used two tests such as Ramsey RESET Test and CUSUM test.

7.5.5.1. Ramsey Reset Test

According to Ramsey Reset Test, most of specification of errors in the model is caused by error a vector that is different from zero. The Ramsey Reset Test is there to test the necessary omitted variable and unnecessary variable included in the model. Precisely, it tests the hypotheses as follow:

H_O: the model is correctly specified
H_1: the model is not correctly specified

7.5.5.1.1. GDPG Ramsey Test

Ramsey RESET Test			
Equation: UNTITLED			
Specification: GDPG LNEXR NX C			
Omitted Variables: Squares of fitted values			
	Value	Df	Probability
t-statistic	1.819903	27	0.0799

| F-statistic	3.312046	(1, 27)	0.0799
Likelihood ratio	3.586958	1	0.0582

Result 7.5.5.1.1. GDPG Ramsey test

From these results, the probability of F-statistic is equal to 7.99%, which is greater than 5% level of significance. Hence, the null hypothesis is accepted means that the model was correctly specified.

7.5.5.1.2. CPI Ramsey Test

Ramsey RESET Test				
Equation: UNTITLED				
Specification: CPI C LNEXR LR				
Omitted Variables: Powers of fitted values from 2 to 3				
	Value	Df	Probabil-ity	
F-statistic	5.687038	(2, 26)	0.0089	
Likelihood ratio	11.24930	2	0.0036	

Result 7.5.5.1.2. CPI Ramsey test

From these results, the probability of F-statistic is equal to 0.89%, which is less than 5% level of significance. Hence, the alternative hypothesis is accepted means that the model was not correctly specified.

7.5.5.2. CUSUM Test

This test indicates whether the parameters of the regression equation are stable or not. The CUSUM test is based on cumulative sum of the recursive residuals.

This option plots the cumulative sum together with the 5% critical lines. There is parameter instability if the cumulative sum goes outside the area between the two critical lines.

7.5.5.2.1. GDPG CUSUM Test
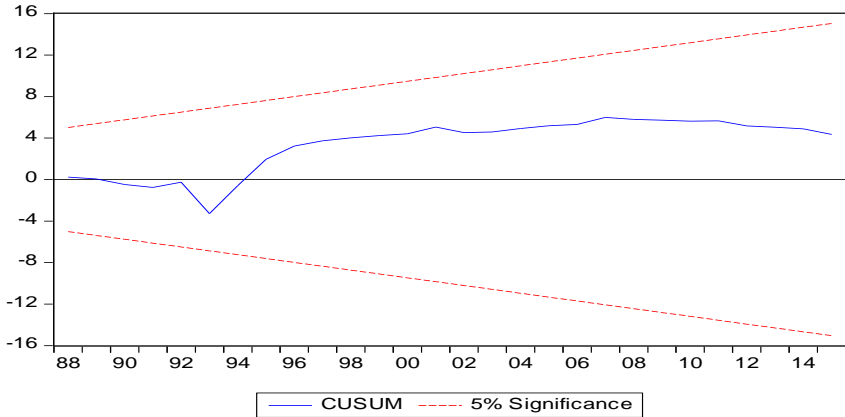
Result 7.5.5.2.1. GDPG CUSUM test

As it is seen in the result 7.5.5.2.1. The CUSUM test shows graphically navigation of variables of the method within a perspective of judging the stability of the model. When the blue curve line goes out of red corridor the coefficient of the model are not stable; otherwise, the coefficients of the model are stable. Hence, one can conclude that Economic (GDPG) model was stable.

7.5.5.2.2. CPI CUSUM Test
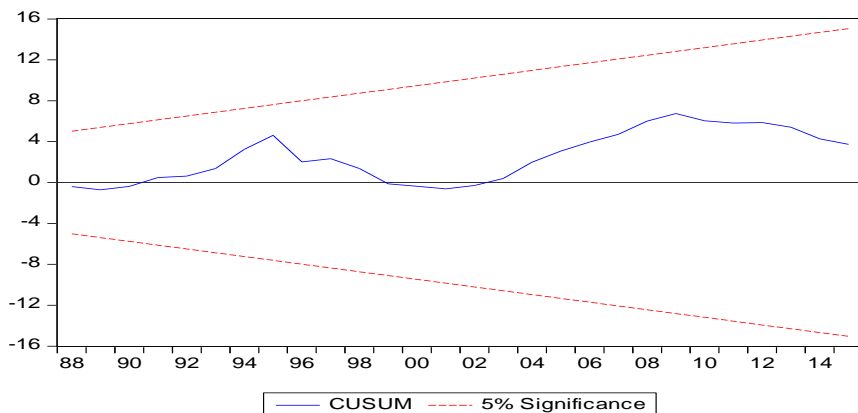
Result 7.5.5.2.1. CPI CUSUM test

The CUSUM plots did not cross 5% critical lines; therefore, one can conclude that consumer price index (CPI) model was stable.

8. CONCLUSION

The objective of this study was to evaluate the effect of exchange rate volatility on macroeconomic variables in Rwanda period 1985 to 2015. Precisely, the paper showed the behavior of Rwanda exchange rate against United State Dollar and the effect of exchange rate volatility on Economic growth (GDPG) and Consumer price index (CPI).

Graphically, the study in the figure 4.1 found that the curve of Rwanda nominal exchange rate moves around the trend line, suggesting less volatility within 1985 -1994 period. However, the period 1995 to 2015, the Rwanda nominal exchange rate was on the trend line, suggesting stability of the currency. This observation was a result of foreign inflows such as foreign aid and a moderate trade deficit.

A closer look at the three types of data used in table 5.1, it can be observed that 99.8% of the data lies between (0.473) and 0.625, which is 3standard deviation from the mean. However, 86.6% of those data in 3standard deviation lies in the area of 1standard deviation near the mean. This lead to conclude that there is less dispersion of data from the mean shows that the Rwandan Francs has been less volatile in period 1985 to 2015. This is a result low export revenues and high import demand with high demand for Dollars from different companies and government projects that put a pressure on Rwandan currency. It is common practice to evaluate the short run and long run

-132-

relationship among variables, residual tests and stability tests. As a result, the study found that Nominal exchange rate (LNEXR) and Net export (NX) affect Economic growth (GDPG) in long-run where the appreciation of 1 unit on nominal exchange rate increase GDPG by 0.8497 units while the appreciation of 1 unit on NX decreases GDPG by 0.25 units ceteris paribus.

The short run relationship has been revealed where the appreciation of 1 unit on Nominal exchange rate (NEXR) raise Economic growth (GDPG) by 91.70884 units while the appreciation of 1 unit on Net export (NX) reduce Economic growth (GDPG) by 1.520098 units on time lag 1 and by 1.241074 units by time lag 2 ceteris paribus. However, the Consumer price index (CPI) showed no relationship both in short run and long run with Nominal exchange rate (NEXR) and Lending rate (LR).

For the residual test, the study found that the Economic growth (GDPG) residuals are not normally distributed, does not have Arch effect, no serial correlation and no autocorrelation.

However, The Consumer price index (CPI) residuals are normally distributed, no Arch effect, no serial correlation while there is autocorrelation

The stability test showed that Economic growth (GDPG) model was correctly specified and stable. However, the Consumer price index (CPI) model was not correctly specified but stable.

The study revealed that Rwanda nominal exchange rate had no direct effect on Consumer price index both in short run and long

run. However, it influenced Economic growth both short run and long run where appreciation of unit of nominal exchange rate raised Economic growth by 0.8497 units in long run. There was also less dispersion of data from the mean, which showed that the Rwanda nominal exchange rate had less volatilized in period 1985 to 2015.

In other words, the study found that Rwanda exchange rate was less volatile for the entire study period. However, it has been found that Rwanda exchange rate has no direct effect on Consumer price index both in short run and long run but it influences positively economic growth both short run and long run.

SUGGESTIONS

- Firstly, the study suggests other researchers to show the variables that are mostly being influenced by nominal exchange rate.
- Secondly, the study suggests the policy makers to intervene in the economy in order to stabilize the level of exchange rate in Rwanda.
- Thirdly, the study suggests that EAC policy makers empower the process of using one currency and remove USD as exchange currency that can reduce volatility of EAC currencies.
- Fourthly, the study suggests Rwandans to promote made in Rwanda to reduce trade deficit

- Lastly, the study suggest government agencies like RDB, MINEACOM to strengthen local investors who use natural resources so that the domestic production capacity may increases.

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DATA USED

Year	NEXR	GDPG	CPI	LNEXR
1985	101.245	4.40275	1.75933	4.61754
1986	87.5909	5.47214	-1.1171	4.472677
1987	79.4607	-0.024	4.13302	4.375262
1988	76.4477	4.49883	2.97864	4.336607
1989	80.149	-0.0365	1.01028	4.383887
1990	83.7041	-2.3993	4.18576	4.427288

1991	125.164	-2.5144	19.6372	4.829627
1992	133.939	5.87273	9.56041	4.897381
1993	144.237	-50.248	12.3544	4.971458
1994	140.704	35.2241	41.6	4.946657
1995	262.182	12.7457	42.1	5.56904
1996	306.82	13.8498	7.41137	5.726261
1997	301.53	8.85867	12.0154	5.708869
1998	312.314	7.5811	6.21007	5.744009
1999	333.942	8.31871	-2.4059	5.810967
2000	389.696	8.66895	3.89953	5.965368
2001	442.992	13.5105	3.34286	6.093551
2002	475.365	1.45134	1.99259	6.164083
2003	537.655	6.94639	7.4497	6.287217
2004	577.449	9.23527	12.2507	6.35862
2005	557.823	9.23527	9.01409	6.324041
2006	551.71	7.61285	8.88283	6.313023
2007	546.955	11.1625	9.08072	6.304367
2008	546.849	6.26799	15.4449	6.304172
2009	568.281	7.31267	10.3942	6.342617
2010	583.131	7.85194	2.30915	6.368412
2011	600.307	8.78835	5.67068	6.39744
2012	614.295	4.68451	6.2709	6.420476
2013	646.636	7.00913	4.23478	6.471784
2014	681.862	6.9042	1.7841	6.524827
2015	720.975	5.98035	2.51809	6.580605

SOURCE: worldbank.org, 2016

THE IMPACT OF LENDING RATE ON DEMAND FOR CREDIT IN RWANDA

By:

Gasheja Faustin PhD

Abstract

This study analyzed the impact of lending rate on demand for credit in Rwanda between 2000 and 2013. Using co-integration and Error Correction Models, the study found that the lending rate does not impact the demand for credit in Rwanda both in long and in short run. The same models revealed that the demand for credit in Rwanda is highly impacted by the real GDP. The results showed that the 1% increase in real GDP impacts the demand for credit to increase by 3.15%.

Besides, the study found that, Rwanda has high lending rate in the region despite its lower and stable inflation rate. The high lending rate causes high NPLs ratio due to lack of competition in banking system in Rwanda. Therefore, the strategies which would help lowering the NPLs ratio and increasing the competition in banking system in Rwanda are needed. These strategies would reduce the lending rate in Rwanda, and therefore, boosting the GDP growth and hence, increasing the Rwandan's ratio of Credit/GDP, which is currently low comparatively to other EAC partner states.

Key words: Lending rate, demand, credit

I. Background

The central bank has a crucial role in stabilizing the economy by implementing its monetary policy. According to Friedman (1976) the central bank impacts the money supply by increasing or decreasing the central bank policy rate. Therefore, by raising its policy rate, the central bank expects discouraging the demand for money due to high cost of investment.

On the other hand, by decreasing its policy rate, the central bank expects encouraging the demand for money as commercial banks also will follow by adjusting downward the interest rate applied to their customers. Consequently, the demand for money increases which encourages the consumption, and leading to boost the investment and the economy in general. In normal economic conditions, when the central bank changes its policy rate, the commercial banks' rates also correspondingly change to respond to the central bank's monetary policy.

In Rwanda, during the last ten years, the Rwandan banking system has enjoyed a relatively stable macroeconomic conditions whereby the growth and inflation rates were averaged to 8% and 5% (BNR, Annual Report, July 2012 – June 2013) respectively. Regarding the inflation, Rwanda was the only country which kept the inflation rate at single digits compared to other member countries of East African Community (EAC). For instance,

in December 2012 the inflation was 27% in Uganda, 18.9% in

Graph 1 Inflation rate in EAC countries, 2010 - 2013

Source: BNR, Annual reports

In addition, Rwanda has the lowest central bank rate in EAC countries due to its high growth rate coupled with its lower and stable inflation as shown in the graph below.
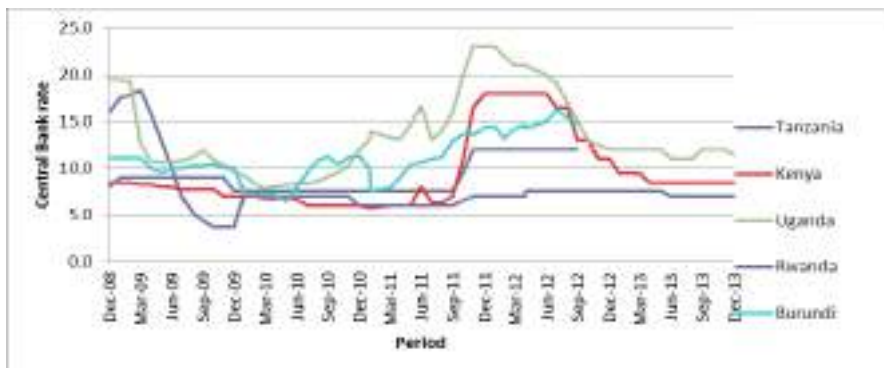
Source: BNR, Annual reports

From December 2008 to end of December 2013 the central bank policy rates were averaged to 7.7% in Rwanda, followed by Kenya with 9.3%, Burundi with 11%, Tanzania with 12% and Uganda with a highest central bank rate averaged to 14.2%.

In general, a country with lower inflation and central bank base rates should have a lower lending rate as the latter is mainly composed by the level of the cost of funds which is central bank rate and the level of inflation. Therefore, based on its lower inflation and central bank rates, by definition, Rwanda should have a lowest lending rate in the EAC region. In contrast, except Uganda with lending rate averaged to 22%, Rwanda is the second country in EAC having the highest lending rate averaged to 17%. Rwanda is followed by Burundi with 16.2%, thereafter Kenya with 15.8% and the last is Tanzania with lending rate averaged to 15.1% (BNR, Annual Reports).

Consequently, the high lending rate in Rwanda impacts negatively the demand for credit. As per the graph below in 2011, the Rwanda's credit to private sector as a share of GDP was the lowest in region. It was 13% in Rwanda compared to 78% in Kenya, 29% in Burundi, 21% in Tanzania and 20% in Uganda.
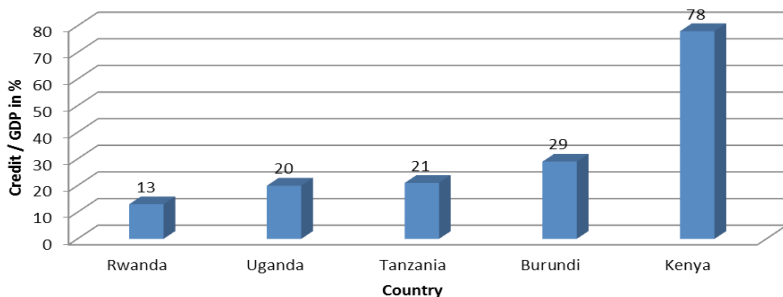
Source: BNR, Financial Stability Directorate, 2013

According to Keynes (1936) the interest rate and demand for credit are negatively correlated. Therefore, when interest rate increases, the demand for credit decreases, and when interest rate decreases, the demand for credit increases.

However, as per the below graph, it seems that there is a positive relationship between interest rate and demand for credit in Rwanda. Especially in 2010 due to the international financial crisis the lending rate declined in the same time with the demand for credit.
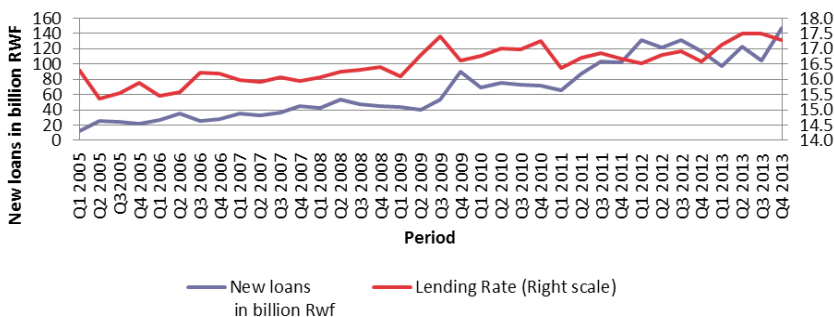
Source: BNR, Financial Stability Directorate, 2013

According to the above graph, interest rate and loans increase in same way in the stated period. For instance, in Q2 2013 interest rate increased by 2.10%, that was from 17.1% to 17.5% and the new authorized loans increased by 26% that was, from RWF 97.5 billion in Q1 2013 to RWF 122.90 billion in Q2 2013. The analysis of the above graph shows that the Rwandan case is reverse to the general economic theory.

II. Conceptual framework

According to the economic theory, there is a negative relationship between lending rate and demand for credit. Besides, the same economic theory revealed that there is positive relationship between GDP growth and demand for credit. Keynes (1936) in his liquidity preference theory emphasized that there are three motives of demand for money: Transactions motive, precautionary motive and speculative motive. Transactions and precautionary motives depend on the level of income, i.e. GDP (fiscal policy), whereas the speculative motive depends on the level of interest rate (monetary policy) on the market. Therefore, the monetary policy and fiscal policy are the main intervening drivers of demand for credit.

III. Problem statement

Economic theory states that there is a negative correlation between lending rate and demand for credit. Thus, high lending rate seems to discourage the demand for credit while lower lending rate encourages the demand for credit. However, when you analyze the time series data in Rwanda, you realized that the correlation between lending rate and demand for credit is not observed, although Rwanda has lower central bank and inflation rates comparatively to other EAC countries. As seen above, Rwanda is the second country which has high lending rate in EAC due to lack of long term savings coupled with lower competition in banking system in Rwanda; as a result, high non -performing loan ratio which is taken into account while determining the lending rate.

As non-performing loan and lending rate are highly correlated, an increase of lending rate causes an increase of the non-performing loan, and the reverse is also correct.

The lack of competition in banking system is an obstacle to the interest rate as channel of monetary policy transmission in Rwanda. When BNR changes its base rate, commercial banks do not adjust their lending rate accordingly, as the market forces of demand and supply are not properly applicable in banking sector in Rwanda.

Therefore, the purpose of this study is to analyze on one hand whether the monetary policy conducted by BNR affects really the lending rate in Rwanda and on the other hand to analyze

the factors underlying the credit to economy in Rwanda.

IV. Objectives of the research

The objectives of this research are:

- ✓ To analyze the impact of lending rate on demand for credit in Rwanda and;
- ✓ To find out the factors influencing the demand for credit in Rwanda.

V. Research questions

- ✓ Does lending rate impact the demand for credit in Rwanda?
- ✓ What are the factors that impact the demand for credit in Rwanda?

VI. Research hypotheses

To analyze the impact of lending rate on demand for credit in Rwanda, the following hypotheses have been formulated:

Hypothesis for research question one

Null hypothesis: The lending rate does not impact the demand for credit in Rwanda.

Alternative hypothesis: The lending rate impacts the demand for credit in Rwanda.

Hypothesis for research question two

Null hypothesis: The real Gross Domestic Products (GDP) does not impact the demand for credit in Rwanda

Alternative hypothesis: The real GDP is the major factor that impacts the demand for credit in Rwanda.

VII. Economic theories on the impact of lending rate on demand for credit

There are several researches that were conducted in this area and most of them concluded that higher lending rate impacts negatively the demand for money and the lower lending rate in the economy affects positively the demand for credit, hence, boosts the real economy through investment and consumption. Since 2008 the world economy has been shocked by the financial crisis which affected negatively the demand for credit and consumption, as a result, lowering investment in particular and economic growth in general.

To contain this financial crisis, Monetary Policy Committees (MPCs) from central banks have been implementing the expansionary monetary stance in order to revive the demand for credit and support sustainable economic growth through investments.

In this regard, the MPCs from Central Bank apply the known as Keynesian economic theory stipulating that there is a negative relationship between real interest rate and investment in economy. Means that, if interest rate declines investment

goes up and if interest rate rises investment falls. According to the Keynesian theory, the real interest rate helps investors deciding whether to invest or not. When interest rate is high the cost of borrowing becomes expensive therefore, economic operators invest less as it will be difficult to them to cover their expenditures as their products will be less competitive on market.

In U.S.A, before the financial crisis the central bank rate was 5.25% (Bloomberg) in June 29th 2006, thereafter when the financial crisis hit the US in September 2007, the central bank rate has been reduced many times since September 2007 from 5.25% to 0.25% in December 2008 till to date in order to encourage the investment and supporting the economic growth. In Europe, during the past five years the European Central Bank (ECB) reduced its policy rate from 4.25% (Thomson Reuters) in July 2008 to 0.25% in November 2013.

In UK, the Bank of England kept unchanged its policy rate at 0.50% (Bloomberg) since March 2009 to September 2013 in order to support employment and economic growth.
Besides, several studies tried to analyze the relationship between interest rate and demand for credit into economy.
In India, Shri Sitikantha P. et al. (2012) investigated the impact of real interest rate on investment and economic growth using the panel regression of three variables investment as dependent variable, real GDP and interest rate as independent variables

and found that a one percentage change in interest rate affects negatively the investment and GDP growth by around 0.50% and 0.20% respectively.

Katja G. and Turkalj (2007) used the regression model comprising three variables: credit to economy as loans to private sector, real interest rate and GDP to examine the determinants of credit demand in Croatia. They found that, in Croatia loans are positively related to GDP and negatively to real interest rate whereby the change in interest rate by 1% affects in opposite way the demand for loans by 8.75% and same change (1%) in real GDP affects positively the demand for loans by 3.09%. Therefore, according to Katja G. and Trkalj, investors react quickly much higher on any change in interest rate rather than in GDP growth.

Majed B. and Ahmad I. (2010) used the co-integration analysis with three variables (credit to economy as investment level, GDP and real interest rate) to investigate the effect of interest rate on credit to economy in Jordan during the period 1990 – 2005. The study revealed that the impact of the real interest rate on credit to economy is higher than the impact of the income level. Their results seem to be in line with economic theory and other related studies in the sense that they found that in Jordan any increase in real interest rate by 1% implies a decline in loan to private sector by 44.04%. In contrast, any change in income level by 1% affects positively the loan to private sector by 17.01%.

A. Calza et al (2001) used the Johansen methodology to study the determinants of loans to private sector for the period 1980 - 1992 in Euro area and found that, the loans to private sector are positively linked to GDP and negatively to real short and long term interest rate. They found that, in Euro area an increase of 1% in GDP influences positively the loan to private sector by 1.339% and an increase in both short term and long term interest rate reduces the loans to private sector by 1.008% and 1.788% respectively.

Edwin A. et al (2003) used the regression analysis based on Ordinary Least Squares (OLS) procedures with four variables (interest rate, GDP, Credit to poor people and SMEs and owner's equity) to analyze the effect of interest rates on demand for credit and loans repayment by the poor and Small and Medium Enterprises (SMEs) in Ghana and, found that there is a negative relationship between interest rates and demand for credit on one hand, and a negative relationship between interest rates and loan repayment by the poor and SMEs in banks and in non-bank institutions, on the other hand.

In addition, their study revealed that, the interest rate is the most determinant for demand for credit in Ghana. Therefore, in order to reduce the poverty in Ghana, the authors conclude their study by advising the Government of Ghana through fiscal and monetary policy to lowering interest rate which would attract

the poor and SMEs' demand for credit and loan repayment at banks and non- bank financial institutions.

Greene and Villanueva (1990) carried out a study in twenty three less developing countries worldwide for the period 1975 – 1987 and found that, there is a negative relationship between real interest rate and demand for credit in those countries.

A study conducted by Larsen (2004) in United States revealed that low interest rate in mortgage sector encourages the supply of the real estate units which boost the American economy in overall.

Aysan et al (2005) conducted a study on the determinants of slowdown private investment growth in the Middle East and North Africa (MENA) over the period 1980-1990. As their study was based on the firm individually, they found that the real interest rate affects negatively the firm investment projects, hence, the private investment growth in general.

Wang and Yu (2007) analyzed the importance of interest rate in investment decisions for firms in Taiwan. They found that the interest rate plays a major role in investment decisions as it is the cost of capital. Their findings have shown that when interest rate rises the firms in Taiwan tend to reduce their investments and vice versa.

Although economic research and theories demonstrated the negative impact of high interest rate on demand for credit in economy, empirical findings have often revealed that the demand for credit is less high in the developing countries than

in developed countries due to the level of competition and financial system. In developed countries the financial systems are well developed and competition is relatively high.

Generally, the higher interest rate in the developing countries is explained by low competition, high reserve requirements coupled with risk aversion for banks, high operational costs, macroeconomic and political instabilities, etc. which lowering the deposit rate and increase the lending rate, as a result create higher spread between deposit and lending rates; hence, discourage both savings and investments.

Empirical studies affirm that the financial liberalization impacts strongly the efficiency of the financial sector. Financial liberalization involves the removal of financial repression in form of interest rate controls, imposition of credit ceilings and rationing, which accelerates economic growth but also leads to greater efficiency of financial institutions.

Since 1995, Rwanda, like most other countries in Sub-Saharan Africa, has embarked different financial reforms program aimed to reduce financial repression, encouraging market-determined prices for financial services, attracting entry of international players, and enhancing market competition, development of legal and physical infrastructures to facilitate financial transactions. With implementation of the financial reform program, interest rates in Rwanda were expected to decline over time.

Kigabo and Barebereho (2007) studied the determinants of interest rate spread in Rwanda and found that the higher interest rate spread in Rwanda is mainly due to bank specific characteristics and market structure variables. Factors such as lack of competition among banks, bank size and the volume of non-performing loans as well as risk aversion of banks (which can be measured by loan loss provisioning) were mentioned by authors to play a major role in having high interest rate spread in Rwanda. They recommended to the concerned authorities to increase market competition and reducing information asymmetries and non- performing loans would help to reduce high interest rate spread in Rwanda.

VIII. Methodology of econometrics

According to Gujarati (2004), traditional econometrics methodology proceeds along the following steps:

Statement of economic theory;

Description of the mathematical model of the theory;

Description of the statistical or econometric model;

Gathering the data;

Estimation of the parameters;

Hypothesis testing;

Forecasting or prediction;

Using the model for policy implications

IX. Model Specification

To estimate the relationship between lending rate and credit

to economy, we specify that, the logarithmic regression will be used, with lending rate, Real Gross Domestic Product (GDP) as the independent variables and credit to economy as the dependent variable. The model is as follows:

(1), where:

is the intercept; **and** are the parameters the research estimated and is the error term.

The data for the model will be quarterly data from Q1 2000 to Q3 2013.

Expected signs

The null hypothesis or H0 is that, **and** do not impact the demand for credit. Therefore,

& =0

The H1 stipulates that, lending interest rate and GDP have a significant contribution on demand for credit. Theoretically, the positive sing is expected for GDP as, when GDP increases the demand for credit increases; and the negative sign is expected for the lending rate as, when interest rate increases, the demand for credit decreases and vice versa. So the alternative hypothesis is,

H1:   < 0; and   greater than 0;

Estimation and Evaluation

The model will be estimated using Eviews software. The regression results will be evaluated using the standard statistics. That is, student t- test for significance of the parameter estimates; F- test for the overall significant of the model; Durbin

- Watson for the autocorrelation; and R² for the explanatory of the regulation.

X. Monetary policy framework in Rwanda

The National Bank of Rwanda (BNR) has been created in 1964 with mandate of ensuring and maintaining price stability as well as to having a sound financial system. In other words, the BNR must endeavor to maintain the value of its currency through efficient and effective monetary policy. The monetary policy instruments in the country have, therefore, passed through different phases including direct control and indirect control within the framework of monetary policy implementation.

Institutional Framework for Liquidity Management in Rwanda

The institutional frameworks for monetary management at the BNR are, the Monetary Policy Implementation Committee (MPIC), with the responsibility for formulating monetary policy and deciding on the volume of interventions. The Committee meets weekly under the chairmanship of the Governor of the Bank and members are all Directors of Department involved in formulating and implementing of the bank monetary policy. The Monetary Policy Technical Committee is in charge of forecasting the trend of monetary aggregates on weekly and monthly basis and advices the MPIC the appropriate decision to be taken.

Treasury Management Committee: launched in 2006, this

committee aims to coordinate fiscal and monetary policies. This committee meets every Thursday of second week of month and is chaired by the Permanent Secretary of Ministry of Finance and Economic Planning, assisted by the Chief Economist of BNR. The committee advices the Minister and the Governor the appropriate instruments to be used in conducting the monetary and fiscal policies in order to achieve the stable inflation and possible higher economic growth.

BNR's monetary policy objectives

The monetary targeting framework is operated through a monetary program. The monetary program is prepared taking into account economic factors such as the expected fiscal and balance of payments developments, economic growth, desired levels of growth in credit and inflation. Based on these factors, the monetary program sets out the desired monetary growth and determines the level of quarterly reserve money targets necessary to achieve this monetary growth.

The monetary base target must be compatible with an estimated level of the money supply, given a money multiplier. The relationship between the money supply and the monetary base is illustrated in the formula: $M2 = b*H$. Where b stands for the money multiplier and H stands for the monetary base. From equation, the BNR considers that the more stable will the money multiplier be, the more it will be able to estimate the behavior of the money supply.

To date, the BNR monetary aggregates that are considered in Rwanda are M3 and M1. M1 has two components which are the currency in circulation (outside BNR) and banks deposits in BNR, while M3 is composed by currency in circulation out of banking system and total deposit of which current accounts and term deposits in local and foreign currencies.

The monetary policy transmission mechanism can be illustrated as follow: The BNR monetary authorities use policy instruments in place to regulate the monetary base and influence the level of the money supply, hence influencing the level of inflation and GDP growth.

Table 1. BNR's Monetary Policy framework

Monetary Policy Instruments	Operational goal: Reserve Money	Intermediary goal: Money Supply: M_3	Ultimate goal: Price stability

Source: BNR, MPEA Department

In order to meet the quarterly targets, decisions on the use of instruments have to be taken on weekly and daily basis. Therefore, for the purpose of liquidity management, the reserve money is forecasted on weekly basis taking into account the changes in autonomous factors according to the below BNR balance sheet.

Table 2. BNR's Balance Sheet

| Assets	Liabilities
Net Foreign Assets	Currency in circulation
Net Domestic Asset: Net claims to Government Net to Commercial Banks Other Items Net	Banks reserves

Source: BNR, MPEA Department

Therefore, the instruments used in conducting the monetary policy changed from time to time, whereby before 1995 BNR used the direct instruments in conducting the monetary policy, thereafter, in March 1995, BNR started conducting the monetary policy using the indirect instruments.

BNR's monetary policy before economic liberalization

Before the economic liberalization that started in 1990 and the financial liberalization that was embarked in 1995, the BNR implemented a monetary policy through direct monetary instruments such as quantitative ceilings on bank credit, selective credit controls and administrated interest rate and exchange rates. That time, the interest and exchange rates were controlled and fixed by the central bank. As a result, the interest rate was relatively fixed for a certain period as depicted on the graph below.

Graph 5. Lending interest rate and credit to economy before
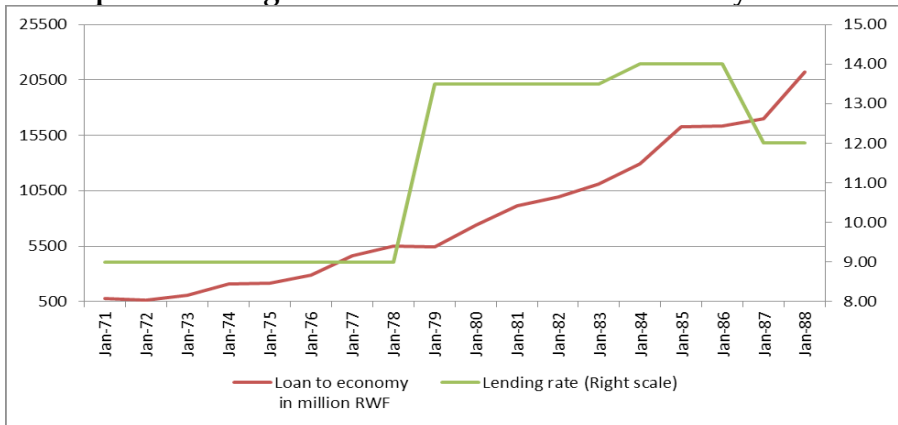
Based on the graph above, before 1994 interest rates changed based on Central Bank decision. From 1968 to 1978 the interest rate was fixed at 9%; from 1979 to 1983 it was fixed at 13.50%; and from 1984 to 1986 it was fixed at 14.00%. Surprisingly, the interest rate has been reduced to 12% in 1987 from 14%; i.e. a decline of 14% and loans to private sector increased by 4% in 1987 and by 25% in 1988 that was, from RWF 16.3 billion in 1986 to RWF 17 billion in 1987 and RWF 21.2 billion in 1988.

BNR's monetary policy after economic liberalization

In period of economic liberalization BNR uses the indirect instruments to conduct its monetary policy. Indirect instruments operate by taking advantage of the relationship between broad

money and reserve money and the special role of the central bank in the creation of reserve money. In order to achieve the operational goal, the Central Bank uses different instruments for monetary regulations. Those are open market operations, such us REPOs and Reverse Repos transactions; the T-Bills and T-Bonds for monetary and fiscal purposes, the Discount rate and the Reserve requirement ratio.

Repurchase Agreement (Repo and Reverse Repo)

A repurchase agreement is a contract involving two simultaneous transactions in a single contract whereby the vendor commits to purchase back the underlying security.

The REPOs transactions help to withdraw liquidity while Reverse REPOs injects funds to the banking system. This monetary instrument has been in use since May 2008 and replaced two monetary instruments that was, namely, the Overnight deposit operations and the seven-day liquidity mop-up operations. The REPOs duration is fixed to 7 days.

The Repos Transactions rates follow the Key Repo Rate-KRR- or, the central bank base rate (which is the maximum rate at which BNR could absorb liquidity and the minimum rate for injecting liquidity in banking system) sets by BNR. This KRR enables BNR to stimulate domestic savings mobilization and support the financial deepening required for boosting the economic growth by keeping real interest rate positive; by maintaining KRR greater than inflation rate as shown in the graph below.
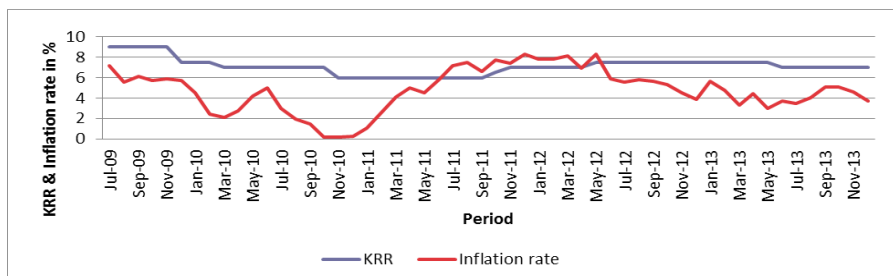
Source: BNR, Financial Markets Department

Starting the second quarter 2009, the inflation rate has declined progressively due to a good performance of agriculture sector on one hand, and also due to international financial crisis which led to lower demand of imported goods resulted from decline of credit in banking system, on other the hand.

As a result, from March 2010, BNR has decided to decrease the KRR with the objective of enabling banks getting money at cheaper rate .Thus, the KRR has been reduced progressively from 9% to 7.5% in March 2010, to 7% in June and to 6% in November 2010. In October 2011 when the economy depicted the sign of recovering coupled with the rise of inflation rate, the Key Repo Rate has been raised to 6.5%, to 7% in November 2011 and to 7.5% in May 2012.

The rise in KRR followed the inflation rate. In November 2010 when the BNR decided to set the KRR at 6% the inflation rate

was 0.2%; when the inflation rose to 7.4% in November 2011 BNR decided to set the KRR at 7% and to 7.5% in May 2012 when inflation rose to 8.3%. In June 2013 when inflation declined to 3.7% also BNR decided to reduce the KRR to 7%.

T-Bills and T-Bonds for monetary and fiscal purpose

T-bills are securities for various tenors: 4, 13; 26 and 52 weeks. There are two types of T-Bills: T-Bills for monetary purposes which have role of mopping- up the liquidity in the system and T-Bills for fiscal purposes which have double role: one for financing the government budget deficit and another one for mopping up the liquidity in the system. However, the latter role is for the short term as the Government re-injects the liquidity in the system progressively while paying its goods and services consumed locally.

The level of budget deficit influences the level of interest rates on market through crowding effect. The crowding effect appears when the Government borrows much money on market to finance its spending in detriment of private sector. This situation pushes up the interest rates (both deposit and lending) on market which reduces the private investment and output in general. According to the graph below it seems that there is a positive relationship between deposit rate and T-Bills rate. The graph shows that between September 2009 and December 2011 both T-Bills rate and Deposit rate were stable ranged between 6% and 8%.

However, during the year 2012 up to end March 2013 there was a huge increase of interest rates for T-Bills and for Deposit. This period coincides with the period whereby the foreign donors delayed the disbursement of budget support to the Government of Rwanda and the latter used only internal resources to finance its spending and pushed up the T-Bill rates as the demand increased which contributed to an increase also of deposit rate due to lack of liquidity in the system.

The downward trend of interest rates both for T-Bills and Deposit started in July 2013 when the donors resumed their budget support to the Government of Rwanda whereby the T-Bills rate dropped to around 6% end of December 2013 from 12.4% end of December 2012. The deposit rate also declined to around 8% end of December 2013 from 11% end of December 2012.

Graph 7. T-Bills, Deposit and lending rates evolution: June

On the other hand, lending rate remained unchanged ranged between 16% and 18% even in the period where government crowded out the private sector. As per below graph, it shows that there is a positive relationship between lending rate and credit to economy. The graph shows that even in period of July 2012 to March 2013 whereby the loans to private sector declined sharply in favor of Government T-Bills, the lending rate remained stable. From September 2012 to end March 2013 the loans to private sector declined by 26% that was, from RWF 131 billion new authorized loans in Q3 2012 to RWF 98 billion new authorized loans in Q1 2013. At the same time, the outstanding in T-Bills for fiscal purposes increased from RWF 75 billion end of December 2011 to RWF 102 billion end of December 2012; i.e.
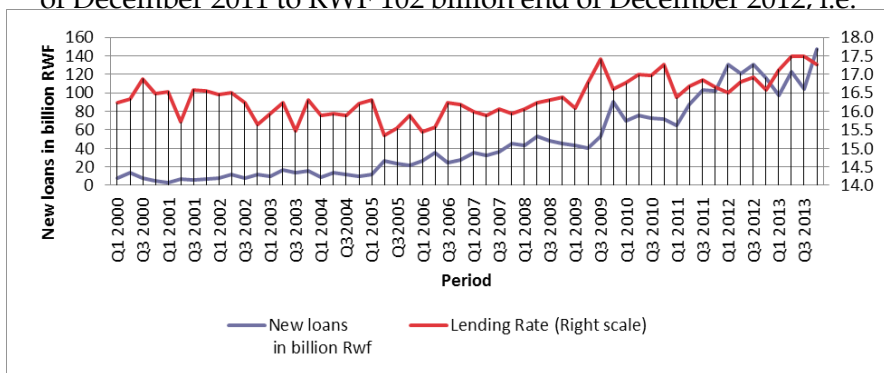

Graph 8. New loans (in billion RWF) and lending rate from Q1 2000 to Q3 2013

However, a big share of commercial banks' loans to private sector continues to be concentrated on business and hotels sector, followed by the construction sector. Agriculture that currently remains the key sector of the economy, employing 87% of the total population and largest contributor to GDP gets only 2% of total funds from commercial banks.

On the other hand, according to the graph below, it seems that the construction and commerce & hotel sectors which are known as the highly sensitive sectors receive a lot of money. Construction sector receives in average 25% of total loans whereas commerce and hotel sector receives in average 53% of new authorized loans each year. Mortgage and commerce sectors are the sectors which are highly sensitive in terms of risks, especially the mortgage sector which was the source of the US sub-prime mortgage crisis that generated the financial crisis in USA in 2009.
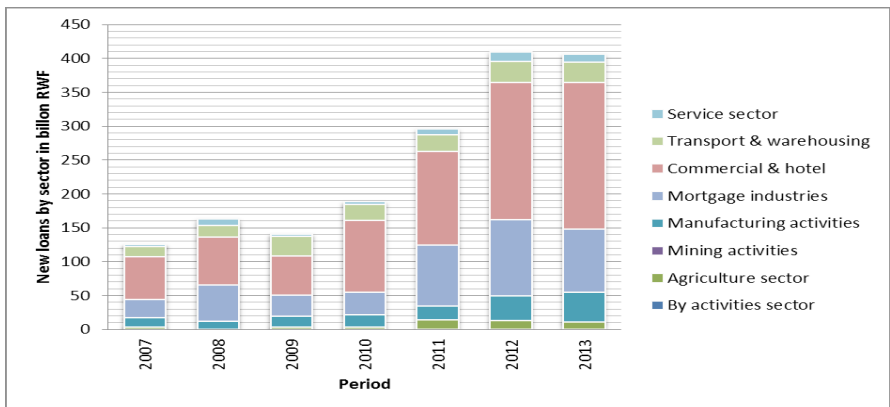
Source: BNR, Financial Stability Directorate

Based on the above time series analysis, there is a positive relationship between lending rate and demand for credit in Rwanda. In addition, the big share of credit in Rwanda is concentrated in mortgage, commerce and hotel sectors which are highly exposed to risks in worldwide. As a result, the source of the high rate of non-performing loans (NPLs) in Rwanda which contributes to the high lending rate as banks consider the NPL in calculating the lending rate.

However, at this stage, the analysis does not show at which level the lending rate impacts the demand for credit in Rwanda. Therefore, in order to measure the level of the impact of lending rate on demand for credit in Rwanda the econometric approach has to be applied.

Analysis of the impact of lending rate on demand for credit in Rwanda

The model is as follows:

  (1)

Unit root test

Unit root test has to be performed to see if variables are stationary in order to avoid false regression.

H_o: Variables are not stationary; when the calculated Probability is greater than the critical value (5%)

H_1: Variables are stationary; when the calculated Probability is less than the critical value (5%)

As per the table below, all variables are stationary after the first difference as their probabilities become less than the critical value of 5% after first difference.

Table 3. Unit root Test results

Variable	Augmented Dickey-Fuller		Phillips-Perron (PP) Test		Remarks
	Prob. Value (level)	Prob. Value (1st Difference)	Prob. Value (level)	Prob. Value (1st Difference)	
Credit	0.9447	0.0000	0.8874	0.0000	I(1)
RDGP	1.0000	0.0000	1.0000	0.0000	I(1)
R	0.0350	-	0.0842	0.0075	I(1)

Source: Researcher's calculation, 2018

Co-integration: Engle and Granger's two-step procedure

Given that all variables are stationary after the first difference I (1); this implies that equation (1) might be co-integrated to form a stationary relationship, and thus, a stationary residual term. Its model is as follows:

(2)

This equation represents the assumed economically meaningful (or understandable) equilibrium relationship among the variables. If the variables are co-integrated, they will share a common trend and form a stationary relationship in the long run. For this purpose ADF is to be performed as:

(3); and the results are as follows:

Table 4. Co-integration test results

Critical values	Adjusted t-Stat	Prob.
The general model	-4.149367	0.0097
At 1%	-4.137279	
At 5%	-3.495295	
At 10%	-3.176618	

Source: Researcher's calculation, 2018

H_o: variables are not co-integrated; when the calculated Probability is greater than the critical value of 5%

H_1: variables are co-integrated; when the calculated Probability is less than the critical value of 5%

Based on the above table, the probability is less than 5% (0.009<0.05), we reject the null hypothesis and confirm that our variables are co-integrated.

As our variables are co-integrated, therefore, we can estimate our long – run model as follows:

Table 5. Long run relationship estimation

 Dependent Variable: LNCREDIT
 Method: Least Squares
 Date: 02/03/14   Time: 14:28
 Sample: 2000Q1 2013Q3
 Included observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15.89954	0.769656	-20.65797	0.0000
R	0.004763	0.006007	0.792840	0.4315
LNRGDP	3.153612	0.125062	25.21631	0.0000
R^2	0.924684			
Adjusted R^2	0.921787			
Probability -Full-er-statistic	0.000000	D-W statistic	1.303773	

Source: Researcher's calculation, 2018

Based on the above results our model is as follows:

LNCPS= -15.89954+0.004763R+3.153612LNRGDP

R^2 & Adjusted R^2 = 92%

Probability for the intercept = 0.0000% less than 5%

Probability for interest rate = 43.15% greater than 5%

Probability for RGDP = 0.0000% less than 5%

Probability F-statistic = 0.000000% less than 5%.

Long run interpretations

Expected sign

According to the above results, interest rate does not respect the expected sign as it has the positive sign which is contrary to the economic theory stating that there is negative relationship between lending rate and demand for credit.

GDP has the positive sign as expected which is in line with the economic theory stating that there is positive relationship between GDP and demand for credit.

Significance

Lending rate is not statistically significant as its probability which is equal to 43.15% is greater than the critical value of 5%; means that, in long run, the lending rate does not impact the demand for credit in Rwanda. In other words, in long – run the demand for credit in Rwanda is explained by other factors rather than lending rate.

Besides, according to the above results, the real GDP is statistically significant as its probability which is equal to 0.000% is less than the critical value of 5%. Thus, Real GDP impacts the demand for credit in Rwanda. Therefore, when Real GDP increases by 1% the demand for credit in Rwanda also increases by 3.15%; and when Real GDP decreases by 1%, the demand for credit decreases also by 3.15%.

Our model has a very high R^2 (92%) which means that; in long - run the real GDP in Rwanda impacts the demand for credit at 92%. Therefore, other factors which impact the demand for credit in Rwanda take only 8%. As the lending rate does not impact the demand for credit in Rwanda, and as the GDP impacts the demand for credit in Rwanda at high level of 92%; therefore, among other factors, the Real GDP is the major factor which impacts the demand for credit in Rwanda. Also, based on the probability of F-Statistic which is 0.0000% the regression is very good.

Table 6. Short- run Estimation: Error Correction Model (ECM)

The obtained results are as follows:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(R)	-0.039328	0.355557	-0.110609	0.9124
D(RGDP)	0.137355	0.073268	1.874702	0.0666
RES(-1)	-0.456209	0.120371	-3.790041	0.0004
R^2	0.211738	D-W statistic		2.122739
R^2 - Adjusted	0.180826			

Source: Researcher's calculation, 2018

Based on the above results, the Error correction model is as follows:

D(CREDIT) = -0.039*D(R) + 0.137*D(RGDP) - 0.456*RES(-1)

R^2 = 21%

Adjusted R^2 = 18%

Probability for interest rate = 91.24% greater than 10%

Probability for RGDP = 6.66% less than 10%

Probability for Residual   = 0.04% less than 10%.

Short - run interpretations
Expected sign
In short run all variables have the expected signs. In short –

run the interest rate moves in opposite direction of credit to economy which is in line with economic theory. In short – run, if the interest rate increases by 1% the demand for credit decreases by 0.039% and vice versa. For Real GDP, when Real GDP increases by 1%, the demand for credit increases by 0.137% and vice versa.

Significance

However, as in long – run, also in short – run the interest rate does not impact the demand for credit in Rwanda as its probability which is equal to 91.24% is greater than the critical value of 10%; means that, as in long- run , there are other factors which impact the demand for credit in Rwanda rather than lending rate.

The coefficient of real GDP is statistically significant at critical value of 10% as its probability is equal to 6.66% which is less than a significance level of 10%.

The adjusted coefficient is negative as expected (-0.456) and is significant at 5% level; means that in case there is a chock in macro- economic fundamentals this chock should be adjusted or corrected in period ranged between five and six months.

CONCLUSION

This research study aimed to analyze the impact of lending rate on demand for credit in Rwanda. To analyze this impact, the econometric approach has been used and results revealed that the lending rate does not impact the demand for credit in Rwanda both in long run and in short run. Therefore, the null hypothesis of the second research question stating that, the lending rate does not impact the demand for credit in Rwanda is confirmed.

As regard to the Real GDP, the results showed that the Real GDP impacts the demand for credit in Rwanda at level of 92%; other factors impact the demand for credit at low level of 8%; the alternative hypothesis of the third research question stating that the Real GDP is the major factor that impacts the demand for credit in Rwanda is confirmed.

And the Research hypotheses were as follows:

Hypothesis for research question one

Null hypothesis: The lending rate does not impact the demand for credit in Rwanda.

Alternative hypothesis: The lending rate impacts the demand for credit in Rwanda.

Hypothesis for research question two

Null hypothesis: The real Gross Domestic Products (GDP) does not impact the demand for credit in Rwanda

Alternative hypothesis: The real GDP is the major factor that impacts the demand for credit in Rwanda.

Based on the E-views' results, the study revealed that, both in long and short - run lending rate does not impact the demand for credit in Rwanda as the coefficient of lending rate is not statistically significant. Therefore, the null hypothesis of the first research question stating that, the lending rate does not impact the demand for credit in Rwanda was confirmed.

The study showed that, the demand for credit in Rwanda is highly impacted by the real GDP both in short and long – run. In long –run when real GDP increases by 1% the demand for credit increases by 3.15% and in short – run when real GDP increases by 1% the demand for credit increases by 0.14%.

Therefore, the alternative hypothesis of the second research question stating that the Real GDP is the major factor that impacts the demand for credit in Rwanda was confirmed.

It has been revealed that, Rwanda has high lending rate despite its lower inflation and lower central bank rates among EAC countries due to lack of competition in banking sector and high non-performing loan. Consequently, the lending rate does not impact the demand for credit in Rwanda. The monetary policy conducted by BNR does not reach the desired results of influencing the demand for credit through lending rate as the interest rate channel of the monetary policy transmission does not work properly due to a kind of monopoly in banking

system in Rwanda.   However, the good coordination between monetary and fiscal authorities in Rwanda enabled the country lowering the crowding out effect, and hence increasing the demand for credit in Rwanda which contributed to the high economic growth that Rwanda recorded during the last 10 years as the study found that the GDP is the major factor which impacts the demand for credit in Rwanda.

RECOMMENDATIONS

Government and BNR should coordinate all efforts in order to reduce the non – performing loan ratio in Rwanda which would decrease the lending rate in Rwanda. In this regards, Banks should develop internal mechanisms to monitor potential defaulters. Indeed, a strong credit reference bureau, used and accessed by all banks, is a valuable tool to provide information about potential borrowers and would help reducing information asymmetries in the commercial banking industry. Banks also, should strengthen their credit management strategies and reinforce their loans appraisal and recovery systems in order to reduce credit risk.

In addition, policy makers should facilitate the penetration of banking services in rural area with objective of increasing the access to finance to all Rwandan people, which would help to increase the ratio of credit/GDP in Rwanda.

The policy makers should develop the capital market in Rwanda in order to reduce the dependence of banking system in offering the credit and raising the long term funds. Finally, the policy makers should attract foreign bank entering the domestic market in order to solve the problem of competition in banking sector in Rwanda.

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