Online ISSN : 2249-4588
Print ISSN : 0975-5853
DOI : 10.17406/GJMBR

# Global Journal of Management and Business Research: C

## Finance

The Effect of Financial Ratio

A Study based on Commercial Banks

Highlights

Co-Operative Societies in KISII

Influence of Corporate Governance

Discovering Thoughts, Inventing Future

VOLUME 19 ISSUE 7 VERSION 1.0

Global Journal of Management and Business Research: C
Finance

Global Journal of Management and Business Research: C
Finance

Volume 19 Issue 7 (Ver. 1.0)

Open Association of Research Society

**Incorporation No.: 0423089**
**License No.: 42125/022010/1186**
**Registration No.: 430374**
**Import-Export Code: 1109007027**
**Employer Identification Number (EIN):**
**USA Tax ID: 98-0673427**

# Global Journals Inc.

*(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)*

*Sponsors: Open Association of Research Society*
*Open Scientific Standards*

## *Publisher's Headquarters office*

Global Journals® Headquarters
945th Concord Streets,
Framingham Massachusetts Pin: 01701,
United States of America
*USA Toll Free: +001-888-839-7392*
*USA Toll Free Fax: +001-888-839-7392*

## *Offset Typesetting*

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

## *Packaging & Continental Dispatching*

Global Journals Pvt Ltd
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

## *Find a correspondence nodal officer near you*

To find nodal officer of your country, please email us at *local@globaljournals.org*

## *eContacts*

Press Inquiries: *press@globaljournals.org*
Investor Inquiries: *investors@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

## *Pricing (Excluding Air Parcel Charges):*

*Yearly Subscription (Personal & Institutional)*
250 USD (B/W) & 350 USD (Color)

# Contents of the Issue

Global Journal of Management and Business Research: C
Finance
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# L'effet (A) Symétrique Des Rendements Des Actifs Boursiers Sur La Volatilité: Cas De La Volatilité Des Cours Boursiers Sur La Bourse Régionale Des Valeurs Mobilières

By Ndeumen Angèle Ghislaine, Kamdem David & Avom Désiré
*Université de Dschang*

*Abstract-* The objective of this article is to check the symmetric or asymmetric effects of returns on the volatility of stock prices on the BRVM[1]. This work takes its theoretical basis of Black and Scholes (1973). The data used are secondary sources from the CD ROM financial data BRVM and CD ROM of the World Bank. The methodology we are inspired by Dalmasso (2016) and has its base Black (1976). Our estimates are made with a method of cointegration in panel data. We find the result that equity returns have asymmetric effects on volatility in the BRVM. This reflects the informational asymmetry which is again a result of the inefficiency of emerging stock markets.

*Keywords:* *volatility (a) symmetrical effects.*

*GJMBR-C Classification:* *JEL Code: G20*

*Strictly as per the compliance and regulations of:*

# L'effet (A) Symétrique Des Rendements Des Actifs Boursiers Sur La Volatilité: Cas De La Volatilité Des Cours Boursiers Sur La Bourse Régionale Des Valeurs Mobilières

Ndeumen Angèle Ghislaine α, Kamdem David σ & Avom Désiré ρ

*Resume-* L'objectif de cet article est de vérifier les effets (a)symétriques ou non des rendements sur la volatilité des cours boursiers à la BRVM. Ce travail prend sa base théorique de Black et Scholes (1973). Les données utilisées sont de sources secondaires provenant du CD ROM de données financières de la BRVM et du CD ROM de la Banque Mondiale. La méthodologie nous est inspirée de Dalmasso (2016) et prend sa base de Black (1976). Nos estimations sont faites avec une méthode de cointégration en données de panel. Nous trouvons comme résultat que les rendements des actions ont des effets asymétriques sur la volatilité à la BRVM. Ceci traduit bien l'asymétrie informationnelle qui est encore une conséquence de l'inefficience des marchés boursiers émergents.

*Motsclés: volatilité, effets (a) symétriques.*

*Abstract-* The objective of this article is to check the symmetric or asymmetric effects of returns on the volatility of stock prices on the BRVM[1]. This work takes its theoretical basis of Black and Scholes (1973). The data used are secondary sources from the CD ROM financial data BRVM and CD ROM of the World Bank. The methodology we are inspired by Dalmasso (2016) and has its base Black (1976). Our estimates are made with a method of cointegration in panel data. We find the result that equity returns have asymmetric effects on volatility in the BRVM. This reflects the informational asymmetry which is again a result of the inefficiency of emerging stock markets.

*Keywords: volatility (a) symmetrical effects.*

## I. Introduction

Selon Zajdenweber (2003), La volatilité des cours boursiers, qui semble aujourd'hui exceptionnellement préoccupante, a pourtant de nombreux précédents historiques. Elle se manifeste par « bouffées », dont la périodicité n'a rien de cyclique. Les grandes vagues de hausse et de baisse observées sur plusieurs années se composent en fait d'un très petit nombre de variations extrêmes concentrées sur quelques séances. Pour Zajdenweber, ces « pics », dont ne rend pas compte la théorie des marchés efficients, s'expliquent à la fois par l'absence de « constantes fondamentales» ou d'« échelle intrinsèque » en économie, par les caractéristiques techniques des marchés financiers, et, plus profondément, par la volatilité de la valeur « fondamentale » des actions.

Pour l'investisseur, la volatilité d'un actif financier évoque le niveau de risque et donc l'ampleur typique observée (ou attendue) de la variation des cours sur un intervalle donné. Sharpe à partir du MEDAF a montré que la volatilité était fonction des rendements. Edwards (1968) montra aussi que le comportement des individus a des effets sur la volatilité ; au début des années 80, les auteurs tels que Le Roy et Porter (1981), puis Shiller (1981) ont montré que les cours ont tendance à fluctuer beaucoup trop par rapport aux facteurs fondamentaux[2]. A la différence de Markowitz (1952) qui fait l'hypothèse d'une volatilité constante, les auteurs tels que Hakanssan (1971; 1993), Pliska (1997) ou Li et Ng (2000) pensent que la volatilité évolue dans le temps d'où la prise en compte des facteurs structurels[3] et conjoncturels. Les auteurs comme Schwert (1989) et White (1996) ont montré que les chocs macroéconomiques tels que les chocs de taux de change[4], de croissance[5], d'inflation, de chômage, de taux d'intérêt, de la crise financière ont des effets sur la volatilité.

Le cadre principal de notre étude, c'est la BRVM; et Selon Hichan (2007), les marchés émergents présentent certaines caractéristiques communes parmi lesquelles: l'extrême volatile en ce sens que les taux de rendement des actifs cotés sur le marché varient énormément et dans de grandes proportions; Ces taux de rendement sont très élevés.

*Author α ρ: Université de Dschang, Cameroun.*
*e-mail: ghislaineangele695@yahoo.fr*
*Author σ: Université de Douala, Cameroun.*

[1] Bourse Régionale des Valeurs Mobilières.

[2] Ce sont des éléments qui sont supposés déterminer la valeur intrinsèque des actifs.

[3] Facteurs propres à chaque entreprise, à chaque secteur et à chaque époque.

[4] Le taux de change d'une devise (monnaie) est le cours, c'est à dire le prix, de cette devise par rapport à une autre devise.

[5] Augmentation significative de la production nationale sur une période longue, elle se distingue en cela d'une simple période d'expansion qui n'est qu'une phase de conjoncture (court terme, moyen terme). Un taux de croissance s'explique à la fois par l'augmentation des facteurs de production et une augmentation des facteurs de la productivité.

Les taux de rendements rencontrés sur ces marchés ne sont pas nécessairement faibles puisqu'on a constaté que ces taux pouvaient être relativement élevés comparativement aux taux de rendement observés sur les autres places financières internationales. Le degré de corrélation entre les taux de rendements observés sur les marchés émergents et ces taux observés sur les marchés qu'on peut qualifier d'« émergés » est relativement faible et c'est la raison pour laquelle les auteurs pensent que, dans le cadre d'une diversification internationale de leurs portefeuilles d'actifs financiers, les investisseurs des pays développés auraient intérêt à intégrer dans leurs portefeuilles des actifs cotés sur les marchés émergents. Les marchés émergents sont généralement des marchés peu efficients[6]. Le risque-pays[7] est parfois extrêmement élevé dans l'environnement des marchés émergents, ce qui rend les marchés peu attrayants pour les investisseurs étrangers.

Les caractéristiques des marchés boursiers émergents, particulièrement la BRVM, cadre principal de notre étude indiquent que ce sont des marchés peu efficients, extrêmement volatiles, où le taux de rendements des actifs cotés varient énormément, ce qui justifie le choix de vérifier l'effet symétrique ou non des rendements sur la volatilité des cours boursiers.

## II. Revue de la Litterature

La théorie moderne d'évaluation d'option (Modern option pricing theory), initié par Black et Scholes (1973), a accordé un rôle central à la volatilité en déterminant la juste valeur d'une option. Dans la formule d'évaluation d'option de Black et Scholes, la volatilité des rendements due à l'actif sous-jacent représente un paramètre important. Elle est amplifiée par le fait qu'elle est la seule variable qui n'est pas observable directement. Bien que la volatilité réalisée puisse être calculée à partir des données historiques, une valeur théorique d'une option dépend de la volatilité qui sera éprouvée dans le futur sur sa durée de vie entière.

Malgré un grand nombre d'études menées sur ce sujet, les causes de la volatilité des marchés financiers et monétaires restent relativement peu connues (Grouard et al, 2003). Selon Grouard et al. (2003), la Banque de France utilise généralement deux types de volatilité: (i) La volatilité historique et (ii) La volatilité implicite. La volatilité historique est calculée à partir des cours passés. Ainsi, pour estimer empiriquement la volatilité du prix d'une action, nous devons observer le prix de l'action en question dans des intervalles de temps fixe (exemple: chaque jour, chaque semaine ou chaque mois). La volatilité implicite quant à elle, est calculée à partir du prix des options existant sur le sous-jacent étudié (action, indice, etc.). Les options se traitent toujours en considérant une date d'exercice future, nous attribuons parfois à la volatilité implicite le rôle prédicateur puisque la valeur du jour de la volatilité implicite annonce celle de la volatilité historique à venir. En fait, le prix des options est toujours défini dans le présent par des spéculateurs[8] qui réagissent en fonction de leurs jugements et intuitions du moment.

Deux réalités ont longtemps suscité l'intérêt des chercheurs dans la littérature relative aux marchés financiers, il s'agit de la variation dans le temps de la volatilité conditionnelle et la persistance de la volatilité des rendements (Gursoy et al., 2008). L'un des arguments utilisés par ces auteurs pour expliquer la variation dans le temps de la volatilité conditionnelle est basé sur l'idée que les rendements des actifs financiers sont générés à partir d'une hypothèse de mélange de distributions dans laquelle la variable stochastique de mélange est considérée comme le taux d'arrivée des flux d'informations sur le marché. Cette hypothèse implique que la volatilité des rendements est proportionnelle à la cadence d'arrivée des informations, offrant ainsi une explication à l'hétéroscédasticité des rendements observée. Aussi une telle explication suggère selon Luu et Martens(2003) que les changements dans les prix quotidiens et le volume des transactions sont causés par la même variable sous – jacente latente qui est le taux d'arrivée des informations sur le marché. Ce qui implique que le rendement et la volatilité varient simultanément en réponse à de nouvelles informations. Dans ces conditions, il existerait une relation contemporaine positive entre le rendement et la volatilité.

La volatilité passée peut être une cause de volatilité future. En effet, des études ont montré que les graphes de volatilité présentaient à certains endroits des concentrations de pics de volatilité ou au contraire des volatilités faibles. En d'autres termes, une forte volatilité a tendance à être suivie d'une forte volatilité, et inversement, une volatilité faible a tendance à être suivie d'une volatilité faible (Cont, 2001). Bref, la volatilité présente dépend de la volatilité passée. On retrouve ici le principe du modèle GARCH.

[6] Un *marché efficient* c'est celui dans lequel les prix reflètent toute l'information disponible. ce faible degré d'efficience est dû au fait que ces marchés sont étroits, que les cotations se font de façon peu fréquentes (parfois une fois par semaine à l'instar de la DSX) et qu'il est donc possible pour le spéculateurs avertis, de manipuler facilement ces marchés .

COURS DU PROFESSEUR KAMDEM DAVID

[7] Risque né de la situation d'un pays importateur, qui se décompose en risque politique, risque catastrophique et risque de non-transfert.

[8] Les spéculateurs sont des personnes qui après une étude approfondie du marché pensent qu'ils sont capables de prévoir le sens dans lequel évoluerons les prix.

Le rôle des spéculateurs est qu'ils se portent contrepartie face aux opérations, de couverture des « hedges ».

Par rapport à la persistance de la volatilité, Lamoureux et Lastrapes (1990) relient également l'observation de ce phénomène à l'hypothèse de mélange de distributions[9] et suggèrent que la persistance de la volatilité conditionnelle dans les rendements des actions (les effets GARCH) reflète une corrélation sérielle dans le taux d'arrivée des informations. Le regroupement de volatilité est également une des propriétés importantes généralement observées dans les séries chronologiques financières. Il est connu comme étant une situation où de grandes variations dans les prix tendent à être suivies par des variations de mêmes envergures, et les petites variations de prix ont tendance à être suivies par de variations de mêmes ampleurs. En présence de regroupement de volatilité, le carré de la série des rendements devrait être très autocorrélé. Dans ce cas, le processus autorégressif à hétéroscédasticité conditionnelle d'Engle (1982) et son extension, le modèle autorégressif à hétéroscédasticité conditionnelle généralisée de Bollerslev (1986) (GARCH) peuvent être utilisés pour appréhender ces phénomènes dans les marchés boursiers.

Depuis la période d'après-guerre mondiale, la volatilité boursière au cours d'une récession marquée, comme celle d'avant la deuxième Guerre, dépasse largement celle observée en expansion, comme celle d'après-guerre. Fama (1976), souligne le danger de mêler sans discernement des données à volatilité très différentes dans les déterminations de longue période. Mais ce sont les observations de la variation asymétrique de la volatilité qui ont tardé. Cela n'étonne pas vu que, conformément au CAPM classique, il n'existe pas de raisons, à première vue, pour qu'une même baisse ou hausse (en%) du cours d'un titre se répercute asymétriquement sur sa volatilité: la baisse du cours accroît plus sa volatilité que la hausse la fait décroitre. Ce phénomène a suscité de multiples écrits où l'asymétrie[10] de la volatilité résulte, notamment, de l'effet de levier financier[11] ou de l'effet rétroactif[12].

Dans les écrits retenus, quelques autres effets, peu répandus, ont été utilisés pour expliquer en partie l'asymétrie de la volatilité. Avramov, Chordia et Goya (2006) renvoient ce phénomène à l'accès à l'information où les transactions moins fréquentes des investisseurs mieux renseignés tendent à freiner la volatilité en période haussière des cours, alors que les moins renseignés contribueraient à accentuer la volatilité en périodes baissières, d'où un effet d'asymétrie sur la volatilité.

Tout d'abord, Black (1976) qui fut parmi les premiers à mettre en évidence le phénomène de l'asymétrie de la volatilité et qui l'explique, notamment, par l'effet de levier financier. Dans son étude empirique, menée avec 11 firmes américaines durant la période 1964-1975, il constate que la variation du levier financier de la firme se répercute asymétriquement sur la volatilité de son action. En effet, la baisse des cours augmente le poids de la dette et donc le levier financier, ce qui signifie plus de variabilité dans le bénéfice net à venir et donc plus de volatilité dans les cours. De son point de vue, Christie (1982) soutient les résultats de Black (1976) en attribuant surtout au levier financier l'élasticité négative de la volatilité par rapport au niveau des cours. Plus tard, Schwert (1989) examine l'évolution de la volatilité sur le marché américain durant la période 1857-1987. Ses résultats révèlent une volatilité excessive durant la dépression des années 30 expliquée, notamment, par le levier financier et le volume des transactions.

Pindyck (1984), French, Schwert et Stambaugh (1987), Campbell et Hentschel (1992) remettent l'asymétrie de la volatilité à l'effet rétroactif, appelé aussi l'effet feedback. Leurs études empiriques font constater qu'une volatilité en hausse incite les investisseurs à exiger une prime de risque excédentaire pour rémunérer davantage les actifs qui deviennent plus risqués. D'où, une hausse du taux de rendement exigé, et par conséquent un repli immédiat des cours. Or, ce repli est plus élevé que l'appréciation des cours causée par une baisse de la volatilité de même amplitude, ce qui reflète l'asymétrie de la volatilité. Pour Campbell et Hentschel (1992), cette asymétrie s'explique, notamment, par la variation du niveau d'aversion au risque des investisseurs qui tolèrent moins le risque en cas d'augmentation de la volatilité. D'ailleurs, ces auteurs révèlent que l'asymétrie de la volatilité s'accentue sur un marché instable. Ce résultat est soutenu, récemment, par Shamila, Shambora et Rossiter (2009), qui montrent que durant la période 1992-2007, l'asymétrie s'accentue dans un marché instable, particulièrement en marchés émergents sous récession.

Ajoutons aussi que l'effet rétroactif est considéré, dans divers écrits récents, comme la source principale des variations asymétriques de la volatilité. Par exemple, Bekaert et Wu (2000) intègrent cet effet pour expliquer l'asymétrie au niveau de la volatilité de la valeur de la firme. Ils observent que l'effet rétroactif est rarement employé pour expliquer l'asymétrie de la

[9] L'Hypothèse de mélange de distributions signifie que la volatilité ne s'explique pas seulement par les rendements ; qu'il y'a d'autres variables qui expliquent aussi cette volatilité et ces variables expliquent la volatilité à partir des informations qu'elles dégagent. C'est l'ensemble de ces informations mise ensemble qui expliquent toute la volatilité ; et ceci de façon proportionnelle.

[10] Selon Engle et Ng (1993), il y a asymétrie lorsque la volatilité est différente selon le signe du choc.

[11] L'effet de levier désigne l'utilisation de l'endettement pour augmenter la capacité d'investissement d'une entreprise, d'un organisme financier ou d'un particulier et l'impact de cette utilisation sur la rentabilité des capitaux propres investis. L'effet de levier augmente la rentabilité des capitaux propres tant que le coût de l'endettement est inférieur à l'augmentation des bénéfices obtenus grâce à l'endettement. Dans le cas inverse il devient négatif.

[12] L'effet rétroactif ou feedback est l'effet retour de la volatilité sur les rendements.

volatilité au niveau des firmes. C'est plutôt l'effet de levier financier qui est communément utilisé. Leur étude empirique est menée avec un échantillon de 172 firmes japonaises durant la période allant du mois de janvier 1985 au mois de juin 1994. Elle révèle que la covariance entre le rendement du marché et celui de la firme est asymétrique. Elle est plus élevée en cas de chute du marché qui s'accompagne généralement d'une hausse brutale de la volatilité.

Wu (2001), propose un modèle à volatilité asymétrique, qui prolonge celui de Campbell et Hentschel (1992), où l'évolution de la volatilité, supposée conditionnelle, est régie par deux variables, le taux de croissance de dividende et sa variance. Son étude est empirique, menée sur le marché américain durant une période de forte volatilité. Ajoutons aussi que Mele (2007) constate que la prime de risque varie d'une manière asymétrique. Elle est plus élevée en cas d'une hausse de volatilité qu'en cas d'une baisse, ce qui explique cette variation asymétrique de la volatilité résultant de l'effet rétroactif. Globalement, les écrits retenus soutiennent l'effet de levier financier et l'effet rétroactif comme principaux facteurs explicatifs de l'asymétrie de la volatilité. Ces deux effets se distinguent dans le type de causalité qu'il implique. En effet, l'effet rétroactif repose sur l'idée que la variation de la volatilité est à l'origine de la variation du rendement alors que l'effet de levier financier considère plutôt le contraire. De cette section qui s'achève, nous pouvons postuler l'hypothèse suivante: *les rendements des titres ont des effets asymétriques sur la volatilité des cours boursiers à la BRVM.*

## III. Methodologie

Les données macroéconomiques utilisées dans ce travail sont un panel de données quantitatives et de source secondaire, en provenance de la publication annuelle de la Banque Mondiale, plus précisément dans le «le livre des indicateurs mondiaux de développement» contenu dans le CD –ROM (WBI-2017). Les données boursières utilisées dans le cadre de cette étude sont de source secondaire. Elles proviennent de « l'historique des données » contenu dans le CD-ROM de données financières de la BRVM et couvrant une période allant de 1998 à 2014. L'échantillon retenu pour l'étude est celui des actions des entreprises industrielles à savoir SICABLE CI, FILTISAC CI, NESTLE CI, CROWN SIEM CI, SIVOA CI, SOLIBRA CI, SMB CI, SITAB CI, TRITURAF et UNIWAX.

Ce choix se justifie par le souci de tenir compte du secteur le plus représenté en termes de nombre de titres sur le marché boursier de la BRVM et pour les actifs les plus transigés (qui reviennent de façon régulière sur la période d'étude).

*a) Les variables utilisées*

*b) Les variables*

i. *Variable dépendante*

Notre variable dépendante est *la volatilité,* elle peut être mesurée par : le coefficient Bêta, l'écart type. Le coefficient bêta est un instrument de mesure de la volatilité. Il permet généralement d'apprécier la sensibilité d'un actif par rapport à celle du marché. Le bêta peut décrire : la sensibilité des mouvements d'une action par rapport aux variations de l'indice boursier, la sensibilité des mouvements d'une SICAV par rapport aux variations de l'indice boursier, la sensibilité des mouvements d'une action par rapport aux variations de notre portefeuille.

A titre d'illustration, si une action a un bêta de 1, cela indique qu'elle est aussi volatile que le marché. Si le marché augmente de 10%, l'action augmente de 10%. A l'inverse si le marché perd 10%, l'action perd 10%. Plus le bêta est important, plus la volatilité de l'actif par rapport au marché est importante. Si une action a un bêta de 4, cela indique qu'elle est plus volatile que le marché. Si le marché augmente de 10%, l'action augmente de 40%. A l'inverse si le marché perd 10%, l'action perd 40%.Si une action a un bêta de 0.6, cela indique qu'elle est moins volatile que le marché. Si le marché augmente de 10%, l'action augmente de 6%. A l'inverse si le marché perd 10%, l'action perd 6%.L'interprétation du bêta dépend du taux de corrélation entre l'actif étudié et l'indice de référence. Ce dernier doit être significatif, nous retenons généralement un niveau supérieur à 0.7. Dans le MEDAF, Sharpes (1964) qui a élaboré le modèle de marché, a mis sur pied un modèle dans lequel il a pu déterminer le prix du risque. Le modèle de marché a été imaginé par Sharpes pour réduire la taille des calculs qu'on était améne à effectuer dans le cadre du modèle de sélection du portefeuille de Markowitz (1952). Sharpes va donc imaginer un modèle dans lequel il suppose que tous les titres sont reliés à un facteur unique qui est l'indice de marché. La formule de base du modèle de marché se présente comme : $R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}$ avec $R_{jt,}$ le taux de rendement de l'actif j au temps t, $\alpha_j$, est une constante détermine dans le cadre de la régression entre les taux du rendement d'un actif quelconque j et le taux de rendement du portefeuille de marché$R_m$. Nous avons :

$$R_{jt} = \frac{P_{jt} - P_{jt-1} + D_{jt}}{P_{jt-1}} \text{et} R_{mt} = \frac{I_t - I_{t-1}}{I_{t-1}}$$

Où $I_t$ est l'indice de marché au temps t; d'après Sharpes, le coefficient de sensibilité du marché $\beta_j$ a deux formules qui sont : $\beta_j = \frac{COV(R_j ; R_m)}{VAR(R_m)}$ et $\beta_j = \rho_{jm} . \frac{\sigma_j}{\sigma_m}$

La présence des rendements négatifs dans l'échantillon nécessite la mesure de la volatilité par le bêta baissier (downside Bêta) d'Estrada (2006).

L'écart type est une caractéristique très utilisée dans les études statistiques. Cet indicateur permet de mesurer la volatilité d'un titre. L'écart type est généralement utilisé pour la construction d'autres indicateurs (exemple : les bandes de Bollinger)[13].

Un écart type élevé indique que les données sont dispersées et donc qu'il y a une volatilité importante. Cela montre généralement un sentiment d'euphorie ou de crainte sur les marchés. A l'inverse, un écart type faible témoigne d'une faible volatilité et d'une bonne anticipation des investisseurs (pas de surprise). Plus les cours s'éloignent de leur moyenne c'est-à-dire plus la différence entre les cours et la moyenne augmente, plus la volatilité est importante. Ces bandes de Bollinger font constater que les changements violents de prix sont précédés par des zones où les prix sont peu volatiles (et donc un faible écart type).

Si l'on veut étudier la variabilité dans le temps de la volatilité à l'aide de données mensuelles, l'écart type mesuré sur échantillon n'est pas un estimateur approprié, étant donné qu'une seule estimation de la volatilité exige de nombreux mois de données. La taille de l'échantillon requise pour l'estimateur fondé sur l'écart type limite la possibilité d'analyser les fluctuations à court terme de la volatilité et la corrélation entre les niveaux d'instabilité des marchés nationaux Schwert (1989). Schwert(1989) a mis au point un estimateur qui produit des valeurs de la volatilité mensuelle à partir de données mensuelles sur les rendements. L'estimateur de Schwert repose sur les techniques d'estimation robustes proposées par Davidian et Carroll (1987); ces propriétés sont analogues à celles de l'estimateur à hétéroscedasticité conditionnelle autorégressive (autoregressive conditional heteroscedasticity ou ARCH) d'Engle(1982).

Selon Grouard et al. (2003), la volatilité des rendements est le concept le plus utilisé pour représenter le risque : volatilité historique pour une analyse du passé ou du présent, volatilité anticipée (ou volatilité implicite contenue dans le prix des options) pour une prévision des fluctuations futures des cours. Le coefficient bêta présente des avantages par rapport à l'écart type. Le coefficient bêta nous fournit la relation (positive ou négative) entre rendements et le taux de rendement de portefeuille du marché; en plus, en calculant le coefficient bêta, on sépare facilement le risque spécifique[14] ou non diversifiable (qui est le coefficient bêta proprement dit) du risque non spécifique (risque résiduelle), ce qui n'est pas le cas avec l'écart type. Nous avons retenu le coefficient bêta comme instrument de mesure de la volatilité dans ce travail. Le coefficient bêta adopté ici est celui d'Estrada (2006). Il calcule un *downside* bêta associé à un modèle CAPM basé sur le *downsiderisk*. Le modèle est appelé *downside* CAPM ou D-CAPM.

D'après Estrada (2006), la volatilité qui est expliquée par les rendements dans les pays émergents est beaucoup plus liée aux rendements négatifs qu'aux rendements positifs. C'est la raison pour laquelle il trouve que pour mesurer la volatilité dans ces pays, il faut utiliser un Bêta baissier ou *downside*bêta. Il se calcule selon la formule qui suit :

$$\beta_i^D = \frac{\sum iM}{\sum_M^2} = \frac{E\{Min\,[(R_i-\mu_i);\;0]\,Min\,[(R_m-\mu_M);\;0]\}}{E\{Min\,[(R_m-\mu_M);\;0]^2\}}$$

i est utilisé pour le titre ; M, correspond au marché. $\sum iM\ est\ la\ covariance$ entre i et M.

Lorsque nous calculons ou que nous faisons la différence de $(R_i-\mu_i)\ si\ le\ nombre$ est supérieur à zéro, nous prenons zéro, chaque fois que la différence est positive nous prenons zéro.

ii. *Les variables indépendantes*

Les variables indépendantes utilisées dans notre modèle sont des facteurs structurels (rendements et valeur absolue des rendements):

- les rendements des actions (REND): pour mesurer les rendements, nous utiliserons les rendements et la valeur absolue des rendements à l'instar de Gerlach et al. (2006), lorsqu'ils examinent le comportement de la volatilité des rendements sur les marchés des obligations et des actions dans un échantillon de huit pays, au moyen de séries chronologiques.
- La valeur absolue des rendements (ABSREND): dans l'optique de vérifier les effets asymétriques ou non des rendements sur la volatilité et surtout dans la logique[15] de Black (1976), French, Schwert et Stambaugh (1987), Campbell et Hentschel (1992), Gerlach et al. (2006). L'asymétrie[16] déterminée ici est celle due à l'effet de levier financier, la baisse (hausse) du rendement fait suite à une hausse (baisse) de la volatilité.

c) *Détermination de l'effet asymétrique ou non des rendements sur la volatilité*

Cette équation de régression de la série de coefficient bêta sur les rendements et la valeur absolue des rendements prend ces fondements de Black (1976) et nous est inspirée de Gerlach et al. (2006), lorsqu'ils examinent le comportement de la volatilité des

[13] Parmi les outils de l'Analyse Techniques les bandes de Bollinger, du nom de l'inventeur de cet outil d'aide à la décision, permettent d'identifier les périodes d'accalmie (faible volatilité) des périodes plus directionnelles (volatilité importante) qui propulsent les cours dans un laps de temps très bref vers un nouveau sommet ou, malheureusement, vers un nouveau plus bas.

[14] Il ne s'annule pas même par diversification de portefeuille contrairement au risque non spécifique.

[15] Selon ces auteurs, il y a effet symétrique des rendements sur la volatilité si le coefficient du facteur valeur absolue des rendements est positif et significatif alors que celui des rendements ne l'est pas.

[16] L'asymétrie de la volatilité via une corrélation négative entre la dynamique du rendement et celle de sa volatilité, dans le sens de la baisse (hausse) du rendement suite à la hausse (baisse) de la volatilité est une asymétrie liée l'effet rétroactif (ou effet feedback) de la volatilité.

rendements sur les marchés des obligations et des actions dans un échantillon de huit pays, au moyen de séries chronologiques très longues. Cette équation a été améliorée à partir de Thi Hong (2008) qui travaillait sur la rentabilité des actifs d'or côtés à la bourse de Paris entre 1950 et 2003.

$$D(BETA1_{it}) = \alpha_0 + \alpha_1 BETA1_{it}(-1) + \alpha_2 D(REND_{it}) + \alpha_3 D(ABSREND_{it}) + \alpha_4 REND_{it}(-1) + \alpha_5 ABSREND_{it}(-1) + \mu_{it} \quad (1)$$

Avec $\boldsymbol{\alpha_0}$ la constante, $\boldsymbol{\alpha_1}$ *à* $\boldsymbol{\alpha_5}$ les coefficients de variables, $\boldsymbol{BETA1_{it}(-1)}$ est le terme de correction d'erreur.

$\boldsymbol{REND_{it}(-1)}$et $\boldsymbol{ABSREND_{it}(-1)}$ sont les variables à long terme, $\boldsymbol{D(REND_{it})}$ et $\boldsymbol{D(ABSREND_{it})}$ sont les variables à court terme. $\boldsymbol{\mu_{it}}$ est le terme d'erreur fait pendant la collecte des données, *i* la dimension individuelle, *t* la dimension temporelle. Sa forme de base est donnée par :

$$\mu_{it} = U_i + V_i + W_{it} \quad (2)$$

Où $\boldsymbol{U_i}$ désigne un terme constant au cours de la période ne dépendant que de l'individu **i**, $\boldsymbol{V_t}$ un terme ne dépendant que de la période **t**, $\boldsymbol{W_{it}}$ un terme aléatoire croisé.

$\boldsymbol{D(BETA1_{it})}$ est la variable expliquée, elle mesure la volatilité. $\boldsymbol{BETA1_{it}(-1)}$ est la volatilité retardée d'une période, lorsque son coefficient est négatif et significatif, il y a ajustement entre l'équilibre du long terme et de court terme. $\boldsymbol{D(REND_{it})}$ est le rendement à court terme, son coefficient peut être positif ou négatif c'est-à-dire qu'il peut être en corrélation positive ou négative avec les rendements. $\boldsymbol{D(ABSREND_{it})}$ est le rendement en valeur absolue, on s'attend à ce qu'il soit en corrélation positive avec la volatilité. $\boldsymbol{REND_{it}(-1)}$ est le rendement à long terme, il peut être en corrélation positive ou négative avec la volatilité. $\boldsymbol{ABSREND_{it}(-1)}$ est la valeur absolue des rendements à long terme, on s'attend à ce qu'il soit en corrélation positive avec la volatilité. Si dans l'ensemble la valeur absolue des rendements a un coefficient positif et significatif alors que le coefficient des rendements n'est pas significatif, on peut conclure qu'il y a un effet symétrique des rendements sur la volatilité.

Avant de procéder à l'estimation, le test de stationnarité d'Im, Pesaran et Shin (IPS), (2003) et de cointégration de Pedroni (1999, 2004) seront effectués.

## IV. Resultats

*a) Test de stationnarité*

Le test de stationnarité d'IPS nous montre que toutes nos séries au départ sont intégrées d'ordre 1. Comme elles ne sont pas stationnaires, il faut s'attendre aux violations des hypothèses classiques de régression. Ce test est résumé dans le tableau ci-dessous. Les lectures ont été faites à l'aide des probabilités et la règle de décision est que si la probabilité correspondante à une statistique est inférieure au seuil de signification, la variable correspondante est stationnaire.

*Tableau 1:* Test de stationnarité pour les séries des cours et du BRVMCOM

| Séries $P_t$ | Modèle avec constante $\alpha$=5% à niveau (moyenne $DFA_{lu}$= -1.1353) | | Modèle avec constante $\alpha$=5% en différence 1 (moyenne $DFA_{lu}$=-34.623 ) | |
|---|---|---|---|---|
| | DFA | p-value | DFA | p-value |
| CROWN SIEM-CI | -0.7465 | 0.8330 | -41.871 | 0.0000 |
| FILTISAC-CI | -2.9122 | 0.0441 | -40.055 | 0.0000 |
| NESTLE-CI | -1.5655 | 0.5001 | -42.878 | 0.0000 |
| SICABLE-CI | -2.8313 | 0.0541 | -22.242 | 0.0000 |
| SITAB-CI | -2.6062 | 0.0918 | -40.650 | 0.0000 |
| SIVOA-CI | -1.8987 | 0.3332 | -42.336 | 0.0000 |
| SMB-CI | 0.8650 | 0.9951 | -40.400 | 0.0000 |
| SOLIBRA-CI | 0.8474 | 0.9948 | -10.829 | 0.0000 |
| TRITURAF-CI | -1.9800 | 0.2959 | -40.890 | 0.0000 |
| UNIWAX-CI | -4.9721 | 0.0000 | -41.634 | 0.0000 |
| BRVMCOM | 5.3117 | 1.0000 | -17.066 | 0.0000 |

*b) Test de cointégration*

Les tests de cointégration effectués ici sont ceux de Pedroni (1999), il repose sur une hypothèse nulle de non cointégration. La probabilité de la statistique de groupe Rho est 0,0057 pour les relation entre la volatilité, rendement et valeur absolue du rendement. Le rejet de l'absence de cointégration dans l'équation 1 à un seuil de 5% est robuste parce qu'il est corroboré par la statistique group- rho (Pedroni, 2004). Cette statistique est la plus conservatrice des sept statistiques de Pedroni en petits échantillons car ses tailles critiques empiriques sont inférieures aux seuils critiques théoriques dans les simulations de Pedroni.

*Tableau 2:* Test de Cointégration du groupe $BETA$, $REND$ et $ABSREND$

Alternative hypothesis: common AR coefs. (within-dimension)

| | Statistic | Prob. | Weighted Statistic | Prob. |
|---|---|---|---|---|
| Panel v-Statistic | 2.299067 | 0.0108 | 2.299067 | 0.0108 |
| Panel rho-Statistic | -2.939523 | 0.0016 | -2.939523 | 0.0016 |
| Panel PP-Statistic | -6.835728 | 0.0000 | -6.835728 | 0.0000 |
| Panel ADF-Statistic | -0.995565 | 0.1597 | -0.995565 | 0.1597 |

Alternative hypothesis: individual AR coefs. (between-dimension)

| | Statistic | Prob. |
|---|---|---|
| Group rho-Statistic | -1.591998 | 0.0057 |
| Group PP-Statistic | -7.427232 | 0.0000 |
| Group ADF-Statistic | -0.133173 | 0.4470 |

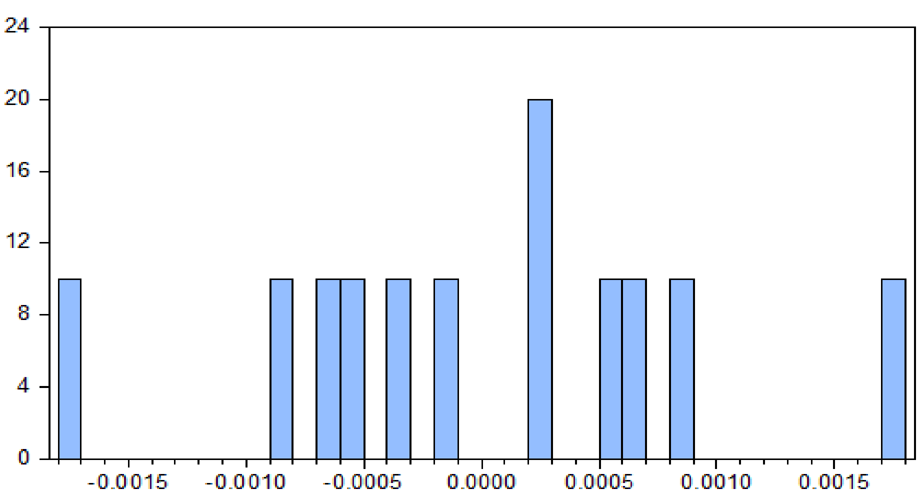
c) *Estimation de l'effet asymétrique ou non des rendements sur la volatilité avec MVCE*

Le coefficient de détermination ajusté est0,679. Ce coefficient est relativement fort. Les variables utilisées dans nos régressions déterminent bien notre modèle. l'omission d'autres facteurs pertinents dans l'analyse est peut-être déterminante. Les variables fictives telles que les crises bancaires et monétaires sont déterminantes dans l'explication de la volatilité selon Bordo et al. (2001). cette équation est globalement significative avec une probabilité de la statistique F de Fisher proche de zéro.

Parlant du test d'autocorrélation, la statistiques de Durbin Watson est procche de 2 (2,005), ce qui signale l'absence d'autocorrélation dans nos estimations.

Le test de normalité des résidus qui figure ci-dessous fait ressortir la normalité des résidus. La probabilité de la statistique de Jarque-Bera est supérieure au seuil de 5%. La significativité de cette statistique repose sur l'hypothèse nulle de normalité des résidus.

*Tableau 3:* Test de normalité des résidus pour $BETA$ en fonction de $REND$ et $ABSREND$




Series: Standardized Residuals
Sample 2000 2011
Observations 120

| | |
|---|---|
| Mean | 4.66e-19 |
| Median | 6.18e-05 |
| Maximum | 0.001746 |
| Minimum | -0.001757 |
| Std. Dev. | 0.000884 |
| Skewness | -0.017782 |
| Kurtosis | 2.831756 |
| Jarque-Bera | 0.147855 |
| Probability | 0.928739 |

Le tableau 4 ci-dessous résume le résultat des estimations.

*Tableau 4:* Estimation de $BETA$ en fonction de $REND$ et $ABSREND$

Dependent Variable: D(BETA1)
Method: Panel Least Squares

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.001330 | 0.000251 | 5.305354 | 0.0000 |
| REND(-1) | 0.255692 | 0.150919 | 1.694228 | 0.0930 |
| ABSREND(-1) | 1.192529 | 0.217851 | 5.474045 | 0.0000 |
| BETA1(-1) | -0.941564 | 0.079200 | -11.88845 | 0.0000 |
| D(REND) | -0.228117 | 0.106739 | -2.137144 | 0.0347 |
| D(ABSREND) | 0.586801 | 0.138259 | 4.244203 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.692950 | Meandependent var | 0.000392 |
| Adjusted R-squared | 0.679483 | S.D. dependent var | 0.001596 |
| S.E. of regression | 0.000903 | Akaike info criterion | -11.13217 |
| Sumsquaredresid | 9.30E-05 | Schwarz criterion | -10.99279 |
| Log likelihood | 673.9301 | Hannan-Quinn criter. | -11.07557 |
| F-statistic | 51.45508 | Durbin-Watson stat | 2.005174 |
| Prob(F-statistic) | 0.000000 | | |

En comparant la probabilité correspondante au coefficient de chaque variable au seuil de signification, si la probabilité est inférieure au seuil, le coefficient de la variable est significatif. La variable BETA retardé d'une période (qui correspond au terme de correction d'erreur) a un coefficient négatif et significatif, ceci implique qu'il y a ajustement de l'équilibre entre le long terme et le court terme. Les variables rendement et valeur absolue du rendement sont toutes significatives à court et à long terme. Le coefficient négatif des rendements à court terme fait ressortir une corrélation négative entre rendements et volatilité. Pour les actions (titres sur lesquels reposent notre étude), ce phénomène pourrait refléter la hausse (aux prix du marché) du ratio endettement/fonds propres lors du repli des cours: c'est l'« effet de levier » avancé par Black (1976). S'agissant des actifs financiers en général, il pourrait aussi s'expliquer par la tolérance limitée aux pertes de la part des investisseurs qui recourent structurellement à des positions longues à effet de levier, que Borio et McCauley (1996) ont mise en évidence sur les marchés des emprunts d'État au milieu des années 1990.

Par contre les rendements à long terme, la valeur absolue des rendements à court et à long terme sont positivement corrélés avec la volatilité. Le signe positif devant la valeur absolue des rendements à court et à long terme montre bien l'asymétrie des rendements dans l'explication de la volatilité. Donc les rendements en valeur absolue sont toujours positivement corrélés à la volatilité alors que les rendements peuvent être positivement ou négativement corrélés à la volatilité.

Selon Gerlach et al (2006), si la volatilité réagissait symétriquement, le paramètre rendement serait non significatif et celui des rendements absolus, positif et significatif. Si en revanche, elle augmentait davantage en réaction aux rendements négatifs qu'aux rendements positifs, le paramètre rendement serait négatif et significatif. Ceci nous permet de conclure que la volatilité ne réagit pas symétriquement à la BRVM concernant le rendement des actions, elle augmente davantage en réaction aux rendements négatifs qu'aux rendements positifs à court terme. La volatilité augmente davantage en réaction aux rendements positifs qu'aux rendements négatifs à long terme. Notre hypothèse est validée. Donc la volatilité agit de manière asymétrique aux rendements des cours boursiers. Ces résultats sont en cohérence avec l'étude menée par (Dalmasso, 2016).

## V. Conclusion

En définitive, on peut dire que ce soit en période d'expansion ou de récession, la baisse des cours fait croître davantage la volatilité qu'une hausse des cours de même ampleur la fait décroître. Depuis un passé récent, cette idée d'asymétrie de la volatilité semble peu remise en question en milieu académique (Wu, 2001; Avramov, Chordia et Goyal, 2006; Bollerslev, Litvinova et Tauchen, 2006; Mele, 2007; Shamila, Shambora et Rossiter, 2009). On s'est pose la question de savoir: Quelle est l'incidence des variables macroéconomiques sur la volatilité des cours boursiers sur la BRVM ? En prenant appuis sur Black (1976) et à partir des analyses de Gerlach et al (2006), si la volatilité réagissait symétriquement, le paramètre (le coefficient à la variable) de la variable rendements (REND) serait non significatif et celui des rendements absolus (ABSREND) serait positif et significatif. Si en revanche, elle augmentait davantage en réaction aux rendements négatifs qu'aux rendements positifs, le paramètre rendement serait négatif et significatif. Ceci nous permet de conclure que la volatilité ne réagit pas symétriquement à la BRVM concernant le rendement des actions et elle augmente davantage en réaction aux rendements négatifs qu'aux rendements positifs. On gagnerait àrendre le marché de la BRVM plus attrayant afin de booster les rendements des titres, ce qui permettra d'avoir des rendements positifs qui sont une source de volatilité faible comparativement aux rendements négatifs.

## References Bibliographiques


1. *Avramov, D.; Chordia, T. etGoyal, A. (2006), «The impact of trades on daily Volatility»*, Review of Financial Studies 19, pp.1241-1277.
2. *Black, F. (1976), « Studies of Stock Price Volatility Changes, Proceedings of the 1976 Meetings of the American Statistical Association »*, Business and Economical Statistics section, pp. 177-181
3. *Black, F (1976), «The pricing of commodity contracts»*, Journal of Financial Economics 3(1), pp. 167-179.
4. *Black, F. et Scholes, M. (1973), «The Pricing of Options and Corporate Liabilities»*, Journal of Political Economy 81 (3), pp. 637-654.
5. *Bekaert, G. et Wu, G. (2000), «Asymmetric volatility and risk in equity markets»*, Review of Financial Studies 13, pp.1-42.
6. *Bollerslev, T. (1986), «Generalized Autoregressive Conditional Heteroskedasticity»*, Journal of Econometrics, Vol. 31, pp. 307-327.
7. *Borio, C. E. V. et McCauley R. N. (1996), « The economics of recent bond yield volatility »*, Bis Economic Papers, n° 45.
8. *Bordo, M.; B. Eichengreen, D. Klingebielet Martinez-Peria, M. S. (2001), « Is the crisis problem growing more severe? », Economic Policy*, vol. 16, pp. 51–82.
9. *Campbell, J. Y. etHentschel, L. (1992), «No news is good news: An asymmetric model of changing volatility in stock returns»*, Journal of Financial Economies 31, pp.281-318.
10. *Christie et Andrew A. (1982), «The stochastic behavior of common stock variances: Value, leverage, and interest rate effect»*, Journal of Financial Economies 10, pp. 407-432.
11. *Dalmasso, A., (2016), «La transmission de la volatilité et l'asymétrie des chocs financiers: le cas des marchés boursiers européens»*, Centre d'Etudes en Macroéconomie et Finance Internationale, http://www.unice.fr/CEMAFI.
12. *Davidian, M. et Carroll, R. (1987), «Robust Variance Function Estimation»*, Journal of the American Statistical Association, vol. 82.
13. *Edwards, W. (1968), « Conservatism in Human information processing »*, in B. Kleinmutzéd., *Formal Representation of Human Judgement*, John Wiley & Sons, reprisdans Kahneman D., Slovic, P. et Tverskyéd, A. (1982).
14. *Engle, R. F. (1982),* «Autoregressive Conditional Heteroskedasticity with Estimates of the *Variance of UK Inflation*», *Econometrica,* Vol. 50 (4), pp. 987-1008.
15. *Estrada, J. (2006), «Downside risk in practice»*. Journal of Applied Corporate Finance 18 (1): 117–125.
16. *Fama, E. F. (1976), «Foundations of Finance», Basic Books*, New York.
17. *French, K.; William, R; Schwert, G. et Stambaugh, R. F. (1987), «Expected stock returns and volatility»*, Journal of Financial Economies 19, pp.3-29.
18. *Gerlach, S.; Ramaswamy, S. et Scatigna, M. (2006), «150 ans de volatilité des marchés financiers»*, Rapport trimestriel BRI.
19. *Grouard, M-H.; Levy, S. et Lubochinnsky, C. (2003),* «Les constats empiriques aux difficultés d'interprétation», Banque de France, RSF.
20. *Im, K.S.; Pesaran, M.H. et Shin, Y. (2003), «Testing for unit roots in heterogeneous panels», Journal of Econometrics*, vol. 115, pp. 53-74.
21. *Lamoureux, C. et Lastrapes, G. W. D. (1990), «Heteroskedasticity in Stock Return Data:* Volume versus GARCH Effects», TheJournal of Finance, Vol. 10.
22. *Mele, A. (2007), «Asymmetric stock market volatility and the cyclical behaviour of expected returns»*, Journal of Financial Economies 86, pp. 446-478.
23. *Pedroni, P. (2004), « Panel cointegration: asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis », Econometric Theory*, vol. 20, pp. 597-625.
24. *Pedroni, P. (1999), « Critical values for cointegrating tests in heterogeneous panels with multiple regressors», Oxford Bulletin of Economics and Statistics*, vol. 61, pp. 653-670.
25. *Pindyck, R. S. (1984), «Risk, inflation, and the stock market»*, American Economy Review 74, pp. 334-351.
26. *Sargent, T.J. et Wallace, N. (1981), «Some unpleasant monetarist arithmetic*, Federal Reserve Bank of Minneapolis», Quarterly Review, n°5, pp. 1-17.
27. *Sharpe, W. F. (1964), «Capital Asset Prices: A theory of Market Equilibrum under conditions of Risk.»* Journal of Finance 19,pp. 425-442
28. *Schwert, W. G. (1989) « Why does stock market volatility change overtime», Journal of Finance, vol.44 (5), pp. 1115-1153.*
29. *Shiller, R. (1981), « Do stock prices move too much to be justified by subsequent changes in dividends? », American Economic Review*, vol. 71, pp. 421-436.
30. *Thi Hong, V. H. (2008), « la rentabilité des actifs d'or côtés à la bourse de Paris entre 1950 et 2003 »*, Laboratoire Orléanais de Gestion.

31. *White, E.(1996),* «Stock market crashes and speculative manias». Edward Elgar Publishing, Cheltenham, UK.
32. *Wu, G. (2001),* «*The determinants of asymmetric volatility*», Review of Financial Studies 14, pp. 837-859.
33. *Zajdenweber, D. (2000), «La volatilité des cours est-elle irrationnelle?»,* Flammarion, Coll. Nouvelle Bibliothèque Scientifique, Paris.

Global Journal of Management and Business Research: C
Finance
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# Accounting Conservatism and Cost of Debt of African Firms: Based on Ownership Structure

By Abdurahman Aliyi Ibrahim, Man Wang & Demis Hailegebreal Hailu
*Dongbei University of Finance and Economics*

*Abstract-* This study examines the relationship between accounting conservatism and the firm's cost of debt in an African firm's settings. In further, the paper investigated the moderating effects of a firm's ownership structure in this relationship. It uses firm-level data of 224 firms in 8 African countries from OSIRIS databases from 2007 to 2018. We employed a linear regression model to estimate the relationship and the moderating effects of ownership structure. We adopted a model of Givoly and Hayn (2000) the accrual-based measure of accounting conservatism to quantify the level of conservatism reporting of the firm, and we use 1-year ahead interests paid for the total interest-bearing debt to measure the cost of the firm's debt capital. The findings indicated that the relation between accounting conservatism and cost of debt is negative as expected, and firms with high accounting conservatism in recognizing their losses than their gain enjoy a low cost of debt. The result also proves that firms with high institutional ownership shareholding percentages are more conservatism. Institutional ownership boots the relationship between accounting conservatism and the cost of debt. The results have a contribution to the positive accounting theory suggests that accounting conservatism enhances efficiency in the debt contracts process (Watts and Zimmerman 1986).

*Keywords: accounting conservatism, cost of debt, ownership structure.*

*GJMBR-C Classification: JEL Code: F65*

ACCOUNTINGCONSERVATISMANDCOSTOFDEBTOFAFRICANFIRMSBASEDONOWNERSHIPSTRUCTURE

*Strictly as per the compliance and regulations of:*

# Accounting Conservatism and Cost of Debt of African Firms: Based on Ownership Structure

Abdurahman Aliyi Ibrahim [α], Man Wang [σ] & Demis Hailegebreal Hailu [ρ]

*Abstract-* This study examines the relationship between accounting conservatism and the firm's cost of debt in an African firm's settings. In further, the paper investigated the moderating effects of a firm's ownership structure in this relationship. It uses firm-level data of 224 firms in 8 African countries from OSIRIS databases from 2007 to 2018. We employed a linear regression model to estimate the relationship and the moderating effects of ownership structure. We adopted a model of Givoly and Hayn (2000) the accrual-based measure of accounting conservatism to quantify the level of conservatism reporting of the firm, and we use 1-year ahead interests paid for the total interest-bearing debt to measure the cost of the firm's debt capital. The findings indicated that the relation between accounting conservatism and cost of debt is negative as expected, and firms with high accounting conservatism in recognizing their losses than their gain enjoy a low cost of debt. The result also proves that firms with high institutional ownership shareholding percentages are more conservatism. Institutional ownership boots the relationship between accounting conservatism and the cost of debt. The results have a contribution to the positive accounting theory suggests that accounting conservatism enhances efficiency in the debt contracts process (Watts and Zimmerman 1986).

*Keywords: accounting conservatism, cost of debt, ownership structure.*

## I. Introduction

The concept of accounting conservatism has a long history in accounting studies. Several works of literature defined conservatism from different angels. In the empirical work, Basu (1997) interprets accounting conservatism to capture accountants' tendency to require a higher degree of verification for recognizing good news than bad news in financial statements. Accounting conservatism is a tendency that accountants when encountering uncertainties in economic transactions, choose to report lower prediction for the values of assets and revenues, but higher estimates for the amounts of liabilities and expenses (Wang, Ó Hogartaigh, et al. 2009). Watts (2003) defined accounting conservatism as the differential verifiability required for recognition of profits versus losses. Hille (2011) also construed that accounting conservatism is about an asymmetry between the verification of positive and negative income streams and profits are being reported far more prudent, while losses are overestimated. Ruch and Taylor (2015) explained it as accounting policies or tendencies that result in the downward bias of accounting net asset value relative to the economic net asset value.

Generally, speaking accounting conservatism is differential verifiability for gains and losses where a high level of verifiability to be given to gains that are good news than losses that is bad news in financial reporting. It had been concluded that conservatism could lead to a direct benefit to investors in the form of more efficient investments (Lara, Osma, et al. 2016). Several pieces of literature made clear that accounting conservatism generates positive economics outcomes (Khan and Watts 2009), (Goex and Wagenhofer 2009), (Jayaraman and Shivakumar 2013), (Lara, Osma et al. 2016). In their studies, Zhong and Li (2017), concluded that accounting conservatism is imperative and cannot be excluded from accounting standards.

The demand for conservatism in financial reporting comes from different stakeholders of the firm or enterprise. Lenders (Debt holder) in the debt market needs more conservatism accounting reporting in to evaluate their fund and make a contract with a firm. Investors in equity market demand conservative reporting to control opportunistic management and to make decisions about thefirm, Similar to equity market users and debt market users, accounting information is of high quality to corporate governance users if it is relevant to corporate governance decisions and mitigates information asymmetry between shareholders and firm management (Ruch and Taylor 2015). Goh, Lim et al. (2017) studied whether conditional conservatism reduces information asymmetry differentially for shareholders and debt holders, and they use the setting of afirm's choice between equity versus debt when it seeks a significant amount of external financing to examine this research question. They found that when firms raise a significant amount of external financing, the use of equity (versus debt) increases with the level of conservatism and also found that the reduction in cost of equity associated with conservatism is more for equity issuers than for debt issuers, but find no such difference when they examine cost of debt. Lai and Taylor (2008) studied firm-level accounting conservatism in the Australian setting and concluded that conservatism is positively associated with stock return volatility,

*Author α ρ: Accounting school, Dongbei University of Finance and Economics, Dalian city, P.O.B 116025, P.R. China.*
*e-mails: obboleso@gmail.com, dhgebreal@gmail.com*
*Author σ: Accounting school, Dongbei University of Finance and Economics, Internal Control Research Centre in China, Dalian city, P.O.B 116025, P.R. China. e-mail: manwang123@163.com*

investment cycle length, and prior period conservatism, and it is negatively associated with firm age, firm size, and leverage. García Lara, Garcia Osma et al. (2005) predicted that conservatism also mitigates underinvestment among firms facing financing difficulties. They concluded these firms likely suffer from related problems such as the risk of insolvency and low profitability. (Chen, Hu et al. 2013) Investigated whether accounting conservatism solves the misalignment of interest between managers and shareholders by increasing hurdle rates used by managers during project selections. They argued that accounting conservatism raises managerial cautiousness in project screening. By incorporating bad news timely into earnings, a conservative accounting system increases the likelihood of early termination of unsuccessful projects, increasing a personal costs of the manager and thus deterring managers from investing in projects merely to enjoy private benefits. They found that conservative accounting increases hurdle rates, and such increases are more pronounced for firms that exhibit a higher degree of the agency problem. They also showed conservatism adds value to firms when an investment is under consideration.

Furthermore, prior researches showed that there is a relationship between accounting conservatism and the firm's cost of capital (Li 2015), Hille, 2011, (Beatty, Weber, et al. 2008) and others. Li (2015) concluded that in international setting, firms domiciled in countries with more conservative financial reporting systems have lower costs of equity and debt capital. On his part, Hille (2011) found the relation between accounting conservatism and the cost of debt is significant and concludes that firms that are more conservative face lower costs of debt. Contrary to the above literature, Gigler, Kanodia et al. (2009), examined how accounting conservatism affects efficiency debt contracting. They developed the statistical and informational properties of accounting reports under varying degrees of conditional and unconditional accounting conservatism and found that accounting conservatism decreases the efficiency of debt contracts. (Lin, Wu et al. 2014)Investigated the relationship among accounting conservatism, institutional investor shareholdings, and earnings manipulation by using Benford's law, and results indicated that firms with more conservative financial reporting have less probability of engaging in earnings-manipulative activities. They also found a negative association between earnings management and institutional investor shareholdings. (Sánchez-Ballesta and García-Meca 2011) Empirically test the association between conditional conservatism and the cost of equity capital. Conditional conservatism imposes stronger verification requirements for the recognition of economic gains than economic losses, resulting in earnings of those reflect losses faster than benefits. Using standard asset pricing tests, they also found a significant negative relation between conditional conservatism and excess average stock returns. On the other, several types of research had investigated the relationship between ownership structure and accounting conservatism. For instance, Cullinan, Wanget al. (2012)found that conservatism is negatively associated with the percentage of shares held by the largest shareholders and that this effect is particularly significant when the ownership percentage exceeds 30% and they indicated that state ownership influences the relationship between largest shareholder's ownership and accounting conservatism. Several kinds of research also showed that stable shareholdings are negatively related to degrees of conservative accounting. Other studies like Alkurdi, Al-Nimer et al. (2017) also showed that there is an inverse effect of government ownership on accounting conservatism. They also indicated that there is a significant and positive relationship between foreign and institutional ownership with accounting conservatism, but the concentration doesn't affect conservatism.

However, all of the afros mentioned studies and others conducted in countries with a well-organized and efficient capital market. There is an empirical research gap on the relationship between accounting conservatism and the firm's cost of capital in developing nations, particularly Africa. Furthermore, the moderating effects of ownership structure on these relationships are where the previous studies overlooked. Such kind of research had not been conducted on African firms, which is working in a different setting and with a diverse scenario where most of the countries in the continent do not have an efficient and effective capital market. There are very little researches conducted in Africa about accounting conservatism. For instance, Houcine (2013) the effect of accounting conservatism on firm investment efficiency in an emerging market form the Tunisian context, and they concluded that conservatism has no significant impact on firms' investment efficiency the Tunisian market. Recently, Ugwunta and Ugwuanyi (2019) tried to see the association between accounting conservatism and performance of consumer goods firms in the context of Nigeria as opposed to the assumed negative relation and findings from their study suggest that accounting conservatism has a positive but non-significant effect on firm performance. As far as our knowledge concerned, there is no empirical research has been done on the relationship between conservatism accounting reports and the cost of debt capital in the context of Africa so far.

Thus, our main objective here is to examine the relationship between accounting conservatism and the cost of debt and in further moderating effects of ownership structure. We investigate it using samples of non-financial African firms from 2007 to 2018. By employing a model of Givoly and Hayn (2000) the accrual-based measure of accounting conservatism we measure the level of conservatism reporting of the firm, and we use 1-year ahead interests paid for the total interest-bearing debt to calculate the cost of the firm's debt capital. We found that the relationship between accounting conservatism and cost of debt is negative, and firms with high accounting conservatism in recognizing their losses than their gain enjoy a low cost of debt. Further, our results prove that firms with high institutional ownership shareholding percentages are more conservatism. We indicated that institutional ownership boots the relationship between accounting conservatism and the cost of debt. The remaining parts of the study structured as; review of the literature and hypothesis development, research methods, results and discussion, and conclusions.

## II. The Literatures Review and Hypothesis Development

### a) *The relation between accounting conservatism and the cost of debt*

This study is based on the literature linking accounting policy choice and financing decisions of the firm. There are two accounting theories, namely positive and normative accounting theories. In positive accounting theory, the investigator tries to predict and explain a particular phenomenon using observation, whereas in normative accounting theory, the investigator uses his/her assumption to explain the phenomenon (Deegan and Unerman 2011). Positive accounting theory suggests that accounting conservatism enhances efficiency in the debt contracts process (Watts and Zimmerman 1986). In their empirical work, Goh, Lim et al. (2017), argued that there is an association between accounting conservatism and debt versus equity financing decision choice. In more specific, Khurana and Wang (2015) proved that short-maturity debt could mitigate agency costs of the debt arising from information asymmetry and suboptimal investment problems inherent in debt financing. As such, debt contracting demand for accounting conservatism is expected to be lower in the presence of more short-maturity debt. (Ahmed, Billings et al. 2002) showed that conservatism is positively associated with mitigating bondholder–shareholder conflict and lower debt cost of capital.

Francis, LaFond, et al. (2004)concluded that there is no significant evidence to indicate that conservatism affects the cost of equity capital. However, a large stream of research successively shows the effects of conservatism on the cost of equity capital. Kim, Li et al. (2013)Using seasoned equity offerings (SEOs), examined the role of accounting conservatism in the equity market and found that issuers with a higher degree of conservatism experience fewer negative market reactions to SEO announcements. Chan, Lin, et al. (2009) analyzed that unconditional conservatism is associated with a lower cost of equity capital, and conditional conservatism is associated with a higher cost of equity capital. Accounting conservatism makes timely loss recognition and deferred gain recognition result in the lower persistence of earnings in bad news periods relative to gain news period. The good news (gains) in earnings is more persistent because the capitalized value of good news is partially recognized in current earnings and partially is deferred in subsequent earnings (Šodan 2012).

Lara, Osma, et al. (2016) empirically test the association between conditional conservatism and the cost of equity capital. Conditional conservatism imposes stronger verification requirements for the recognition of economic gains than economic losses, resulting in earnings of those reflect losses faster than income. This asymmetric reporting of gains and losses is predicted to lower firm cost of equity capital by increasing bad news reporting precision, thereby reducing information uncertainty(Li 2015) pointed out that is a negative association between conditional conservatism and cost of equity capital. The paper further explores the cross-sectional variation of the above relationships, finding that the negative association between conditional conservatism and the cost of equity and debt capital is more pronounced in countries with stronger legal enforcement, suggesting a complementary role between conservatism and legal institutions in capital markets. Empirical findings prove that companies with higher debt costs have a lower level of conditional conservatism, and lenders prefer conservative accounting and timely loss recognition because it improves debt agreement efficiency by sending a timelier signal of default risk and allows them to take protective actions (Šodan 2012).

Zhang (2008) studied the benefits of accounting conservatism for lenders and borrowers and concluded that borrowers profit from accounting conservatism through lower interest rates and lenders profit through reduce downside risk. Conservatism provides timely information about default risk to lenders, which results in lower debt cost of capital for borrowers. Li (2015) hypothesized that there a negative relationship between condition conservatism and the cost of debt capital. Li (2015) found that in international setting, countries with high conservative financial reporting systems have lower costs of equity and debt capital. In further analysis, Li (201) also determined that a negative association between conditional conservatism and the cost of equity and debt capital is more pronounced in countries with stronger legal enforcement, suggesting a complementary role between conservatism and legal institutions in capital markets.

As we have discussed in the previous paragraphs, accounting conservatism is one of accounting policy or measurement that helps both borrowers and lenders in debt contract setting. Lenders use accounting conservatism to assess the credibility the default risk of the borrower (i.e., firm). Conservatism provides timely information about default risk to lenders, which results in lower debt cost of capital for borrowers.

For example, Li (2015) studied the benefits of accounting conservatism for lenders and borrowers and concluded that borrowers profit from accounting conservatism through lower interest rates and lenders profit through reduce downside risk. In other cases, similar to the shareholder–manager conflict, the agency problem also exists between shareholders and creditors. Due to conflicts of interest, self-serving shareholders may expropriate creditors' value through wealth transfers, such as asset substitution and overpaying dividends. Creditors protect themselves through binding contracts based on a series of performance measures in periodic financial reports. In the event of covenant violation, creditors could reduce their default risk by either taking over control of the firm or by exercising greater oversight. In exchange, creditors are likely to require a lower return from borrowers that commit to a conservative financial reporting practice. Also, many kinds of the literature showed that firms with more conservatism accounting practice bear the lower cost of debt ((Ahmed, Billings, et al. 2002), (Zhang 2008), (Li 2015)).

To seriously assess the performance of their borrowers and to avoid their risks, creditors favor a conservative financial reporting system that recognizes unwanted news in a timelier manner than good news and minimizes the default risk. For example, by recording bad news earlier than good news, covenants based on earnings numbers become more binding (e.g., (Ahmed, Billings, et al. 2002); (Zhang 2008)). From the above discussion, it could understand as firms become conservative in recording financial report the creditors or lenders require a lower return from their borrower. So, the hypothesis as follows;

*H1:* There is a negative relationship between accounting conservatism and the cost of debt.

*b) The Moderating effects of ownership structure*

Ownership structure characteristic like institutional ownership, ownership concentration, shareholding controls, and state ownership affects the cost of debt capital and accounting conservatism. The previous literature broadly support the significant influence of the ownership structure characteristic on the practices of the information disclosure by companies. For example, if there is a shareholder who owns a large percentage of the company's shares, this shareholder may heavily influence the functioning of the company organization, and the company's financial reporting quality.

Li (2015) indicated that different ownership structure does matter for managers in adopting accounting conservatism. Bhagat, Black et al. (2004) and Chen, Chung et al. (2007)among others, argue that while minority shareholders and institutional investors aiming for short-term trading gains tend to require timely disclosure of bad news, large shareholders with greater access to private information might discourage such disclosure owing to their longer investment horizons.

So, these show that the ownership structure of the company affects accounting conservatism of the company.

On the other hand, ownership also affects the cost of debt capital. For example, Sánchez-Ballesta and García-Meca (2011) noted that ownership structure might promote effective decision making and reduce information asymmetry and moral hazard, thus lowering the firm's cost of debt, mainly by increasing the external monitoring of management and by increasing the incentive alignment between management and shareholders. The empirical results of Lin, Wu et al. (2014) indicated that compared with companies demonstrating the lowest accounting conservatism and high institutional ownership ratios, companies with the lowest accounting conservatism and a low institutional ownership ratio possess enhanced motivation to manage their earnings.

Lafond and Roychowdhury (2008) investigated the association between managerial ownership and conservatism found that firms with lower ownership report more conservative earnings. Their results are consistent with equity stakeholders demanding greater conservatism as a means of addressing agency problems arising from the greater separation between ownership and control. Specifically, managers effectively enjoy limited liability concerning to other stakeholders in the firm. As managerial ownership declines, the severity of the agency problem increases, increasing the demand for conservatism (Lafond and Roychowdhury 2008). They also provide evidence on a source of demand for conservatism from the firm's shareholders.

García-Meca and Sánchez-Ballesta (2009) also noted that directors who own shares tend to aligned with external shareholders, that firms with government ownership enjoy a lower cost of debt and that banks effectively monitor management, so reducing the agency costs of debt.

Based on the arguments above, we argue that ownership structure and its characteristics may have a moderator effect on the relationship between accounting conservatism and the cost of debt capital. Accordingly, the second hypothesis is as follows;

*H2:* The relationship between accounting conservatism and the cost of debt moderated by a firm's ownership structure.

*c) Research framework*

To analysis, the relationship between accounting conservatism and cost of debt capital as moderated by the firm's ownership structure three main proxy variables identified, and analyzed. The first one is accounting conservatism (ACCON), the firm's cost of debt (CD), and institutional ownership as a proxy for a firm's ownership structure. The study also includes some controlling variables; firms return on asset, convergence ratio, leverage ratio, tangibility ratio, and firm's size. Based on the hypothesis the following conceptual research framework has been designed;

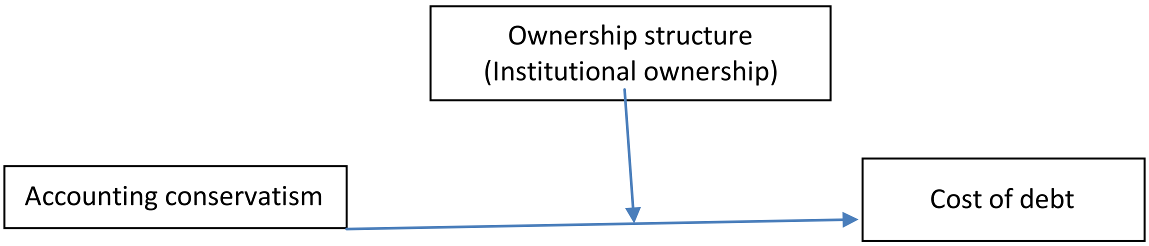



*Figure 1:* Conceptual framework

## III. Methodology

*a) Data and sample*

To investigate the association between accounting conservatism and the cost of debt capital and examine the moderating effects of institutional ownership in these relations, we use OSIRIS financial database as sources of data. All Financial statements, ownership structures, and stock data of the firms extracted from these data sources. The study population is African non-financial publicly listed companies on the OSIRIS database. African Firms registered on the OSRIS database about 1300, including financial institution firms. The sample for the current study determined after excluding financial institution firms and firms with missing data. We exclude them due to that the financial reporting environment for financial institutions differs from that for other companies and to avoid some complexity. Firms that don't have a fiscal year report of 2018 have been excluded from the sample, and firms with missing value also excluded. Accordingly, 224 firms extracted for the analysis purpose. The study covers the period of 2007-2018. We chose this period due to that most African companies listed on the OSIRIS database start adopting IFRS from 2007.

*b) Variable specifications and measurement*

i. *Measurement for accounting conservatism*

Prior literature suggests several empirical measures that can gauge the degree of accounting conservatism. Basu (1997)which is based on asymmetric the timeliness of earnings to good news and the incremental timeliness of earnings to loss news, Givoly and Hayn (2000) model a measurement based on the sign and magnitude of accruals overtime, and firm-year proxy for conditional conservatism model developed by (Khan and Watts 2009), and others.

Considering the scenario of African firms and the data on hand, a model of Givoly and Hayn (2000), the accrual-based measure of accounting conservatism employed to measure the level of conservatism reporting of the firm. They state that the sum of cash flows in the total lifetime of a company should be equal to the sum of net income in the entire lifetime of the company. The existence of a negative difference between this years is expected to be followed by a positive difference in the following year. If the accruals persistently remain negative in contrast to the expected pattern of accrual reversal it is a signal of conservative accounting, and it suggests that the mean of the firm's accrual over a long time is a proxy for accounting conservatism.

Accordingly, we use the method of Givoly and Hayn (2000) to measure the firm's accounting conservatism level. The Firms with a high value of accounting conservatism considered as conservative firms in reporting their losses than their gains. All the information used to determine the firm's conservatism level is obtained from the financial statement of the company. Operating income, depreciation, and others obtained from income statement, whereas accrual cash flows extracted from the company's cash flow statement. After calculating the value for accounting conservatism the result would be multiplied by mines 1 to avoid the negative value of the results.

ii. *Measurement for the cost of debt*

There are different measurements for firms' cost debt. For example, Li (2015), Šodan (2012), (Zhang 2008), Beatty, Weber, et al. (2008) had used the 1-year ahead average interest rate a firm pays for its debt outstanding or interest-bearing. For example, Beatty, Weber et al. (2008) examine a sample of private lending contracts and find that higher conditional conservatism is associated with a lower probability of having an income escalator in debt contracts after controlling for the interest rate. Also, Gigler, Kanodia et al. (2009) argue that the optimal debt contract simultaneously determined by the specification of a covenant and an interest rate negotiated ex-ante between the lenders and borrowers. However, the possibility that creditors may adjust other contracting terms rather than lowering the interest rate for conservative borrowers is working against finding a negative association between the interest rate and conditional conservatism.

In line with these literature and considering the nature of data on hand 1-year ahead interests paid for the total interest-bearing debt were used to measure the cost of the firm's debt capital. This measurement computed from the financial statements of the companies. Total interest paid by a firm obtained from the income statement of the company, and the total interest-bearing of the company is extracted from the balance sheet of the company.

iii. *Measurement for control variables*

Based on various previous literature and considering the nature of data on hand, control variables such as return on asset, firm size, leverage, convergence ratio, tangibility ratio and some dummy variables have been included in the model. Earlier research is proved that a higher return on assets leads to a better rating (Kaplan and Urwitz 1979). We measure return on an asset as operating income divided by total assets. The cost of debt is expected to be lower because when a firm has a better profit, it is more able to meets its obligations. The control variable for equity risk is leverage. Relatively more debt leads to higher leverage and more risk for the firm. The debt holders want compensation for the higher risk, and thus, the cost of debt will increase. So, a higher leverage rate leads to a higher value of interest expenses on debt (CD). So, we measure leverage as the total debt divided by total assets. Size is a control variable for the size of a firm and of course, calculated as the natural log of the firm's total asset. Convergence ratio measured as operating income after depreciation divided by interest expenses. Tangibility ration determine the net property, plant, and equipment divided by total assets, as additional controls for default risk.

Also, we include country and company as dummy variables to controls their effects on the model. Generally, the following table shows the lists of variables and their measurements.

*Table1:* Lists of variables and their measurement

| Variables | Measurement |
|---|---|
| Cost of debt | The 1-year ahead average interest rate a firm pays for its debt outstanding. Total interest expenses divided by total interest bearing debt |
| Accounting conservatism | Total accruals= (Net Income + Depreciation) - Cash flow from operations multi plied by -1 deflated by total asset |
| Institutional ownership | proportion of common shares held by institutional investors |
| Size | The natural log of a firm's total assets at the fiscal year end. |
| Leverage | the total debt divided by total assets |
| Convergence ratio | operating income after depreciation divided by interest expenses |
| Tangibility ratio | net property, plant, and equipment divided by total assets, as additional controls for default risk |
| Return on asset | operating income divided by total assets |

c) *Model specification*

To achieve the research objectives, we have employed a linear regression model using a formula or model of Ahmed, Billings et al. (2002) and Li (2015). Based upon the model from these two pieces of research, we investigate whether conservatism influences the cost of debt of a company or that conservatism has no significant effect on it. Ahmed, Billings et al. (2002) had used a credit rating from standard and poor (S&P) to measure the response variables. However, credit ratings for many African companies are unavailable. Due to that, we have another proxy for the cost of debt. Li (2015) used the interest expenses on the debt of a company divided by its total interest-bearing debt as a proxy for the creditworthiness of a firm. Following Li (2015), we have used the relation between interest expenses and total interest-bearing debt (CD-cost of debt capital) as a response variable (independent variable). The higher the result of this result, the higher the cost of debt is for a company. So, ACCON and CD are predictors for the cost of the debt in this formula.

So, generally, to test hypothesis H1, we employ the following a linear regression model employed.

$$CD_{t+1} = \beta + \beta_1 ACCON + \beta_2 InOwn + \beta_3 Sizet + \beta_4 Lev + \beta_5 ROA + \beta_6 Cov + \beta_7 Tang + \mu_{it..........} \qquad (1)$$

Where;

$CD_{t+1}$ is the 1-year ahead cost of debt capital, ACCON-level of accounting conservatism of the company In Own-institutional ownership, Size- firm size, Lev-leverage ratio, ROA-return on an asset, Cov-the interest coverage ratio, and tangibility - the tangible ratio. In the model, two dummy variables used to control Year effects, and country effects of the firms used as dummy variables.

For H2 only the interaction variable ($\beta_3$ ACCON *In Own) has been included in the previous formula to measure the moderating effects of institutional ownership. Accordingly, the following linear regression model used;

$$CD_{t+1} = \beta + \beta_1 ACCON + \beta_2 InOwn + (\beta_3 ACCON * InOwn) + \beta_4 Sizet + \beta_5 Lev + \beta_6 ROA + \beta_7 Cov + \beta_8 Tang + \mu_{it} \quad (2)$$

Where;

$CD_{t+1}$ is the 1-year ahead cost of debt capital, In Own-institutional ownership, ROA-return on an asset, Size-firm size, Lev-leverage ratio, Cov-the interest coverage ratio, and tangibility - the tangible ratio. In the model, two dummy variables used to control their effects. Year effects and country effects of the firms have been taken as dummy variables.

## IV. Empirical Results and Discussion

### a) *Statistical descriptive*

Table 2shows the summary statistical descriptive of the variables included in this study by their mean, maximum-minimum, and standard deviation value of the variables. The average mean value of accounting conservatism (ACCON) is -0.04028 with 0.1369908 standard deviation value. Its maximum value is 222.03. The negative sign of the value indicates that, on average most companies are conservative in recognizing bad (loss) news than good(gain) news. The result also reveals that in the increase in the level of accounting conservatism and the existence of accounting conservatism in the financial reporting of African Firms. The result is more consistent with the finding of (Givoly and Hayn 2000), Alkurdi, Al-Nimer, et al. 2017). They confirm that the negative ratio refers to the increase in the level of accounting conservatism and the implementation of more conservative accounting standards. The average mean value of the cost of debt is 1.131326, which indicates the companies experiencing a low level of cost of debt with more conservative reporting. The average mean institutional ownership is 0.038231 with a maximum value of 1.604069 less number of observations because of missing data. It also implies accounting conservatism driven by different ownership structures.

*Table 2:* Descriptive statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| CD | 2,006 | 1.131326 | 7.362964 | -0.14 | 222.03 |
| ACCON | 2,441 | -0.04028 | 0.136991 | -1.60407 | 1.705186 |
| Size | 2,437 | 6.807228 | 0.79832 | 2.053078 | 9.020443 |
| InOwn | 2,441 | 0.038231 | 0.130818 | -1.70519 | 1.604069 |
| ROA | 2,437 | 0.096951 | 0.565233 | -27.17 | 0.92 |
| Cov | 2,301 | 178.5806 | 5017.262 | -116861 | 142162 |
| Lev | 2,437 | 0.545866 | 0.321623 | 0.006377 | 12.61947 |
| Tang | 2,437 | 0.334293 | 0.228791 | 0 | 0.937535 |

*Correlation and variance inflation matrix*

Before making a regression analysis, regression diagnosis was conducted to test multi co-linearity and tolerance of variance among the variables. Pearson's correlation method and variance inflation (Vif) employed to examine the multi co-linearity and noise of the model. Table 3 presents both correlation, and the result showed that there no multi co-linearity problem among the independent variables. The maximum multi co-linearity exists between tangibility and accounting conservatism with the coefficient value of -0.3204, which still tolerable. Evans (1996)suggested that the absolute value of correlation (r) of more than 0.6 has a strong correlation. Since, our collinearity is less than this threshold, there is weak correlation between the variables used in the current study.

Table 3 also shows the variance inflation factor analysis of all variables in the model. Since multi co-linearity inflates the variance parameter estimates in the model, and this may lead to a lack of statistical significance of individual explanatory variables. So, to test this problem, the correlation between the variables, variance inflation factor analysis has been used. In table 3, the mean value of variance inflation factor of all variables is 1.12, with the maximum amount 1.23 has existed for accounting conservatism is the highest in the model, which still acceptable. Literature suggested that 7% of VIF is tolerable for the variables in the model. For instance, (Kaplan and Urwitz 1979)standards analysis of correlation coefficient size suggested that 7% of VIF moderate for multi co-linearity. Generally, the outcome reveals that there is no multi co-linearity problem between the variables both in Pearson's correlation method and variance inflation. So, the current model is appropriate to investigate the moderating effect of ownership structure (institutional ownership) in the relationship between accounting conservatism and the firm's cost of debt.

*Table 3:* Correlation and variance inflation matrix between variables

| | CD | ACCON | Size | InOwn | ROA | Cov | Lev | Tang | VIF | 1/VIF |
|---|---|---|---|---|---|---|---|---|---|---|
| CD | 1 | | | | | | | | | |
| ACCON | -0.0085 | 1 | | | | | | | 1.22 | 0.821541 |
| Size | 0.001 | 0.006 | 1 | | | | | | 1.04 | 0.95994 |
| InOwn | 0.033 | 0.0015 | -0.0408 | 1 | | | | | 1 | 0.997296 |
| ROA | 0.005 | 0.1911 | 0.0275 | 0.022 | 1 | | | | 1.11 | 0.900385 |
| Cov | -0.0087 | 0.029 | -0.0214 | 0.0121 | 0.1688 | 1 | | | 1.05 | 0.952176 |
| Lev | 0.0081 | -0.1534 | 0.0504 | 0.014 | -0.1395 | -0.1536 | 1 | | 1.07 | 0.934623 |
| Tang | -0.0737 | -0.3204 | 0.171 | -0.0096 | 0.1059 | -0.0059 | -0.0437 | 1 | 1.2 | 0.831753 |
| Mean vif | | | | | | | | | 1.1 | |

CD-determined total interest expenses divided by total interest-bearing debt, ACCON-accrual method followed, net income before interest expenses depreciation-, InOwn=the percentage of total shares held by institutions divided by total equity, Lev=the total debt divided by total assets, Tang=net property, plant, and equipment divided by total assets, as additional controls for default risk, Size= natural log of total asset, interact=it is an interaction value where acc*inown, ROA=total equity divided by total assets, Cov=operating income after depreciation divided by interest expenses.

*Heterogeneity test*

Heteroskedasticity does make the coefficient estimates less precise, lower precision increases the likelihood that the coefficient estimates are far from the correct population value. It does not create bias in coefficient estimates. In finance-related data, heteroskdasticty often exist because of unconditional price volatility, especially in stock data. In this study also there are some stock data used in the model so, heteroskedasticity problem does exist in the model. To solve this problem, robust regression analysis applied. The heterogeneity test conducted based on the results showed that there is heteroskedasticity in the model.

*Table 4:* Heteroskedasticity of the variables

| | |
|---|---|
| Breusch-Pagan / Cook-Weisberg test for heteroskedasticity | |
| Ho: Constant variance | |
| Variables: fitted values of cd | |
| chi2(1) = | 1092.84 |
| Prob> chi2 = | 0.0000 |

b) *Empirical results*

i. *Regression results of Accounting conservatism and cost of debt capital*

Table 5 provides the results of regression results for H1 using the accrual method of Givoly and Hayn (2000). The research hypothesizes of this study expects that there is an inverse relationship between accounting conservatism and the cost of debt, and there would be a moderating effect of ownership structure in this relationship. It expected that companies with a high level of accounting conservatism practice experience a low cost of debt and expected that institutional ownership in the companies' equity would enhance this relationship.

Accordingly, table 4 showed that there is a negative relationship between accounting conservatism and the firm's cost of debt capital. The result indicated that the level of the firms' accounting conservatism has statistically significant effects on the firms' cost of debt capital at (0.086) p-values a 10% significance level. The result implies that firms with more conservative in recognizing losses and give conscious about loss recognition or give timely recording would have less cost of debt. Because, the creditor or debt holder, offers low-interest-rate for firms with more conservative in recognizing losses than gains. This result is consistent with the findings of Šodan (2012), who proved that that company with higher debt cost has a lower level of conditional conservatism, as it expected in the hypothesis. Namely, conservatism causes more timely recognition of losses than gains, which improves the quality of accounting information in the context of corporate governance and loan agreements. So, debt holders are likely to reward borrowers with more conservative accounting by reducing the interest rates (debt costs), and vice versa. Therefore, coefficients on changes in net income are expected to be substantially different for high debt cost companies than for the whole sample.

Generally, the results from Table 5 suggest; First, the existence of accounting conservative practice among African firms. Second, the association between accounting conservatism and the cost of debt capital is negative as expected. The result proves the hypothesis that there is a negative relationship between accounting conservatism and the cost of debt capital. The coefficient showed us that as 1% increases in the value of the, firms' accounting practicing level firms cost of debt capital decrease (-3.59%). The result disclose as firms become more conservative in recognizing their losses than their gain, they enjoy a low level of cost of debt capital. Table 5 also shows the other controlling variables' significance level. Except for tangibility and leverage ratio, no variables appeared significant at 10%, 5%, and 1% confidence level, and it indicates that the majority of the controlling variables would not explain the dependent variable.

To sum up, the study results supported hypothesis H1. It indicates that as firms become conservative in recording their losses than their gain. The result implies as firms become more conservative in recognizing their losses than their gain, they enjoy a low level of cost of debt. Thus, the negative changes in accounting conservatism reduce the cost of borrowing debt as a result of timely recognizing losses than gains. The currents study proves that the majority of African firms are conservative in recording their losses than gains, which enables them to enjoy a low level of cost of debt. R- Square of the model explaining how the variables in the model fit to explain the dependent variables. Accordingly, Table 5 shows that R-square is 0.0085, which means the variables in the model explains the dependent variable is 8%. All results summarized in the following table 5.

*Table 5:* Regression results of the relation between accounting conservatism and the cost of debt capital

| CD | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| ACCON | -2.50359 | 1.459643 | -1.72 | 0.086 | -5.36623 | 0.359054 |
| Size | 0.173962 | 0.227397 | 0.77 | 0.444 | -0.27201 | 0.61993 |
| InOwn | 1.963 | 1.368157 | 1.43 | 0.152 | -0.72022 | 4.646219 |
| ROA | 1.562319 | 1.580556 | 0.99 | 0.323 | -1.53746 | 4.662093 |
| Cov | -0.00049 | 0.000919 | -0.54 | 0.593 | -0.00229 | 0.001311 |
| Lev | -0.09774 | 0.935248 | -0.1 | 0.017 | -1.93194 | 1.736463 |
| Tang | -2.96282 | 0.793023 | -3.74 | 0.000 | -4.51809 | -1.40755 |
| _cons | 0.717198 | 1.610162 | 0.45 | 0.656 | -2.44064 | 3.875035 |
| R-squared | 0.3185 | | | | | |
| Adj R-squared | 0.0049 | | | | | |

CD-determined total interest expenses divided by total interest-bearing debt, ACCON-accrual method followed, net income before interest expenses depreciation-, InOwn=the percentage of total shares held by institutions divided by total equity, Lev= the total debt divided by total assets, Tang= net property, plant, and equipment divided by total assets, as additional controls for default risk, Size= natural log of total asset, interact=it is an interaction value where acc*inown, ROA=total equity divided by total assets, Cov= operating income after depreciation divided by interest expenses.

ii. *Moderating effect of ownership structure in accounting conservatism and cost of debt*

The other main hypothesis of this study are that ownership structure, particularly institutional ownership, has moderating impacts on the relationship between accounting conservatism and firms' cost of debt. Accordingly, the results in table 6 show that institutional ownership in the company has statistically significant at 10% percent to boost the relationship between accounting conservatism and the cost of debt in African firms, and it indicates that the relationship between firms' conservatism reporting level and their cost of debt capital determined by the firm's ownership structure, specifically institutional ownership. On average, as institutional ownership increases by 2.53 percent, the level of accounting conservatism increases by 3.59 percent, which leads to the decrease of firms' cost of debt capital. So, the institutional ownership has moderating effects on the relationship between the independent variable (firm's accounting conservatism level) and the dependent variable (firm's cost of debt capital) implies decreases. The value of interaction variables is not statistically significant, but it has boosting or enhancing effects on the relationship.

Thus, it shows the existing relationship between accounting conservatism and the firm's cost of debt capital moderated by an institutional investor. Institutional investors need more conservative firms to invest in the company. For conservative firms, institutional investors offer low-interest rates for the amount borrowed by the firms. As a result, firms with high conservative accounting practices would enjoy a low-interest rate that means low cost of debt and it implies ownership structure of the company, particularly institutional ownership has a significant impact on the firms accounting conservatism level. So, the interaction results of the model have an effect on determining or enhancing the relationship of accounting conservatism (Independent variables) and the cost of debt capital (dependent). That means it increases the negative relation between accounting conservatism (Independent variables) and the cost of debt capital (dependent) and their association boosted by the interaction variables effects. Table 6 demonstrates that the coefficient between accounting conservatism (Independent variables) and the cost of debt capital (dependent) increased from (-2.50359 table 5) to (-3.97119 table 6), which indicates the relationship between the Independent variable and dependent variables becomes stronger because of the moderating effects of institutional ownership. In this second model, the accounting conservatism (ACCON) is statistically significant at 10% with a p-value of (0.019), which also indicates that the power of explaining the dependent variable boosted by the moderating effects of institutional ownership.

Most controlling variables is not statistically significant except tangibility ratio. The Tangibility ratio is significant at a 1% confidence interval, and it implies that the tangibility ratio can explain the dependent variables. This finding shows that variables such as return on asset, convergence ratio, firm size, and leverage ratio have not a significant impact on the dependent variables. However, it happened because of the interaction variables. Table 6 also shows the interaction variable is significant at a 5% confidence interval. It implies that the interaction variable increases the relation between accounting conservatism and the cost of debt capital.

R- Square of the model explaining how the variables in the model fit to explain the dependent variables. After including moderating effects of institutional ownership in the model, R- Square increases from 0.0085 8% to 0.010010% to describe the model, and it indicates that institutional ownership has an enhancing effect on the model.

Generally, the findings indicated that institutional ownership has moderating effects on the relationship between accounting conservatism and the cost of debt capital. The results proved H2 that is the relationship between accounting, and conservatism and cost debt capital moderated by ownership structure.

*Table 6:* The regression results of the moderating effects of institutional ownership

| CD | Coef. | Std. Err. | T | P>t | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| | | | | | | |
| ACCON | -3.97119 | 1.690454 | -2.35 | 0.019 | -7.28649 | -0.65588 |
| Size | 0.177144 | 0.227289 | 0.78 | 0.436 | -0.26861 | 0.622902 |
| InOwn | 2.745041 | 1.44119 | 1.9 | 0.057 | -0.08141 | 5.571492 |
| ROA | 1.628332 | 1.580225 | 1.03 | 0.303 | -1.47079 | 4.727458 |
| Cov | -0.00051 | 0.000919 | -0.56 | 0.076 | -0.00232 | 0.001288 |
| Lev | -0.21131 | 0.937109 | -0.23 | 0.012 | -2.04916 | 1.62654 |
| Tang | -3.08571 | 0.795842 | -3.88 | 0.000 | -4.6465 | -1.52491 |
| interact | 18.16258 | 10.56821 | 1.72 | 0.086 | -2.5637 | 38.88887 |

CD-determined total interest expenses divided by total interest-bearing debt, ACCON-accrual method followed, net income before interest expenses depreciation-, InOwn=the percentage of total shares held by institutions divided by total equity, Lev= the total debt divided by total assets, Tang= net property, plant, and equipment divided by total assets, as additional controls for default risk, Size= natural log of total asset, interact=it is an interaction value where acc*inown, ROA=total equity divided by total assets, Cov= operating income after depreciation divided by interest expenses.

## V. Conclusion and Implications

This paper examines the relationship between accounting conservatism and the cost of debt and the moderating effects of ownership structure particularly, institution ownership on this relationship. Findings emerge from this investigation are; One, it proves that the existence of accounting conservative practice among African firms. The association between accounting conservatism and the cost of capital is statistically significant. It implies that the majority of African companies conservatively recognize their bad news to achieve an efficient debt contract. That is, firms with a high levels of accounting conservatism practice bear low level of cost of debt. Two, the association between accounting conservatism and the cost of debt capital is negative as expected, and it infers as firms become more conservative in recognizing their losses than their gain, they enjoy a low level of cost of debt. The result consistent with the finding of literature; Ahmed and Duellman (2007), (Gigler, Kanodia, et al. 2009), (Li 2015), (Goh, Lim, et al. 2017). Thus, the negative changes in accounting conservatism reduce the cost of borrowing debt as a result of timely recognizing losses than gains. Three, the firm's ownership structure moderates the relationship between accounting conservatism and the cost of debt capital. Specifically, institutional ownership has an enhancing or boosting effect on the relationship between accounting and the firm's cost of debt capital. It indicates firms with higher institutional ownership shareholding are more conservatism than with the lower institutional ownership shareholding. Firms with high institutional ownership structure enjoy a low cost of debt capital as institutional investors want to invest in more conservative firms.

The study is noble by showing that the moderating effects of institutional ownership in increasing the level of a firm's accounting conservatism, and also the first in its kind using African data. The currents study proves that the majority of African firms are conservative in recognizing their losses than gains, which enables them to enjoy a low level of cost of debt. These findings contributed to the literature by showing up that conservative reporting practice is existing and practicing among African firms. Furthermore, and perhaps more importantly, the study reveals that the relationship between accounting conservatism and the cost of debt capital moderated by ownership structure.

Generally, it is good to recommend that accounting standard-setter should emphasis that accounting conservatism principles are exiting among African firms. African firms should be conservatism in reporting their financial statements to enjoy the low cost of debt capital from an institutional investor. The findings of this paper could not be generalized for the whole African firms as it only focused very few countries, and also the study did not address all the country-level variables, it focuses only on firm-level. So, level of accounting conservatism could vary from firm to firm and from country to country.

## References Références Referencias


1. Ahmed, A. S., et al. (2002). "The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs." The accounting review 77(4): 867-890.
2. Ahmed, A. S. and S. Duellman (2007). "Accounting conservatism and board of director characteristics: An empirical analysis." Journal of Accounting and Economics 43(2-3): 411-437.
3. Alkurdi, A., et al. (2017). "Accounting conservatism and ownership structure effect: evidence from industrial and financial Jordanian listed companies." International Journal of Economics and Financial Issues 7(2): 608-619.
4. Basu, S. (1997). "The conservatism principle and the asymmetric timeliness of earnings 1." Journal of Accounting and Economics 24(1): 3-37.
5. Beatty, A., et al. (2008). "Conservatism and debt." Journal of Accounting and Economics 45(2-3): 154-174.
6. Bhagat, S., et al. (2004). "Relational investing and firm performance." journal of Financial research 27(1): 1-30.
7. Chan, A. L.-C., et al. (2009). "Accounting conservatism and the cost of equity capital: UK evidence." Managerial Finance 35(4): 325-345.
8. Chen, C., et al. (2013). Accounting Conservatism and Corporate Investment Decisions: Evidence from a Structural Assessment, Working Paper.
9. Chen, W. P., et al. (2007). "Corporate governance and equity liquidity: Analysis of S & P transparency and disclosure rankings." Corporate governance: an international review 15(4): 644-660.
10. Cullinan, C. P., et al. (2012). "Ownership structure and accounting conservatism in China." Journal of International Accounting, Auditing and Taxation 21(1): 1-16.
11. Deegan, C. and J. Unerman (2011). Financial accounting theory: European edition, McGraw-Hill.
12. Evans, R. H. (1996). "An analysis of criterion variable reliability in conjoint analysis." Perceptual and motor skills 82(3): 988-990.
13. Francis, J., et al. (2004). "Costs of equity and earnings attributes." The accounting review 79(4): 967-1010.
14. García-Meca, E. and J. P. Sánchez-Ballesta (2009). "Corporate governance and earnings management: A meta-analysis." Corporate governance: an international review 17(5): 594-610.
15. García Lara, J. M., et al. (2005). "The effect of earnings management on the asymmetric timeliness of earnings." Journal of Business Finance & Accounting 32(3-4): 691-726.
16. Gigler, F., et al. (2009). "Accounting conservatism and the efficiency of debt contracts." Journal of accounting research 47(3): 767-797.

17. Givoly, D. and C. Hayn (2000). "The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative?" Journal of Accounting and Economics 29(3): 287-320.
18. Goex, R. F. and A. Wagenhofer (2009). "Optimal impairment rules." Journal of Accounting and Economics 48(1): 2-16.
19. Goh, B. W., et al. (2017). "Conditional conservatism and debt versus equity financing." Contemporary Accounting Research 34(1): 216-251.
20. Houcine, A. (2013). "Does accounting conservatism affect firm investment efficiency in an emerging market? Evidence from Tunisian context." African Journal of Accounting, Auditing and Finance 2(3): 209-232.
21. Jayaraman, S. and L. Shivakumar (2013). "Agency-based demand for conservatism: evidence from state adoption of antitakeover laws." Review of Accounting Studies18(1): 95-134.
22. Kaplan, R. S. and G. Urwitz (1979). "Statistical models of bond ratings: A methodological inquiry." Journal of business: 231-261.
23. Khan, M. and R. L. Watts (2009). "Estimation and empirical properties of a firm-year measure of accounting conservatism." Journal of Accounting and Economics 48(2-3): 132-150.
24. Khurana, I. K. and C. Wang (2015). "Debt maturity structure and accounting conservatism." Journal of Business Finance & Accounting 42(1-2): 167-203.
25. Kim, Y., et al. (2013). "The role of accounting conservatism in the equity market: Evidence from seasoned equity offerings." The accounting review 88(4): 1327-1356.
26. Lafond, R. and S. Roychowdhury (2008). "Managerial ownership and accounting conservatism." Journal of accounting research 46(1): 101-135.
27. Lai, C. and S. L. Taylor (2008). "Estimating and validating a firm-year-specific measure of conservatism: Australian evidence." Accounting & Finance48(4): 673-695.
28. Lara, J. M. G., et al. (2016). "Accounting conservatism and firm investment efficiency." Journal of Accounting and Economics 61(1): 221-238.
29. Li, X. (2015). "Accounting conservatism and the cost of capital: An international analysis." Journal of Business Finance & Accounting 42(5-6): 555-582.
30. Lin, F., et al. (2014). "The relations among accounting conservatism, institutional investors and earnings manipulation." Economic Modelling 37: 164-174.
31. Ruch, G. W. and G. Taylor (2015). "Accounting conservatism: A review of the literature." Journal of Accounting Literature 34: 17-38.
32. Sánchez-Ballesta, J. P. and E. García-Meca (2011). "Ownership structure and the cost of debt." European Accounting Review20(2): 389-416.
33. Šodan, S. (2012). "Conditional conservatism and the cost of debt: Evidence from central and eastern Europe." Croatian Operational Research Review3(1): 245-255.
34. Ugwunta, D. O. and B. U. Ugwuanyi (2019). "Accounting Conservatism and Performance of Nigerian Consumer Goods Firmsï¯: An Examination of the Role of Accruals." International Journal of Financial Research10(1): 1-9.
35. Wang, R. Z., et al. (2009). "A signaling theory of accounting conservatism." Tony, A Signaling Theory of Accounting Conservatism (June 6, 2009).
36. Watts, R. L. (2003). "Conservatism in accounting part I: Explanations and implications." Accounting horizons17(3): 207-221.
37. Watts, R. L. and J. L. Zimmerman (1986). "Positive accounting theory."
38. Zhang, J. (2008). "The Contracting Benefits of Accounting Conservatism to Lenders and Borrowers." Journal of Accounting and Economics 45: 27-54.
39. Zhong, Y. and W. Li (2017). "Accounting conservatism: A literature review." Australian Accounting Review 27(2): 195-213.

Global Journal of Management and Business Research: C Finance
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# The Effect of Financial Ratio (Car, FDR, NPF and BOPO) on the Profitability Level in PT Bank Muamalat Indonesia TBK

By Fitratin Nimah & Wahyudin Maguni

*Abstract-* Profitability Ratio is a ratio to measure the level of profit obtained by a company. One of the Islamic banks in Indonesia since 1992, namely Bank Muamalat Indonesia (BMI). Based on financial report data for 2014-2016, BMI experienced a decline in assets, causing the profitability of the bank to decline. Therefore, BMI issued new shares through HMTD (Pre-emptive Rights) to obtain fresh funds in order to meet the shortage of liquidity that had occurred to BMIs for the past 4 years. Liquidity deficiency occurs due to a decrease in the rate of return of financing that reaches 6% above the maximal stipulations set by Bank Indonesia and has an impact on decreasing BMI income or profits, known as profitability. So this study was conducted to determine what factors affect the level of profitability in BMI since the last 4 years with indicators of assessment, among others: CAR (Capital Adequate Ratio), FDR (Financing Deposit Ratio), NPF (Non Performing Financing), and BOPO (Cost Operations on Operating Income). This research is a descriptive quantitative study using BMI financial report data for 2014-2017 taken from the BMI website as a data source. Data analysis in this study is multiple regression analysis and classic assumptions with SPSS 22 and Microsoft Excel analysis tools.

*Keywords: financial ratio (car, FDR, NPF, BOPO), to ROE.*

*GJMBR-C Classification: JEL Code: G21*

THEEFFECTOFFINANCIALRATIOCARFDRNPFANDBOPOONTHEPROFITABILITYLEVELINPTBANKMUAMALATINDONESIATBK

# The Effect of Financial Ratio (Car, FDR, NPF and BOPO) on the Profitability Level in PT Bank Muamalat Indonesia TBK

Fitratin Nimah [α] & Wahyudin Maguni [σ]

*Abstract-* Profitability Ratio is a ratio to measure the level of profit obtained by a company. One of the Islamic banks in Indonesia since 1992, namely Bank Muamalat Indonesia (BMI). Based on financial report data for 2014-2016, BMI experienced a decline in assets, causing the profitability of the bank to decline. Therefore, BMI issued new shares through HMTD (Pre-emptive Rights) to obtain fresh funds in order to meet the shortage of liquidity that had occurred to BMIs for the past 4 years. Liquidity deficiency occurs due to a decrease in the rate of return of financing that reaches 6% above the maximal stipulations set by Bank Indonesia and has an impact on decreasing BMI income or profits, known as profitability. So this study was conducted to determine what factors affect the level of profitability in BMI since the last 4 years with indicators of assessment, among others: CAR (Capital Adequate Ratio), FDR (Financing Deposit Ratio), NPF (Non Performing Financing), and BOPO (Cost Operations on Operating Income). This research is a descriptive quantitative study using BMI financial report data for 2014-2017 taken from the BMI website as a data source. Data analysis in this study is multiple regression analysis and classic assumptions with SPSS 22 and Microsoft Excel analysis tools. Based on the results of the analysis in this study, it was found that the indicators that influence BMI's profitability are Capital Adapty Ratio and Operational Cost to Operating Income with a significance value of 0.012 smaller than 0.05, H1 is accepted and CAR to ROE has a significant effect and a significance value of 0.005 smaller than 0.05 then H4 is accepted and BOPO of ROE has a significant effect.

*Keywords: financial ratio (car, FDR, NPF, BOPO), to ROE.*

## I. Preliminary

There are several financial ratios to measure the financial position of a[1] bank, the measurement is intended so that investors can easily make decisions to invest in the bank. According to J. Fred Weston[2], these financial ratios include Liquidity Ratios, Profitability Ratios, Solvability Ratios, Activity Ratios, Growth Ratios, and Assessment Ratios.[3] Bank Indonesia has issued a regulation regarding guidance in assessing the bank's health rating in Circular Letter No.6/10/PBI/2004 dated 12 April 2004 using CAMELS analysis (Capital, Assets, Management, Earning, Liquidity, Sensitivity to Market Risk).

This study uses several aspects that exist in the CAMEL analysis in calculating the level of Profitability of Islamic Banks with the intended aspects namely Capital including CAR, Assets including NPF, Management including BOPO, and Liquidity including FDR. Profitability ratio with several ratios in question is used to predict bank bankruptcy, to assess the soundness of the bank, and assess the performance of the bank in terms of the profits that have been obtained by the bank.

The main data that forms the basis of this research is financial statements. The parties with an interest in financial statements are investors, employees, lenders (creditors), the government, Bank Indonesia, the Financial Services Authority, and the community as customers who will invest in the bank. Financial statements are presented to fulfill different information. One of the important information is profit. This information is very important because it explains how the company performs for a period from the past period. The financial statements used in this study are financial statements from Bank Muamalat Indonesia. The bank was chosen because the bank was the first Islamic bank in Indonesia and became the only bank capable of surviving the economic crisis that hit Indonesia in 1998. Based on Bank Muamalat Indonesia's financial statements over the past 3 years, 2014-2016 shows a significant decrease in assets. Here's a graph of Total Assets from Bank Muamalat.[4]

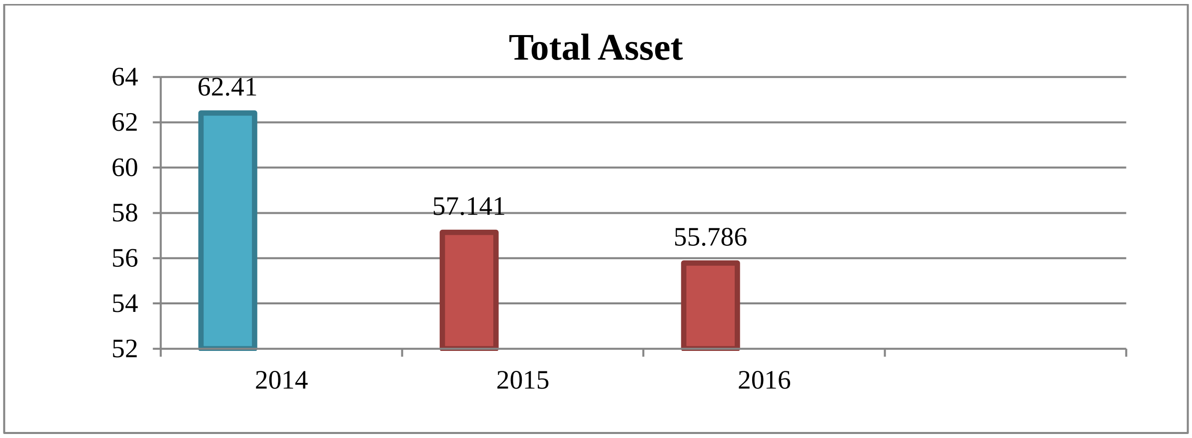
*Author α σ: FEBI IAIN Kendari (South East Sulawesi, Country: Indonesia). e-mails: fitratinnm@gmail.com, wmaguni@yahoo.com*

[1] Alumni of the Faculty of Islamic Economics and Business (FEBI) IAIN Kendari

[2] Lecturer in the Faculty of Islamic Economics and Business (FEBI) IAIN Kendari (Supervisor 1 Thesis)

[3] Cashmere, Analysis of Financial Statements, (PT. Rajawali Pers, 2014) p.106

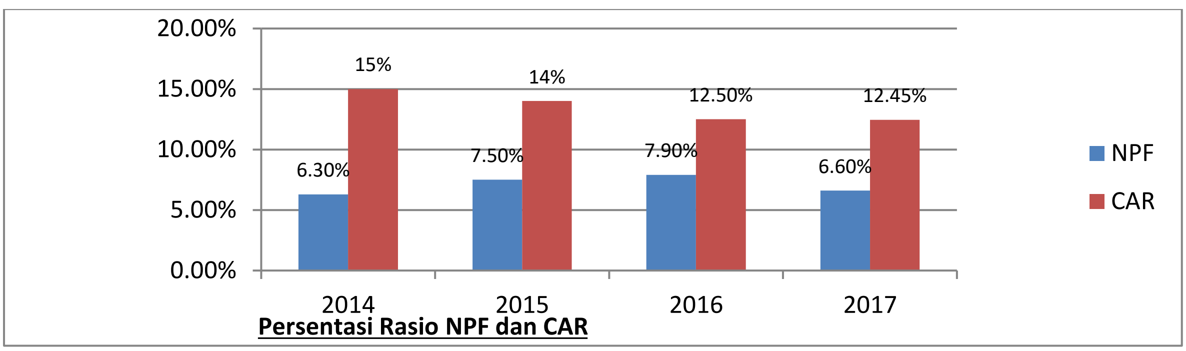
[4] w ww.bankmuamalat.co.id




Source: Processed in the Field, 2018

*Picture 1:* Total Assets

The table shows that the total assets of Bank Muamalat decreased from the previous 3 years, namely knowing 2014 as much as 62.41 billion to 55.786 billion. The decline in these assets adversely affected the health of Bank Muamalat. The impact affects customers who no longer trust the bank, resulting in an increase in NPF or the amount of bad credit risk. 2017 was recorded in Bank Muamalat Indonesia's quarterly financial report that NPF (Net Performing Financing) increased to reach 4%. This value is close to the maximum NPF figure set by Bank Indonesia at 5% per year. When compared with NPF in the last 3 years, BMI has reached an average value of 8.01 per year.




Source: Processed in the Field, 2018

*Picture 2:* Percentage of ratio of NPF and CAR

Even though the value of CAR or the value of capital adequacy in BMI tends to be in a very healthy position, BMI is not able to manage finances to the full. So that it caused Bank Muamalat to experience a shortage of assets. Based on this, Bank Muamalat sells more than 50% of the assets he has to obtain additional capital. Bank Muamalat increased capital by issuing new shares through the Pre-emptive Rights (HMTD) scheme.

The asset was successfully owned by a brokerage company, Minna Padi, with 51% or 80 billion shares with a value of 4.5 billion which had previously been a standby buyer. Minna Padi officially acquired Bank Muamalat with the majority share.[5] Minna Padi or PT. Minna Padi Sekuritas Tbk. is a brokerage company that is listed on the Indonesia Stock Exchange which is engaged in securities trading, which is tasked as a customer intermediary in making securities purchases.[6] This company is an Indonesian company.

Based on the description above, it becomes the reference material in this study, why Bank Muamalat Indonesia, which is the first Islamic bank in Indonesia, can experience this. Therefore the researcher conducted a research on the level of profitability in the BMI proposed in the form of a research proposal entitled "The Effect of CAR (Current Asset ratio), FDR (Financing Deposit Ratio), NPF (Non Performing Financing), and BOPO (Operating Income Operating Costs) to the level of Profitability (Return On Equity) at PT. Bank Muamalat Indonesia Tbk ".

## II. Literature Review

Sri Windarti and Misbach Fuady in the research written in the EBBANK Journal entitled "Factors Affecting Profitabilias Sharia Commercial Banks in Indonesia"

[5] www.republika.co.id

[6] www.minnapadi.com

explained that the factors that affect profitability in Indonesia are CAR, KAP (Quality of Earning Assets), BOPO, REO (Operational Efficiency Ratio), FDR, and GWM (Minimum Required Current Account). With the results of the CAR variable research has a significant positive effect on the Syariah Commercial Bank Profitability. Significance values of 0.00105 and t-Statistic 2.622824 indicate that an increase in capital is proven to be followed by an increase in the profitability of Islamic banks. KAP has a significant negative effect on profitability in Islamic Commercial Banks.

Wawan Prasetyo in his research on Analysis Affecting Banking Profitability stated that CAR did not affect bank profitability. In addition, the BOPO variable has an influence on bank profitability. The smaller the value of BOPO means the more efficient the operational costs incurred.

Nur Mawaddah with the research title "Factors Affecting the Profitability of Islamic Banks". The results of the study show that financing has a direct effect on profitability of 2.45%. Net Interest Margin (NIM) has a direct effect on Profitability of 6.45%. Non Performing Finance (NPF) has a direct effect on profitability of 4.32%. Financing has an indirect effect on Non Performing Finance (NPF) of 2.77%. Net Interest Margin (NIM) has an indirect effect on Non Performing Finance (NPF) of 2.77%.

Farrashita Aulia and Prasetiono in the management journal entitled "The Influence of CAR, FDR, and BOPO on Profitability (Empirical Study on Sharia Commercial Banks in Indonesia for the Period 2009-2013)". The results showed that CAR, FDR, NPF, and BOPO variables simultaneously had a significant influence on the ROE of Sharia Commercial Banks.

1. ROE (Return On Equity)

Profitability ratio is a ratio to assess a company's ability to seek profits. This is indicated by profits generated from sales and investment income. The point is that the use of this ratio shows the efficiency of the company[7]. The measure of profitability in the banking industry used in general is Return On Equity (ROE) and Return On Assets (ROA). ROA focuses on the company's ability to obtain earnings in its operations, while Return On Equity (ROE) only measures returns obtained from investment of company owners in the business.[8] The return on equity or profitability of capital alone shows the efficiency of the use of own capital. This means that the position of the company owner is getting stronger, and vice versa. Furthermore, the increase will cause an increase in bank stock prices. Mathematically ROE can be formulated as a bank account:

$$\text{ROE} = laba\ bersihtotal\ equity \text{ x } 100$$

2. CAR (Capital Adequacy Ratio)

CAR or Capital Ratio is an assessment of bank capital adequacy to cover current risks and anticipate future risks. The higher the CAR, the higher the ROE. In accordance with Bank Indonesia regulations No.6 /10/ PBI/2010 concerning the Rating System for Commercial Banks, the higher the CAR value indicates the healthier the bank. However, a CAR that is too high means that there are idle funds. Thus, the opportunity for banks to obtain profits will decrease; consequently it will reduce the profitability of the bank.

$$\text{CAR} = modal\ sendiriATMR\ X\ 100$$

3. FDR (Financing Deposit Ratio)

Financing to Deposit Ratio is the ability of banks to channel their funds to those who need capital.[9]9 FDR illustrates the comparison between the amount of loans or financing provided to customers and the amount of funds collected by Islamic banks. The greater the amount of funds channeled to customers in the form of credit, then the amount of unemployed funds decreases and the income earned will increase. This of course will increase FDR so that bank profitability also increases. According to Bank Indonesia Circular Number 13/27/ DPM Dated December 1, 2011, the FDR ratio formula is as follows:

$$\text{FDR} = Jumlah\ Pemby.yg\ disalurkantotal\ deposit\ X\ 100$$

4. PF (Non Performing Financing)

NPF is the rate of return on credit/financing provided by depositors to banks, in other words NPF/ NPL is the level of bad credit at the bank. If the NPF gets lower, then the bank will experience more profits. Conversely, if the NPF level is high, the bank will suffer losses due to the rate of return on bad financing. Bank Indonesia has set an NPF limit of 5%. If a bank's NPF can be reduced below 5%, the potential profit gained will be even greater because the bank can save money that is used to form reserves of non-performing loans or Earning Assets Allowance (PPAP). So it can be concluded that the greater the NPF ratio, the greater the risk borne by the company and later it will also negatively affect profitability.

$$\text{NPF} = Jumlah\ Pemby.\ bermasalahtotal\ pembiayaan\ X\ 100$$

5. BOPO (Operational Cost of Operational Income)

This ratio is a comparison between operating costs and operating income. The operational cost ratio is used to measure the level of efficiency and ability of banks in conducting operations.

[7] Cashmere, Analysis of Financial Statements. First Edition, Seventh Print. (Jakarta: PT Raja Grafindo Persada, 2014) p.196

[8] Dahlan, Management of Financial Institutions, Third Edition, (Jakarta: Faculty of Economics, Indonesia, 2001) p.86

[9] Cashmere, Analysis of Financial Statements, (PT. Rajawali Pers, 2008) p.151

$$\text{BOPO} = \frac{\textit{biaya operasional pendapatan operasional}}{X\ 100}$$

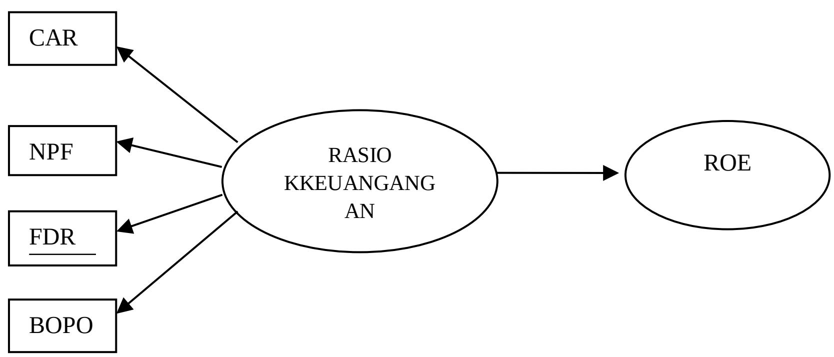
If the ratio increases, it reflects the lack of ability of banks to reduce operating costs and increase their operating income which can cause losses because banks are less efficient in managing their business.

## III. Methods, Data, and Analysis

This type of research is quantitative descriptive research that explains the relationship between dependent variables and independent variables. Quantitative Research is a process of finding knowledge that uses data in the form of numbers as an analytic tool.[10] The method in this study uses multiple regression analysis method, which is intended to test the effect Financial Ratio of CAR, NPF, FDR, and BOPO on the level of profitability of PT. Bank Muamalat Indonesia Tbk.

Data used is sourced from quarterly financial reports from 2014-2017 PT. Bank Muamalat Tbk obtained from the research object website and OJK (Financial Services Authority). This study uses 5 variables. 1 Dependent Variables namely ROE and 4 Independent Variables, namely CAR, FDR, NPF, BOPO.

*Desain Penelitian*




*Source: Processed in the Field, 2018*

*Picture 3:* Research design

The method of data analysis is done by using Multiple Analysis Regression performed on SPSS 21 and Microsoft Excel with formulations:

$$Y = b_0 + b_1X1 + b_2X2 + b_3X3 + b_4X4 + e$$

*Information:*

$X_1$ = CAR

$X_2$ = FDR

$X_3$ = NPF

$X_4$ = BOPO

Y = ROE

$b_0$ = Constant Numbers

$b_1, b_2..b_n$ = Koefesien Regresi

e = Faktor Kesalahan/Eror

Another analysis used is the classical assumption test (normality test, autocorrelation test, and multicollinearity test) on the research variable. In the event of a deviation from the classic assumption, the t test and F test to be conducted are invalid and can statistically confuse the conclusions obtained.

1. Normality Test

The normality test in the regression model is used to test whether the residual value is normally distributed or not. Using the Normal P-P chart Plot of regression standardized residual and statistical method Kolmogorov Smirnov If the value of Asymp. Sig 2-tailed> 0.05 then H0 is rejected and residual is spread normally. Conversely if Asymp. Sig 2-tailed <0.05, H0 is accepted and residual spread is not normal.

2. Autocorrelation Test

Autocorrelation occurs when the disturbance value in a certain period is related to the value of the previous disturbance. The simplest autocorrelation test is to use the Durbin-Watson (DW) test. The decision making in the Durbin Watson test is:

a. DW <1.1: There is autocorrelation
b. 1.1<DW <1.54: There are no clear conclusions
c. 1.55 <DW <2.46: There is no autocorrelation
d. 2.46<DW <2.9: There are no clear conclusions
e. DW> 2.91: There is autocorrelation

3. Multicollinearity Test

This test aims to test whether the regression model found a correlation between independent variables. The independent variable does not have a correlation. To detect the presence or absence of multicollinearity in a regression model can be seen from tolerance value or variance inflation factor (VIF). So the

[10] Kasiram, Moh. Research methodology. (Malang: UIN-Malang Pers, 2008) p. 149

low tolerance value is the same as the high VIF value. The commonly used cutoff value is:

a. If the tolerance value is> 10% (0,1000) and VIF value is <10, then there is no multicollinearity between the independent variables in the regression model.
b. If the tolerance value is <10% (0,1000) and VIF value is> 10, then there is multicolonearity between the independent variables in the regression model.

4. Correlation Test

Correlation analysis (Bivariate Correlation) is used to determine the closeness of the relationship between two variables and to find out the direction of the relationship that occurs. A simple correlation coefficient shows how much the relationship occurs between two variables. With guidelines for degree of relationship:

a. Pearson Correlation Value 0.00 - 0.20 = no correlation.
b. Pearson Correlation Value 0.21 - 0.40 = weak correlation.
c. Pearson Correlation value 0.41 - 060 = moderate correlation.
d. Pearson Correlation Value 0.61 - 0.80 = strong correlation.
e. Pearson Correlation Value 0.81 - 1.00 = perfect correlation.

With values marked positive and negative indicating the direction of the relationship. A positive sign indicates the direction of a unidirectional relationship while for a negative sign indicates an opposite relationship.

5. Test the Hypothesis

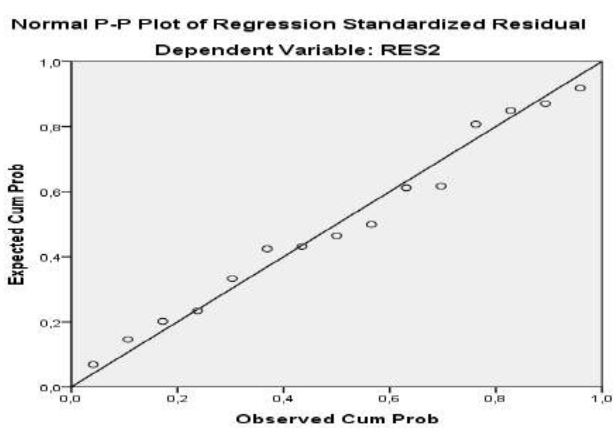
The t statistical test shows how far the influence of one independent variable individually in explaining the dependent variable. The results of the t test can be seen by comparing the p-value with α of 0.05 or comparing t-count and t-table, if p-value <0.05 or t-count> t-table, it can be concluded that H0 refused. Likewise vice versa if p-value> 0.05 or t-count <t-table then H0 is accepted.

The F statistic test is an overall regression coefficient test. If the probability (significance)> 0.05 (α) or F count <F table means that the hypothesis is not proven then H0 is accepted Ha is rejected if done simultaneously. If the probability (significance) <0.05 (α) or F count > F table means the hypothesis is proven then H0 is rejected and Ha is accepted if done simultaneously. The coefficient of determination is a test carried out to see how much influence the independent variable used can explain the dependent variable. That is by looking at the adjusted R squared, if the adjusted R squared is greater than the value 1 means that the independent variable chosen can explain the dependent variable.

## IV. Research Result

1. Normality Test

From the graph above, it can be seen that the points spread around the line and follow the diagonal line, it is concluded that the residual value is normal.




*Source: Processed in the Field, 2018*

*Figure 3:* Normal P-P Plot of Regression Standardized Residual Dependent Variable: RES2

However, this test is not accurate, so another normality test is tested, using the Kalmograv Smirnov statistical method. The results of the Kolmogorov-Smirnov normality test can be seen in the following table:

*Table 1:* Kalmograv Smirnovrr Test Results

**One Sample Kolmogorov Smirnov Test**

| | | Unstandardized Residual |
|---|---|---|
| N | | 15 |
| Normal Parameters[a,b] | Mean | ,0000000 |
| | Std. Deviation | ,98256941 |
| Most Extreme Differences | Absolute | ,180 |
| | Positive | ,180 |
| | Negative | -,122 |
| Test Statistic | | ,180 |
| Asymp. Sig. (2 - tailed) | | ,200 [c,d] |

a. *Test distribution is Normal.*
b. *Calculated from data.*
*Source: Processed in the Field, 2018*

In the table above shows that the variables CAR, FDR, NPF, BOPO, and ROE indicate that the value of Asymp. Sig (2 tailed)> 0.200. Overall, the variables are normally distributed.

2. Autocorrelation Test

The Autocorrelation Test Results are as follows:

*Table 2:* Autocorrelation Test Results

| Model | R | R Square | Adjusted R Square | Durbin Watson |
|---|---|---|---|---|
| 1 | ,769[a] | ,592 | ,428 | 2,555 |

a. *Predictors: (Constant), BOPO, FDR, NPF, CAR*
b. *Dependent Variable: RES2*
*Source: Processed in the Field, 2018*

From the table above, we can see the results of the autokorelai test with the Durbin Watson value of 2.555. The DW value will be compared with the table value by using a 5% confidence level, with a sample of 15 out of 4 independent variables. Then from the Durbin Watson table (attached) there will be a dL value of 0.685 and a value of dU 1.977.

3. Multiconearity Test

*Table 3:* Multicollinearity Test Results

**Coefficients[a]**

| Model | | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|
| | | | | Tolerance | VIF |
| 1 | (Cons) | 3,468 | ,006 | | |
| | CAR | -3,057 | ,012 | ,216 | 4,625 |
| | FDR | -1,003 | ,340 | ,895 | 1,117 |
| | NPF | ,784 | ,451 | ,551 | 1,814 |
| | BOPO | -3,524 | ,005 | ,168 | 5,957 |

a. *Dependent Variable: ROE*
*Source: Processed in the Field, 2018*

Based on the table above it can be concluded that there is no multiclinearity because each variable has a tolerance value above 0.10 and a VIF value above 10 because it is in accordance with the provisions of the multicollinearity test.

4. Correlation Test

Following are the results of the Pearson Correlation test. Positive and negative signs indicate the direction of the relationship. A positive sign indicates the direction of a unidirectional relationship while for a negative sign indicates an opposite relationship.

*Tables 4:* Correlations

**Tabel 7:**
**Hasil Uji *Peaerson Correlation***

**Correlations**

| | | CAR | FDR | NPF | BOPO | ROE |
|---|---|---|---|---|---|---|
| CAR | Pearson Correlation | 1 | -,173 | -,457 | -,862** | ,599* |
| | Sig. (2-tailed) | | ,537 | ,087 | ,000 | ,018 |
| | N | 15 | 15 | 15 | 15 | 15 |
| FDR | Pearson Correlation | -,173 | 1 | -,031 | ,012 | ,101 |
| | Sig. (2-tailed) | ,537 | | ,913 | ,967 | ,719 |
| | N | 15 | 15 | 15 | 15 | 15 |
| NPF | Pearson Correlation | -,457 | -,031 | 1 | ,642** | -,523* |
| | Sig. (2-tailed) | ,087 | ,913 | | ,010 | ,046 |
| | N | 15 | 15 | 15 | 15 | 15 |
| BOPO | Pearson Correlation | -,862** | ,012 | ,642** | 1 | -,688** |
| | Sig. (2-tailed) | ,000 | ,967 | ,010 | | ,005 |
| | N | 15 | 15 | 15 | 15 | 15 |
| ROE | Pearson Correlation | ,599* | ,101 | -,523* | -,688** | 1 |
| | Sig. (2-tailed) | ,018 | ,719 | ,046 | ,005 | |
| | N | 15 | 15 | 15 | 15 | 15 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

*Source: Processed in the Field, 2018*

Based on α = 0.05 (5%) can be explained the relationship between variables. ROE and CAR variables have a significant relationship with a significance value of 0.018 and the value of Pearson Correlation 0.599 means that the CAR variable on ROE has a significant relationship because 0.018 is smaller (<) than 0.05 and has a unidirectional correlation that is in the medium category because it is in the range 0 , 41 - 0.60.

The ROE and NPF variables have significant correlation with a significant value of 0.46 and the Pearson Correlation value of- 0.523 means that the ROE variable has a significant effect on the NPF variable because the significance value is smaller than 0.05 with the relationship not having a negative Pearson Correlation value and being in the medium category with a range of 0.41 - 0.60.

Based on α = 0.01 (1%) describes several variables that have relationships. These variables include BOPO to CAR, BOPO to NPF, and ROE to BOPO. BOPO variable on CAR has a significant relationship below 0.05 but does not have a direct relationship and the Pearson Correlation value is -0.862. This means that the BOPO variable on CAR has a significant relationship because it is below 0.05.

NPF and BOPO variables have a significant relationship with a significant value of 0.10 and the Pearson Correlation value is 0.642. This means that the variables of the two variables have a significant effect because they have a significant value of 0.10 with a unidirectional relationship because Pearson Correlation is positive and is in the strong correlation category. The ROE and BOPO variables have a significant relationship with a significant value of 0.005 and the Pearson Correlation value of -0.688 means that the ROE variable has a significant effect on the BOPO variable because the significant value is below 0.05 with a unidirectional relationship because it has a negative Pearson correlation and is in the correlation category strong with a range of 0.61 - 0.80.

5. Multiple Linear Regression Analysis

This analysis is to determine the direction of the relationship between the independent variable and the dependent variable whether each independent variable is positively or negatively related and to predict the value of the dependent variable if the value of the independent variable increases or decreases. The following are the results of multiple regression tests:

*Table 5:* Multiple Regression Test Results

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standr. Coef. | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 16,009 | 4,616 | | 3,468 | ,006 |
| | CAR | -,335 | ,110 | -1,328 | -3,057 | ,012 |
| | FDR | -,019 | ,019 | -,214 | -1,003 | ,340 |
| | NPF | ,039 | ,050 | ,213 | ,784 | ,451 |
| | BOPO | -,100 | ,028 | -1,738 | -3,524 | ,005 |

a. *Dependent Variable: ROE*

*Source: Processed in the Field, 2018*

From the table above the regression equation can be arranged as follows:

$$ROE = 16{,}009 + (-0{,}335)\ CAR + (-0{,}019)\ FDR + 0{,}039 NPF + (-0{,}100)\ BOPO + e$$

a) The above multiple regression equations can be explained as follows: Constant value of 16.009 means if the value of CAR (X1), FDR (X2), NPF (X3), and BOPO (X) is zero (0), then the ROE (Y) ratio is 16.009% or 16.01%.

b) CAR variable regression coefficient that is -0.335 means that if the value of other independent variables is fixed and CAR has a 1% increase, the ROE ratio has decreased by 0.335%. The coefficient is negative, meaning there is a negative relationship between CAR and ROE, the higher the CAR ratio the ROE ratio tends to decrease.

c) FDR variable regression coefficient which is -0.019 means that if the value of the other independent variables is fixed and FDR has a 1% increase, the ROE ratio has decreased by 0.019%. The coefficient is negative, meaning that there is a negative relationship between FDR and ROE, the higher the FDR, the ROE ratio tends to decrease.

d) NPF variable regression coefficient which is 0.039 means that if the value of the other independent variables is fixed and NPF has increased by 1%, the ROE ratio has decreased by 0.039%. The coefficient is positive, meaning that there is a positive relationship between NPF and ROE, the higher the NPF, the ROE ratio decreases.

e) BOPO variable regression coefficient which is -0.1 means that if the value of other independent variables is fixed and NPF has increased by 1%, the ROE ratio has decreased by 0.1%. The coefficient is negative, meaning that there is a negative relationship between BOPO and ROE, the higher the BOPO, the ROE ratio decreases.

6. Test the Hypothesis

a. Partial Test (statistics t)

This test shows how far the influence of the independent variables partially/individually in explaining the dependent variables. Following is the partial test table:

*Table 6:* Hasil Uji Parsial Variable CAR, FRD, NPF, BOPO tarhadap ROE

**Coefficients**[a]

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 16,009 | 4,616 | | 3,468 | ,006 |
| CAR | -,335 | ,110 | -1,328 | -3,057 | ,012 |
| FDR | -,019 | ,019 | -,214 | -1,003 | ,340 |
| NPF | ,039 | ,050 | ,213 | ,784 | ,451 |
| BOPO | -,100 | ,028 | -1,738 | -3,524 | ,005 |

a. *Dependent Variable: ROE*

*Source: Processed in the Field, 2018*

Based on the table above, it can be explained that the testing of the first hypothesis is H1 = CAR has a significant effect on ROE with a regression coefficient of -0.335. The estimation result of CAR variable is t table = -3,057 and the probability value or t count is 0,012. Significance value of 0.012 is smaller than 0.05, H1 is accepted and CAR to ROE has a significant effect.

The second hypothesis is H2 = FDR which has a significant effect on ROE with a regression coefficient of -0.019. The estimated FDR variable is t = -1.003 and the probability value is 0.340. Significance value of 0.340 is greater than 0.05, H2 is rejected and FDR to ROE has no significant effect.

The third hypothesis is that H3 = NPF has a significant effect on ROE with a regression coefficient of 0.39. The estimation result of NPF variable is t = 0.784 and probability value is 0.451. Significant value of 0.451 is greater than 0.05, H3 is rejected and NPF to ROE has no significant effect.

The third hypothesis is that H4 = BOPO has a significant effect on ROE with a regression coefficient of -0,100. The estimated BOPO variable is t = -3,524 and the probability value is 0,005. Significance value of 0.005 is smaller than 0.05 so H4 is accepted and BOPO of ROE has a significant effect.

b. Simultaneous Test (F statistic)

Is testing the overall regression coefficient. This test shows whether all the independent variables included in the model have a joint effect on the dependent variable. Following are the results of the simultaneous test:

*Table 7:* Simultaneous Test Results

| Model | Sum of Squares | Mean Square | F | Sig. |
|---|---|---|---|---|
| Regression | 1,447 | ,362 | 3,624 | ,045[b] |
| Residual | ,999 | ,100 | | |
| Total | 2,446 | | | |

*Source: Processed in the Field, 2018*

Mean of square shows the average variance calculated. For the average per variable seen in the mean of square regression with a value of 0.362 and for the average Y data variables seen in the mean of square residuals is 0.100. F table value is 3,624 and F count value is 0,45. Based on the results of testing the simultaneous test in table 10, it can be concluded that the significant value is 0.045. The significance level is smaller than 0.05 or the F table value is greater than the calculated F value which means CAR, FDR, NPF, BOPO have a significant effect H0 is rejected and Ha is accepted because the variable CAR, FDR, NPF, and BOPO has an effect against ROE.

c. Coefficient of determination

The magnitude of the coefficient of determination ranges from 0.00 to 1.00.

*Table 8:* Determination Coefficient Test Results

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,769[a] | ,592 | ,428 | ,31601 |

a. *Predictors: (Constant), BOPO, FDR, NPF, CAR*

b. *Dependent Variable: RES2*

*Source: Processed in the Field, 2018*

It can be seen that the Adjusted R Square value is 0.428 or 42.8%, which means that CAR, FDR, NPF, and BOPO influence ROE of 42.8%. The remaining 57.2% is explained by other variables. The error standard of estimate (SEE) is 0.31601, the smaller the SEE value or close to 0 (zero), the regression model used is more accurate in predicting the dependent variable. ANALYSIS OF FINANCIAL STATEMENTS PT. MUAMALAT INDONESIA BANK The recording of financial statements of a bank that has been published to the general public and has been audited by OJK (Financial Services Authority) is divided into several reports other than the annual financial report or Annual Report, these reports include monthly reports, quarterly reports, GCG reports (Good Corporate Governance), and risk exposure reports. In this study explained the financial condition of PT. Bank Muamalat Indonesia using annual analysis and quarterly analysis.

1. Yearly Analysis

Financial reports that have been processed to look for financial ratios per year produce financial ratios that reflect the financial conditions of PT. Bank Muamalat Indonesia Tbk. The following are the results of the calculation of financial ratios that have been averaged based on the first quarter to fourth quarter 2014-2017 reports.

*Table 9:* Average Financial Ratios for 2014 – 2017

| RASIO | TAHUN | | | |
|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 |
| CAR | 15,057% | 14,065% | 12,582% | 12,45% |
| FDR | 89,63% | 92,955% | 96,842% | 89,313% |
| NPF | 6,387% | 7,505% | 7,913% | 6,653% |
| BOPO | 85,07% | 89,625% | 95,087% | 92,273 |
| ROE | 2,572% | 2,26% | 0,85% | 0,063% |

*Source: Processed in the Field, 2018*

In 2014 the financial condition of PT. Bank Muamalat Indonesia Tbk is very good. The capital adequacy value that can be collected is 15,057% of the total RWA 164 billion including the very healthy category. This means that CAR in 2014 BMI was able to manage its capital very well. However, the FDR and NPF ratios are at the values of 89.63% and 6.587%. The FDR and NPF values indicate the condition of the rate of return in the sufficient category. BOPO is 85.07% and ROE is 2.572%. The BOPO value means that BMI is difficult to reduce operating costs and make income decline.

In 2015 the CAR value of 14.065% decreased due to the decreasing amount of capital so that to overcome the risk of being less good. The FDR and NPF values which increased quite rapidly were 92.955% and 7.505% indicating a low rate of return on financing which triggered a loss at the bank. BOPO value in 2015 amounted to 89.625%, which means experiencing an increase in the number of operational costs that existed in BMI and ROE in 2015 reaching 2.26%, still remaining in the unhealthy category.

In 2016 the CAR value declined again with a value of 12.282% but still in the healthy category. The increase in the value of the ratio actually lies in FDR, NPF, and BOPO, namely 96.842%, 7.913%, and 95.087%. This shows a very low reduction in financing returns, giving rise to the number of problematic financing increasing and income from operational costs decreasing. 2016 was only able to achieve investor returns of 0.85%.

2017 to the third quarter became the peak of the financial decline of PT. Bank Muamalat Indonesia. The CAR value reaches 12.45%, FDR is 89.313%, NPF is 6.653%, BOPO is 92.273%, and ROE is 0.063%. All of these ratios are in the unhealthy category, and have an impact on the number of assets declining due to the increasing number of problematic financing followed by the increasing number of operational costs.

## V. Conclusion

Based on the results of data analysis and discussion that has been explained in the previous chapter, the conclusions from the research are:

1. H1 = CAR has a significant effect on ROE received. Based on the results of the t test the significance value of 0.012 is smaller than $\alpha = 0.05$. With the results of multiple linear regressions test the regression coefficient value -0.335 which means that if the CAR has a 1% increase and other variables are constant, the ROE ratio will decrease by 0.335%. Coefficients that have a negative value means that there is a relationship that is not in the same direction. And the results of the classic assumption test state that the CAR variable has a significant effect on ROE with a significant value below 0.05, which is 0.018.
2. H2 = FDR has a significant effect on ROE rejected. Based on the results of the t test the significance value of 0.340 is greater than 0.05. With the results of multiple regression tests the regression coefficient value is -0.019, which means that if the value of the other independent variables is fixed and FDR has a 1% increase, the ROE ratio has decreased by 0.019%. Coefficients that have a negative value mean that there is a relationship that is not in the same direction. And the results of the classic assumption test on the Pearson Correlation Test state that FDR against ROE does not have a significant relationship because it has a significant value of 0.719> of a significant standard $\alpha = 0.05$.
3. H3 = NPF has a significant effect on ROE rejected. Based on the results of the t test the significance value of 0.784 is greater than 0.05. With the results of multiple regression tests the regression coefficient value is 0.039, which means that if the value of the other independent variables remains and the NPF increases by 1%, the ROE ratio increases by 0.039%. Coefficients that have a positive value means that the relationship is in the same direction. However, the results of the classic assumption test on the Pearson Correlation Test state that NPF to ROE has a significant relationship because it has a significant value of 0.046 smaller than the significant standard $\alpha = 0.05$.
4. H4= BOPO has a significant effect on ROE received. Based on the results of the t test the significance value of 0.005 is smaller than 0.05. With the results of multiple regression test the regression coefficient value -0,100 which means that if the value of other independent variables is fixed and BOPO has increased by 1%, the ROE ratio has decreased by 0.0397%. Coefficients that have a negative value means that there is a relationship that is not in the same direction. And the results of the classic assumption test on the Pearson Correlation Test state that FDR against ROE has a significant relationship because it has a significant value of 0.005 with a smaller than significant standard $\alpha = 0.01$.
5. Based on the results of testing the simultaneous test of significant value of 0.045 smaller than 0.05 or F count greater than F table, the variables CAR, FDR, NPF, and BOPO affect simultaneously the ROE value.
6. The results of financial statement analysis since the first quarter of 2014 up to the third quarter of 2017, explain that condition.

## Bibliography

1. Annual Report 2015 Annual Report "Embracing Change, Energizing Growth" PT. Bank Muamalat Indonesia Tbk.

2. Annual Report 2016 Annual Report "Stepping Confidently Standing Firm" PT. Bank Muamalat Indonesia Tbk.
3. Bank Indonesia Circular Letter No.12/11/DPNP dated March 31, 2014 concerning guidance in assessing the health level of the bank with CAMELS analysis Bank Indonesia Circular Number 6/23/ DPNP dated May 31, 2004 concerning the health rating system for commercial banks and attachments.
4. Agus, Sartono, Financial Management: Theory and Application. Fourth Edition, Yogyakarta: BPFE, 2001.
5. Ascarya, Akad and Products of Islamic banks, Jakarta: Bank Indonesia, 2006.
6. Banoon, Malik, Prediction of Growth of Sharia Banking in Indonesia in 2008. Surabaya: Petra Christian University, 2007.
7. Fahmi, Irham, Financial Report Analysis, Bandung: Alfbeta, 2013.
8. Hasan, Ali, Marketing from Mouth to Mouth, Yogyakarta: Media Pressindo, 2010.
9. Hasibuan, Banking Basics, Jakarta: Bumi Aksara, 2005.
10. Kasiram, Moh, Research Methodology, Malang: UIN-Malang Per, 2008.
11. Cashmere, Financial Report Analysis, Jakarta: PT. Rajawali Press, 2013.
12. Analysis of Financial Statements. First Edition, Seventh Print. Jakarta: PT Raja Grafindo Persada, 2014.
13. Banking Management, Jakarta: PT. Raja Grafindo Persada, 2010.
14. Kuncoro, Suhardjono, Banking Management (Theory and Application) First Edition, Yogyakarta: BPFE, 2002
15. Lukman, Dendawijaya, Banking Management. First Printing, Jakarta: Ghalia Indonesia, 2000.
16. Siamat, Dahlan, Third Edition Financial Institution Management, Jakarta: Faculty. Indonesian Economy, 2001.
17. Siamat, Dahlan, Management of Financial Institutions. Jakarta: Faculty of Economics, University of Indonesia, 2005.
18. Sugiyono, Qualitative quantitative research method, Bandung: Alfabeta, 2006.
19. Syahrial, Dermawan and Djahotman Purba, Financial Report Analysis: An Easy & Practical Way to Understand Financial Reports. Second Edition. Jakarta: Mitra Wacana Media, 2013.
20. Al-azhari, Faturrahman, Mechanisms and Ways to Resolve Problematic Financing, At-Tarhadi Journal, Journal of IAIN Economic Studies Antasari Vol. 3 No. 1, 2001.
21. Aulia, Farrashita and Prasetiono, Effect of CAR, FDR, and BOPO on Profitability (Empirical Study on Sharia Commercial Banks in Indonesia for the Period 2009-2013), Diponegoro Journal of Management Vol. 5 No. 1 thing 1-10, 2016.
22. Irhamsyah, Anwar, Analysis of the Effect of Capital Adequacy Ratio (CAR), Operating Costs on Operating Income (BOPO), and Financing to Deposit Ratio on Return On Equity (ROE). Jakarta: Sarif Hidayatullah State Islamic University, 2010.
23. Mawaddah, Nur, Factors Affecting the Profitability of Islamic Banks, Journal of Ethics Vol. 14 No.2, 2015.
24. Prasetyo, Wawan, Analysis that Affects Banking Profitability, JESP-Vol. 7, No. 1, 2015.
25. Rafelia, Thyas and Moh. Didik Ardiyanto, Effect of CAR, FDR, NPF, and BOPO on ROE of Mandiri Islamic Banks for the period December 2008-August 2012. Semarang: Diponegoro, Journal of Accounting, 2013.
26. Rahim, Rida and Yuma Irpa, Operational Efficiency Analysis on Profitabiltas at Sharia Commercial Banks and Sharia Units. Journal of Business Management Vol. 4 No. 3, 2008.
27. Sisca Juliana and Ade Sofyan, Analysis of the Effect of BOPO, Capital Adequacy, Troubled Financing, Profit Sharing and Profitability on Mudharabah Deposits in Sharia Commercial Banks for the 2011-2015 Period. Li-Falah Journal of Islamic Economics and Business Studies Vol. 2 No. June 1, 2017.
28. Solihatun, NPF Analysis of Sharia Commercial Banks in Indonesia in 2007-2012. Journal of Development Economics, Vol. 12 No. June 1, 2014
29. Sri Windarti Mokoagow and Misbach Fuady, Factors that influence the profitability of sharia commercial banks in Indonesia, Journal of EBANK Vol. 6. No. 1. thing 33-62, 2015.
30. Suryani, Analysis of the Effect of Financing to Deposit Ratio on the Profitability of Islamic Banking in Indonesia, Walisongo Journal STAIN Malikus Saleh Lhokseumawe. vol. 19. No. 1: 48-49, 2011.

*Internet:*

http://www.bi.go.id
http://ejournal.iainkendari.ac.id/lifalah/index
http://www.bankmuamalat.co.id/dewan-komektur
http://www.bankmuamalat.co.id/dewan-pengawas-syariah
http://www.bankmuamalat.co.id/direksi
http://www.bankmuamalat.co.id/hubungan-investor/laporan-triwulan

http://www.bankmuamalat.co.id/produk-layanan-consumer
http://www.bankmuamalat.co.id/profil-bank-muamalat
http://www.bankmuamalat.co.id/struktur-organis
http://www.bankmuamalat.co.id/visi-misi
http://www.minnapadi.com/about-us/company-profile?lang=id
http://www.republika.co.id/berita/ekonomi/syariahekonomi/17/09/28/owzh0n383-51-persen-saham-bank-muamalat-resmi-dibeli-minna-padi 2014 Annual Report "Building Opimism Amidst Market Challenge" PT. Bank Muamalat Indonesia Tbk.

Global Journal of Management and Business Research: C Finance
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# An Assessment of the Influence of Corporate Governance Principles on Growth of Savings and Credit Co-Operative Societies in Kisii County, Kenya

By Ondari Moses, Dr. Andrew Nyang'au & Dr. Joshua W. Chesoli

*Kisii University*

*Abstract-* The purpose of this study was to assess the influence of corporate governance principles on the growth of savings and credit cooperatives societies in Kisii County, Kenya. The recent past had witnessed decreased growth of societies due to alarming rate of dormant Savings and credit corporative societies within Kisii County a situation that was attributed to poor corporate governance principles practiced by Savings and credit corporative societies. The specific objectives considered in this study were: influence of Accountability, participation, inclusivity, and transparency on growth of SACCOs. The theory that was considered for this study was agency theory. The researcher adopted crosssection research design. The target population was 172 management officials of the deposit taking savings and credit corporative societies within Kisii County. Census method was used to obtain the sample size. The researcher used questionnaires as the research instruments for the purpose of collecting data from the respondents for the study. Validity of the study involved the researcher discussing with the supervisors on how the questionnaire was to be tailored to ascertain accurate information from the respondents for data analysis, and the reliability of the research instruments was measured by Cronbach's Alpha. Adequate reliability level was attained. The study targeted a total of 172 sampled SACCO management officials on whom the questionnaires were administered.

*GJMBR-C Classification: JEL Code: G34*

# An Assessment of the Influence of Corporate Governance Principles on Growth of Savings and Credit Co-Operative Societies in Kisii County, Kenya

Ondari Moses [α], Dr. Andrew Nyang'au [σ] & Dr. Joshua W. Chesoli [ρ]

*Abstract-* The purpose of this study was to assess the influence of corporate governance principles on the growth of savings and credit cooperatives societies in Kisii County, Kenya. The recent past had witnessed decreased growth of societies due to alarming rate of dormant Savings and credit corporative societies within Kisii County a situation that was attributed to poor corporate governance principles practiced by Savings and credit corporative societies. The specific objectives considered in this study were: influence of Accountability, participation, inclusivity, and transparency on growth of SACCOs. The theory that was considered for this study was agency theory. The researcher adopted cross-section research design. The target population was 172 management officials of the deposit taking savings and credit corporative societies within Kisii County. Census method was used to obtain the sample size. The researcher used questionnaires as the research instruments for the purpose of collecting data from the respondents for the study. Validity of the study involved the researcher discussing with the supervisors on how the questionnaire was to be tailored to ascertain accurate information from the respondents for data analysis, and the reliability of the research instruments was measured by Cronbach's Alpha. Adequate reliability level was attained. The study targeted a total of 172 sampled SACCO management officials on whom the questionnaires were administered. Out of this number, a total of 141 of them returned their questionnaires, translating to an overall response rate of 82% which was sufficient for data reporting. Descriptive statistics used were: mean, standard deviation, percentages and frequencies. Inferential statistics used were correlation and regression analysis to analyse data collected from the respondents. Computer software (SPSS) package for social sciences version 22 was used in conducting quantitative data analysis. The study found that the SACCO managements were partially practicing accountability in SACCO governance. The study concluded that participation of SACCO's members and other stakeholders in corporate governance, in decision making and accommodating ideas from members in SACCO governance is key to promote growth of SACCOs. The study recommended that SACCOs in Kisii County should practice inclusivity principle of governance in order to spur growth through mobilising the member's resources and accepting members from different disciplinary to bring in skills that would further the growth of SACCOs in Kisii County.

*Author α σ ρ: Ph.D, Kisii University, School Of Business And Economics, Department of Finance and Accounting.*
*e-mail: wycliffeotera@gmail.com*

## I. Introduction

SACCO was first invented in South Germany in 1846 at the time of Agricultural crisis as a result of heavy drought in Europe, by two community business leaders: Freidrick W. Reifeisen and Herman Schultze-Delitsch, who are considered as the founding father of the saving and credit cooperatives (SACCO) movement (Tache, 2006). Later in Italy, Luigi Luzzatti established saving and credit cooperative society, which combined the principles established by his predecessors. Both forms spread rapidly all over Europe; and the history of SACCOs or credit unions shows that they were formed essentially for the relief of poverty among the poorer classes of people in Europe, United States, India and the rest of the world (Tache, 2006).

Principles of corporate governance are a topic that has been debated on overtime and there are no specific standards of principles of corporate governance that are applicable to all countries of the world. However, G20/OECD a worldwide organization comprising of country members has given the guidelines on what constitutes to principles of good corporate governance and they include, efficiency in allocation of the firm resources, transparency and disclosure of operations of the firm, participation of shareholders in shareholders' meetings, inclusiveness by taking care of all stakeholders of the firm, accountability that is by reporting on financial and non-financial matters to shareholders, and management responsibility to oversee the operations of the firm for growth purposes; hence these can be summarized as efficiency, transparency, participation, inclusivity, accountability, and management responsibility (Gurria, 2015).

Principles of corporate governance at whatever arrangements aim at supporting and promoting the integrity of the firm and protect the shareholders' wealth and care for the interests of the stakeholder, in this case there are six principles of corporate governance that are considered and these include transparency,

Global Journal of Management and Business Research ( C ) Volume XIX Issue VII Version I Year 2019

independence, accountability, integrity, clarity of purpose, and efficiency. Transparency as a principle of governance would ensure openness that creates confidence of the shareholders and stakeholders of the firm, independence includes freedom of office holders from interference of decision making issues, and accountability principle ensures that managers are accountable of their actions while integrity deals with straightforwardness and honesty, and clarity of purpose principle help shareholders and stakeholders to know why their firm exists meanwhile efficiency ensures that the firm delivers quality out-comes at affordable costs to the shareholders (O'Reilly, 2009).

Corporate governance principles are set by the firm to promote investors' confidence and also promote the wellness of the firm while aiming at achieving the objectives of the organization, and good principles of corporate governance tend to achieve good governance outcomes and quality outcomes; Australian corporate governance council has set eight good principles of corporate governance and they include, accountability, transparency, participation, efficiency, audit, integrity, management responsibility, and competitive compensation for managers that contribute to achieving the goals of the firm (Johnstone, 2019).

Tapiwa Michael (2015) points out in his study that accountability, fairness, transparency, and responsibility of the management of the firm are core principles of good corporate governance; accountability obligates the firm managers to give an explanation of their conduct and actions of the firm, and fairness gives an equal treatment to the shareholders irrespective of whatever shareholdings they hold, while transparency as a good principle of corporate governance is that all stakeholders should be informed of the firm's activities, and thus responsibility involves board of directors being given authority to act on behalf of shareholders.

In Kenya, the codes of corporate governance principles borrow leave from and are in line with G20/OECD principles of corporate governance a worldwide organization which has president in establishing corporate governance principles (Makabwa, 2016). Keay & Loughrey (2015) in their article on accountability of the board in corporate governance argue that directors of the SACCO are required to provide an account of their actions to the shareholders, and for that account to be justified and evaluated, and there to be the possibility of consequences being imposed upon directors in the light of the account which they give. And, for directors to be accountable to shareholders is considered as an icon of good corporate governance, and it implants value creation for firms or for SACCO Societies; and enhancing the growth of SACCOs.

Chansa (2006) did a study on accountability: A case of Zambia state corporation holds that accountability in corporate governance is key to economic growth of firms; and where there is poor accountability practiced by players in the SACCO Societies or firms, shareholders may lose the confidence they have for their organization and hence become reluctant to put in their best and, this would mean less growth in the SACCOs in terms of their resources. The more accountable managers are, the more likely it is that results of performance measurement processes are going to be a true and fair representative of the performance being measured.

Wannergren (2014) did a study in Kenya on Accountability and access on open Data in Kenya argues that for transparency to lead to accountability there must have been actions taken from a number of involved shareholders, based on their capacity, context and from their various specified needs; and here accountability is an action to report to shareholders how best the managers have implemented actions in terms of finance and non-finance needs of the shareholders in the course of pursuing the SACCOs' operations.

Nagy (2015) did a research on participatory governance in the European capital of culture programme he contends that participatory in corporation governance influences the process of involving those actors that are affected by them. Participation requires transparency, equal access to decisions, openness, competence, and respect of shareholders of the SACCO. And, this is an incentive to the shareholders to put more of their resources to their SACCO for growth purposes.

Maseko (2015) in his study on Participation of shareholders in corporate governance in Switzerland posits that participation of shareholders in governance of the firm is key in corporate governance decision-making processes that include right to nominate, appoint and remove managers or directors of the firm, remove external auditors and approving of major corporate decisions; and other rights of participation also include to obtain relevant and important financial information of their company from managers and right to participate and vote in the annual general meetings of the firm and this enhances the ownership of the firm or SACCO for its growth purposes.

Esser & Havenga (2008) did a study on participation of shareholders in corporate governance in South Africa, they argue that shareholders participation is considered to be a good principle of good corporate governance and it is usually entrenched in self-regulatory codes, it is widely recognized that shareholders can, and should, play an important role in ensuring that their SACCO adhere to sound and effective corporate governance set rules by shareholders participating in decision making processes during the annual general meeting. And, this induces the shareholders to put in their resources for the growth of the SACCO Society.

Dilyard (2017) did study on socially inclusive economic growth through innovative corporate governance argues that inclusivity in corporate governance allows broader shareholder participation in social inclusive economic growth of SACCOs and allows reach out to many, and all groups that could be considered stakeholders and shareholders from all households of the economy; and through this, the right engagement develops a sense of ownership and enable control over the decision making-process that strengthens accountability due to wider array of groups of people involved that gives a voice to all.

Norton & Rogerson (2012) in their study on inclusive and sustainable development points out that social enterprises like SACCOs are designed or formed for specific economic social outcomes, and it is intended that these micro-credit are established to promote financial inclusion for their members from both public and private, and these credit institutions need to cover their costs in order to attract investors in order to survive and expand their economic wellbeing in the competitive financial market environment. Norton and Rogerson further argue that inclusive governance calls for many actors such as shareholders, policy makers, government agencies and other related stakeholders who come together to promote inclusive growth in both public and private economic sectors which purpose to reduce poverty, reduce inequality between the rich and the poor in order to make inclusive growth to be more sustainable which in the end result increase the wealth of the shareholders while taking care of the interests of the stakeholders.

Clsse (2013) did a study on inclusive Businesses for shared prosperity a realization of Africa's wealth argues that the principle of inclusivity in the firm management facilitates knowledge sharing, access to finance and provide the best practices of information dissemination for important information is power to any business or firm for growth of shareholders' wealth; and further points out that inclusive practices make possible availability of investment opportunities, crucial information to the firm, incentives and implementation support programmes which enhance the growth of the SACCOs.

Wachuku (2017)did a study on inclusive finance programme for Central, East and Southern Africa advocates that access to finance is one of the most challenging issue to East Africa residents; and it is the intention of inclusivity in corporate governance to strengthen access to financial products and services to social credit and savings members from other financial institutions that would uplift their standards in their personal economic development; hence growth of SACCOs could be the end result.

Madan (2013) in his study on transparency and performance of Indian Companies points out that transparency and disclosure of matters relating to accounting and financial operations to shareholders motivate the shareholders to own their firm and keeps the managers alert of their actions relating to the finances of the SACCO; and hence appropriate actions of plans on use of firm resources can foster growth in wealth of the members.

Carothers & Brechenmaster (2014) in their study on transparency and accountability they advocate that transparency is of great importance as to the use of development resources of the firm and affirm that the shareholders are to be allowed to participate in the planning processes of their firm capital resources and transparency here determines whether the managers of the SACCO are going astray or are on track. Razzano (2012) advocates in his article on Transparency in South Africa open government interventions that transparency is key to access to information on financial matters by shareholders and freedom of expression of shareholders and in return this icon of good corporate governance will provide democratic management of the SACCO which would ensure accountability, openness and responsiveness by the managers.

Total membership of SACCO Societies in 2013 was 148,202 and in 2017 was 206,724. Share capital in 2013 was Kshs 4.34 Million and in 2017 stood as Kshs 1.26 billion. Total Assets in 2013 stood as Kshs 6.22 billion and in 2017 as Kshs 9.42 billion. The total number of registered SACCO Societies in 2013 was 94 and in 2017 stands as 189. Dormant SACCO Societies in 2013 was 23 and in 2017 was 90 dormant SACCOs (Kisii County Ministry of corporate annual report, 2017).

Good Governance means competent management of a SACCO's resources and affairs in a manner that is open, transparent, accountable, equitable and responsive to SACCO's stakeholders and inclusivity of all stakeholders in the management of SAACO's resources; corruption which undermines development is generally an outcome and symptom of poor governance. Without efficient governance, there is no impetus for economic growth and sustainable development of a firm or a SACCO (Alam *et al*., 2012). Mwangi et al, (2015) note that goal of corporate governance is to maximize the wealth creation at minimal cost of the SACCO as a whole and this would include also the achievement of the SACCO's objectives. To achieve this in the modern SACCO it would mean taking care of a large set of interested groups; including minimum shareholders, lenders, customers, employees, suppliers and management which are often referred to as the primary stakeholders, who are vital to the survival and success of SACCOs. Employees would like to get assurance that they are working in a SACCO that sustained itself thus securing their employment, supplier's payment after delivery of goods and service (Kafela & Agumba, 2008).

Wachuku (2017) observed high inclusive finance programme in Central, East and Southern Africa which advocated that access to finance is one of the most challenging issue to East Africa residents; and it is the intention of inclusivity in corporate governance in SACCOs is to strengthen access to financial products and services to social credit and savings members from other financial institutions that would uplift their standards in their personal economic development; hence growth of SACCOs could be the end result.

Transparency and performance of Indian Companies points out that disclosing matters relating to accounting and financial operations to shareholders motivate the shareholders to own their firm and keeps alerting their actions relating to the growth of the SACCO. Hence appropriate actions of plans on use of firm resources can foster growth in wealth of the members (Madan, 2013).

*a) Statement of the Problem*

Accountability, participation, inclusivity and transparency are the most important principles of corporate governance of SACCOs in Kenya. These principles when they are practiced by SACCOs, the SACCOs can enjoy overall increase in growth and benefit their members in terms of higher dividends, and increase of members' wealth.

According to the Annual report (2017) from the Ministry of Co-operative Department, Kisii County registered in 2013 dormant SACCOs as 23 in number, and in 2017 as a total of 90 dormant SACCOs. The increase of dormant Saccos is worrying and reflects the decline in growth which is attributed to poor corporate governance principles practiced by SACCOs operating within Kisii County.

Otieno (2013) carried out the study on the relationship between corporate governance practices and the growth of SACCOs in Nairobi County. The study failed to include participation as a crucial principle of good corporate governance. Makai & Olweny (2016) examined corporate governance and financial growth of savings and credit co-operative societies a case of SACCOs in Kirinyaga County, Kenya. The study focused on board leadership, financial performance disclosure, corporate social responsibility, and compliance with legislation as the objectives. The study targeted 327 members of SACCO's staff and a sample of 104 respondents was taken. But this study failed to include inclusivity of members in governance as a principle of good corporate governance. Thus, this study sought to address how the considered principles of corporate governance affect the growth of SACCOs in Kisii County to fill the gaps that are identified above and on the summary of research gaps.

*b) Objectives of the study*

The study was based on the following research objectives

i. To find out how accountability influence the growth of SACCOS in Kisii County.
ii. To establish how participation influence the growth of SACCOs in Kisii County.
iii. To determine how inclusivity influence the growth of SACCOs in Kisii County.
iv. To examine how transparency influence growth of SACCOS in Kisii County.

## II. Literature Review

Agency theory was initially developed by Berle and Means in 1932 in their publication "The Modern Corporate and Private Property", who argued that there was a continuous separation of the firm's management from the shareholders of the firm which needed to be resolved and this was in relation to corporate governance of the firm, hence there was no monitoring of autonomy on the firm managers who are made responsible by shareholders to take care of their firm; and the theory was further advanced by Jensen & Meckling in 1976 to be called agency theory; and they also brought in managerial behavior, agency costs and ownership structure components to enhance the theory (MacColgan, 2001). Samson (2014) advocates on how best agency theory explains the best way to organize a relationship where one party determines the work, and where the other party carries out the work; which means the principal (shareholders) hires the agent (managers) to do the work. Agency theory assumptions are outlined by wright *et al.* (2001) that the agents (managers) act in the best interest of the principals (shareholders).

Though agency theory is useful in its application in corporate governance it has some limitations as pointed out by Arthurs & Busenitz (2003) that when the goals of the principals (shareholders) and agents (managers) are aligned there is no agency problem and that where actual goals and perceived goals are different agency theory fails. Panda & Leepsa (2017) in their article Agency theory: Review of theory and evidence on problems and perspectives agree that agency theory is the most debated financial theory since 1930s till to date in regards to theoretical and empirical literature by researchers for it is attached to corporate governance of the firm; every firm is subject to corporate governance except self-owned firms and this is due to separation of owners from the control of the firm which is given by shareholders to the corporate managers to manage the activities of the firm in their behalf.

Agency theory has been criticized strongly by (Ghoshal, 2005) in his article "seminal Bad management theories are destroying good management practices" where he argues that implementation of agency theory has allowed principals and agents to become self-fulfilling and forgetting other stakeholders like creditors, debtors and the government agencies; hence the managers can pursue activities for the interest of their principals and for their own interest at the expense of other stakeholders. However the researcher found the agency theory relevant to the study for it relates to corporate governance of the firms or SACCOs, it establishes the relationship between the shareholders and the Managers whom the shareholders have assigned the responsibility of running day to day activities of the SACCO in their behalf.

*a) Accountability and growth*

Lindberg (2009) in his study on accountability and its core concepts claims that the central thought of accountability is when the authority is transferred from the principals (shareholders) to the agents (managers), and having mechanism in place to hold the agents accountable for their decisions and actions to the shareholders of the firm, and it necessitates imposing sanctions or removing the agents from authority who contravenes the authority of the principals or when the agents do not perform. Lendberg, further advocates that accountability necessitates the shareholders to sanction the agents for failure to provide information in regard to financial and non-financial issues and also failure to justify their decisions and action to the shareholders hence holding the firm's executives responsible improves the quality of service delivery and the end result enhances the growth of the firms or SACCOs.

Dunop *et al*. (2012) in their study on accountability and transparency points out that accountability and transparency are key ingredients for preserving business value in a competitive economy and these two principles of corporate governance are pillars for business success for they foster sustainable social growth, economic growth and job creation in the society and this increases the wealth of the SACCOs members and extent prosperity to the community.

Zainabu *et al.* (2018) researched on accountability, internal audit function and corporate governance in statutory corporations. The purpose of the study was to establish the contributions of accountability, internal audit function, and corporate governance on the management of state owned corporations in Uganda. The researcher employed cross section research design. The objectives examined were: corporate governance and accountability and internal audit function and accountability. 92 state owned enterprises were taken as sample. Correlation and regression statistics were used to analyse data. The study concluded that internal audit function and corporate governance have a positive and significant association with accountability in Uganda. Due to limitations in this study, the researcher recommends further research to test various corporate governance attributes affect accountability that were not considered in this study such as; board size, board independence, and board composition to accountability to both public sector and private sector entities in different settings in future. The study failed to employ participation which would improve accountable governance aspect of SACCOs.

Odhiambo (2013) in his study on accountability for donor funding by non-governmental organization in Kisumu County claims that accountability as a principle of good corporate governance is an important aspect for any organization today; any organization needs to deal with utmost importance of accountability of finances for the success of the firm be it in public or private sector and he emphasizes that the executives of the firm must be held accountable by the shareholders for the goals and performance and growth of the SACCOs.

Chemakai *et al* (2018) on their article study on accountability on the performance of SACCOs in Kakamega County Kenya they assert that lack of accountability and transparency retard the growth of SACCOs, and this comes as a result of poor principles of corporate governance; and with experiencing of poor corporate governance a host of problems arise that affects the development of SACCOs such as; low financial innovations, poor financial reporting, lack of access to financial resources from other financial institutions and this would make the shareholders have miss trust in the board of management and staff of the SACCOs, which becomes hindrance to the growth of SACCOs.

*b) Participation and growth*

Huang & Xie (2016) conducted a research on the impact of shareholders participation on corporate governance in China. Evidence from companies listed on the Shenzhen stock exchange "A" shares. The study was to investigate an impact of shareholders participation in corporate governance in China; for the separation of ownership and management of companies often to some extent causes agency problems between shareholders and managers. The objectives of the study were: shareholders participation in corporate governance, and effect of participation of shareholders in corporate governance. A sample of 468 listed companies was examined to determine the effect of participation of shareholders in corporate governance of the Chinese listed companies. Descriptive and regression statistics were used to analyse data. It was concluded that shareholders participation in corporate governance improved performance of the listed companies in China. Therefore shareholders, board of directors and regulators should pay more attention to the status of shareholders participation in business

Global Journal of Management and Business Research ( C ) Volume XIX Issue VII Version I Year 2019

decision making. The recommendation from the study was that the Chinese government should continue promoting development of institutional investors in its economy, emphasis on relevant laws and regulations should be established and improved especially about corporate governance. The study failed to include, inclusive principle of corporate governance which would cater for other stakeholders of the rest companies.

Waheduzzaman (2010) researched on shareholder's participation for good corporate governance: A case of rural development programmes in Bangladesh. The study was designed to investigate the specific circumstances at the local level and the barriers to the process of people's participation in government bodies and private sector; and the researcher also seeks to find possible ways to increase people's precipitation in development programmes which can contribute to good corporate governance over the firms' resources. The objectives of the study were: understanding of people's participation in development programmes, practice of engaging people in development programmes, and identification of the gap between the values of people's participation in corporate governance. Qualitative approach was used to analyze data. The study concluded that there are manifold problems contributing to the ineffectiveness of people's participation due to lack of knowledge of the elected representative for people's participation, lack of direct participation, and that no legal system that ensures people's participation in government bodies, hence administrative decentralization is incomplete, which has empowered government officials over elected peoples' representatives in relation to financial matters. The study recommends a new model to overcome the uncovered barriers to effective people's participation known as people's school, which ensures that people's participation is included in all local government projects and also non-government organization to be an overseer. The study failed to include transparency principle of corporate governance which would spell that people's participation was valuable or was worthwhile for the growth of the firm.

MacGaughey (2014) did a research on participation in corporate governance he claims that participation in corporate governance principle is one of the principle that guarantees participate rights in investment which makes corporate governance an agent of economic growth and sustainable environment shareholders; and he further argues that participation principle brings agency problem in a broader view in the modern investment where it accounts more on ultimate equity contributors( shareholders) who determine the operations of their enterprise.

Mutekede & Sigauke (2015) did a study on participation in governance, policy options and local development in Africa they hold that participatory principle in corporate governance triggers the sharing of power that leads to access to equity and use of resources of the firm. Where women and men in the Sacco society membership must participate as equals in all decision-making processes, priority setting and resource allocation process; inclusive of everyone be it poor, young, older persons, religious or ethnic, for this become key for the growth of SACCOs.

Wanja (2007) did a research project on participation of women in corporate governance in Kenya she argues that women as their counterpart also have abilities that are particularly effective in today's organization management. This is to enhance the gender debate in higher ranks of the firms in Kenya, she points out that the shared responsibility in this manner enhances women participation in corporate governance as good principle of governance which results in high morale for increased productivity and new innovations that provide growth of the shareholders' wealth.

c) *Inclusive governance and growth*

Brown (2018) conducted a research on inclusive governance practices for non-profit organizations and in this study he points out that inclusive principle of governance is an aspect that foster diversity in service delivery to SACCO members and to the credit society as a whole, and that inclusivity brings about skills for better running of the firm and access to finances to enable credit societies accomplish their objectives, and this spur members to contribute more and more of their resources to enhance the growth of their wealth.

d) *Transparency and growth*

Lumentut *et al.*(2017) on their study on the transparency principle of good corporate governance puts it that transparency increases the confidence of the shareholders, support and participation of all stakeholders of the firm, and that all functions and operations of the firm need to be done in a transparent manner in order to promote good corporate governance of an enterprise and this encourages economic development and foster the welfare and reduce poverty of members of the society; and also creates job opportunities in the community; and he further argues that openness of all matters relating to operations of the firm encourage investors (shareholders) to put in more of their resources for the purpose of expansion and growth of their SACCO.

Bushman & Smith (2003) in their study on "transparency, Financial accounting information practices of corporate governance of firms in India" argue that transparency is the availability of reliable financial records and performance for specific periods and take ups or investment opportunities that are at the disposal of managers, and this can enable shareholders to discipline the firm managers to direct resources towards identified projects or operations that will result in growth of wealth that will benefit the shareholders of the SACCO.

## III. Research Methodology

The study adopted the cross sectional research design which Oso and Onen (2009) say involves looking at people who differ on one key characteristic at one specific point in time. The data is collected at the same time from people who are similar in other characteristics but different in a key factor of interest such as age, income levels, or geographic location. Cross sectional design takes place at a single point in time, it does not involve manipulating variables, allows researchers to look at numerous characteristics at once (age, income, gender, education, etc.), often used to look at the prevailing characteristics in a given population and it provides information about what is happening in a current population. Creswell (2014) equates a cross-sectional study with a snapshot of a particular group of people at a given point in time. The target population of the study was 172 SACCO management officials from 8 registered DTS-SACCOs in Kisii County. Census method was used where the entire target population of 108 SACCO officials was taken as a sample size of the 8 registered DTS-SACCOS in Kisii County. In this study the researcher used questionnaires to collect required data. Questionnaires were used to collect data from the SACCO management officials.

## IV. Findings

### a) *Accountability*

The study sought to establish the influence of accountability as a corporate governance principle on the growth of SACCOS in Kisii County. This was done by exploring the views of the Sacco management officials on their level of accountability in governance. Their responses were summarized in percentage frequencies and means, as shown in Table 1.

*Table 1:* Level of Accountability

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| The management in our Sacco usually justifies all their activities to shareholders during AGM. | 141 | 1 | 5 | 3.13 | .958 |
| All actions are justified at every stage of making decisions process. | 141 | 1 | 5 | 3.38 | .990 |
| The Sacco management takes full responsibility for any outcome of their actions whether good or bad. | 141 | 1 | 5 | 2.95 | 1.065 |
| Taking full responsibility by management in our Sacco is one of the important attribute in corporate governance. | 141 | 1 | 5 | 3.48 | .789 |
| Taking full responsibility by our Sacco management is key to corporate governance of our Sacco. | 141 | 1 | 5 | 3.26 | .659 |

The findings established that although managers of SACCOs are obligated to fully accountable for their activities, accept responsibility and to disclose all the results in a transparent manner to their members, the results of the study indicate that this was not always the case among the Sacco's in Kisii County. For instance, only small proportion of the sampled officials accepted that their managers generally justify their actions, as interpreted with a (mean 3.13; SD 0.958). Likewise, the sampled officials agreed that all actions in their Sacco are justified at every stage of making decisions process by the management as indicated by a (mean 3.38; SD 0.990). In addition, the surveyed Sacco officials observed that their Sacco management never take full responsibility for any outcome of their actions whether good or bad as indicated by a (mean 2.95; SD 1.065).

However, it emerged that majority of the respondents accepted that taking full responsibility by management in a Sacco is key in corporate governance, as implied by a mean of( 3.48;SD 0.789). Likewise, in contrast the fairly low average accountability (mean of 3.26; SD 0.659).Many of officials who took part in the survey indicated that taking full responsibility by Sacco management is key to corporate governance of their Sacco.

*b) Participation*

The study sought to establish the influence of participatory governance on the growth of SACCOs in Kisii County. The objective was explored by exploring the views of the Sacco management officials on the level of participatory governance in their Sacco and its influence on growth of Sacco. The level of participatory in governance was measured by five itemed Likert scale questionnaire, with the responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The responses were summarized in percentage frequencies and means, as shown below in Table 2.

*Table 2:* Participatory Governance

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Members in our Sacco usually participate in major decision making process. | 141 | 1 | 5 | 3.39 | 1.034 |
| Members are given opportunity to express their ideas in decision making processes. | 141 | 1 | 5 | 3.21 | 1.011 |
| All members have equal opportunity to express their ideas concerning the management of the Sacco | 141 | 1 | 5 | 3.30 | 1.061 |
| The meetings of our Sacco follow democratic process in decision making. | 141 | 1 | 5 | 3.38 | .799 |
| Democratic processes are key to corporate governance of our Sacco. | 141 | 1 | 5 | 3.22 | .972 |

This was revealed by the overall mean average participatory governance of 3.30. This implies that, on average, the SACCO management officials were fairly committed in involving members and other stakeholders in decision making, but only to some extent. Management officials who took part in the survey said that the members in their Sacco usually participate in major decision making process as indicated by the (mean; 3.39; SD, 1.034).

Equally, the findings of the study established that although many of the officials alluded that members in their Sacco are given opportunity to express their ideas in decision making processes as given by a (mean; 3.21; SD, 1.011).

On expression of ideas concerning SACCO management, the results of study indicate that only a few of the Sacco management in Kisii County accommodated ideas from the members, as was reflected by a (mean,3.30; SD1.061). Equally, on whether the Sacco meetings follow democratic process, majority of the respondents alluded that the meetings of their Sacco usually observe democratic process in decision making, which translates to a (mean 3.38; SD, 0.799).

*c) Inclusivity Governance*

The third independent variable of the study sought to investigate how inclusivity principle of corporate governance influence growth of SACCOs within Kisii County. The investigation was done by use of five point Likert scaled questionnaire on indicators of inclusive governance among the SACCOs. The management official respondents rated the inclusivity in governance indicators ranging from strongly disagree (1) to strongly agree (5), with high rating meaning high inclusivity in governance and vice versa. The responses were summarized in means and standard deviation as shown in Table 3 below.

*Table 3:* Descriptive on the Level of Inclusive Governance

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| All members are given equal opportunity to share resources and services that are provided by the Sacco. | 141 | 1 | 5 | 3.16 | .976 |
| The management of our Sacco shares matters regarding the management of the Sacco with the Sacco members. | 141 | 1 | 5 | 3.28 | .854 |
| Our Sacco provides access to finance from other financial institutions to Sacco members. | 141 | 1 | 5 | 2.72 | 1.111 |
| Our Sacco accepts membership from all disciplinary groups for example: Teachers, accountants, businessmen etc. | 141 | 1 | 5 | 3.13 | .970 |
| Our Sacco accepts membership from poor and rich individuals from the community. | 141 | 1 | 5 | 2.95 | .839 |

Findings of the study reveal that there is generally moderate amount of inclusivity in corporate governance among the SACCOs in Kisii County. This was interpreted from a mean rating of 3.05 on Likert scale of 1 to 5 points, with rating of indicators of the questionnaire ranging from 2.72 to a high of 3.28. However, it emerged that SACCOs in Kisii County slightly differed on how they control their activities so as to achieve their objectives with regard to inclusivity. For example, on membership of the SACCOs, the results of the survey reveal that the SACCOs accept membership from everybody who wishes to join them; some of them are restrictive on their membership. This was confirmed by the officials who took part in the survey who confirmed that their Sacco do not accept membership from all disciplinary groups, translating to inclusivity in governance among the SACCO management at a level of (mean, 3.13; SD, 0.970).

In regard to whether SACCOs in Kisii county welcome members or not with varied economic status, the findings of the study established that there was no unison in agreement of the respondents on this matter, as interpreted by a (mean 2.95;SD,0.839).

Equally, the surveyed management officials alluded that all their SACCO members are given equal opportunity to share resources and services that are provided by the Sacco as indicated by (mean,3.16;SD,0.976).

On the flip flop, it was established that most respondents agreed that their managers always share matters regarding the management of the Sacco with the Sacco members translating to a (mean, 3.28; SD, 0.854). Equally, the results of the survey revealed that not all of the Sacco's provide access to finance from other financial institutions to Sacco members as revealed by (mean, 2.72; SD, 1.111).

*d) Transparency*

The study sought to examine the influence of transparency as a corporate governance principle in SACCOs' governance on growth of SACCOS within Kisii County. The variable was addressed by, first, exploring the views of SACCO management officials on the level of transparency in governance and, second, by using inferential statistics to investigate whether there exist relationship between transparency governance and growth of SACCOs. The level of level of transparency in governance was sought by use of five itemed Likert scale of five point's questionnaire with responses that ranged from Strongly Disagree (1) to Strongly Agree (5). The responses were summarized in means and standard deviation, as in Table 4 below.

*Table 4:* Ratings on the Level of Transparency in Governance

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Members of our SACCO have access to all financial records at any point in time | 141 | 1 | 5 | 3.08 | .784 |
| Shareholders have access to all minutes and actions taken by SACCO management at any time | 141 | 1 | 5 | 2.97 | 1.000 |
| Reporting to shareholders on matters relating to finance and non-finance is key to corporate | 141 | 1 | 5 | 2.82 | 1.064 |
| It is the practice of the management to share with members on issues of operation of our Sacco during AGM and any other matter that may arise | 141 | 1 | 5 | 3.08 | .934 |
| Accurate and comprehensive disclosure of financial records to members is key to our corporate governance | 141 | 1 | 5 | 2.79 | 1.074 |

The finding indicated that the management of most of these SACCOs does not adequately produce the required financial records and statements for the purpose of assessment by the members to enable them make appropriate decisions that affect the operations of the SACCOs. For example, specifically on the financial records, the results of the survey depict that there is only partial access to financial records and documents, as indicated by(mean, 3.08; SD, 0.784).

In regards to minutes of SACCO meetings, the study findings reveal that only a few SACCOs openly avail this to the members. This was interpreted by (mean, 2.97; SD, 1.000). Likewise, reporting to shareholders on matters relating to finance and non-finance which is key to corporate governance of Sacco's was established to be fairly low (mean=2.82; SD, 1.064), Similarly, disclosure on accurate and comprehensive financial records to members which is an important aspect of transparency in corporate governance was found to be low (mean=2.79; SD, 1.074).

On the same note, it emerged that even during annual general meetings key matters on operations of the SACCOs are not always given to the members, as mirrored by (mean 3.08; SD, 0.934) in the scale of 1 to 5.

## V. Conclusion and Recommendations

It was concluded that the level of accountability in governance among the SACCOs in Kisii County is moderate. This was informed by the finding that just a few respondents agreed that their management officials fully account for their activities, accept responsibility and to disclose the results in a transparent manner to their members. However, it was concluded that accountability in governance is of critical importance for the growth of SACCOs.

Equally, from the findings of the study it was concluded that participation of members and other stakeholders in the matters of SACCOs in Kisii County was moderate. The SACCO management officials are not fully committed in involving members and other stakeholders in decision making, members are not given opportunity to fully express their ideas and management officials hardly accommodate ideas from the members. However, it was concluded that practicing participatory governance is key to the growth of SACCOs.

Based on accountability principle of governance which showed a positive growth of SACCOs and it was recommended for official management of SACCOs to embrace this corporate governance principle of being accountable for their operations. It is also recommended that SACCOS should be ready to account for their activities, accept responsibility and to disclose the results in a transparent manner to the members.

Further, the study recommended that participation of SACCO members and other stakeholders should be promoted by the government through the Ministry of Industrialization and Enterprise Development to train management of SACCOs on sound corporate governance principles which promotes participation in governance. The trainings should be based on framework of rules and practices by which management staff ensures participation is in place for the running of SACCOs.

Thus, the generalization of these results especially in other areas may be restrictive, hence replication of this research using data from other counties in Kenya may provide valuable insight to corporate governance and its influence on growth of SACCO.

## References Références Referencias


1. Alam M. Mahmudul, Siwar Chamhuri, Talib Basir, Mokhtar Mazlin, Toriman M. Ekhwan (2012). *Climate change adaption policy in Malaysia- Issues for Agricultural sector*. African Journal of Agricultural research, 7(9).
2. Amin M.E. (2005*). Social Science Research: Conception, Methodology and Analysis.* Kampala, Makerere University printer.
3. Arthurs D. Jonathan, Busenitz (2003). *The boundaries and limitations of agency theory and steward theory in the venture capitalist/entrepreneur*. University of Oklahoma.
4. Carothers Thomas, Brenchenmacher Saskia (2014).*Accountability, Transparency, Participation and Inclusion* a *New development consensus*. Carnegie Endowment for International peace UK. Department for International Development UK.
5. Chansa Karen, Chabala (2006). *Project Paper "Accountability: A Case Study of Zambia State Insurance Corporation*." Zambia
6. Chemakai, D., Alala, B. Ondiek., Charles, Tibbs (2018). *The contribution of board accountability on the performance of SACCO's in Kakamega County*, Kenya. International journal of economics, commerce and management united Kingdom; 4(5).
7. Dunop Melda, Nadne Khayat, Bahman Sara (2012). *Accountability and Transparency*. Pearl initiatives series on corporate good practices. University if Cambridge, UK.
8. Co-operative UK (2013).*Corporate governance code for consumer co-operative societies*. A report on the international co-operatives Alliance statement of co-operative identity.
9. Creswell, John W. (2014) *Research Design Qualitative, Quantitative and Mixed Methods Approaches,* 4th edition, Sage Publications Inc. 2455 Teller Road Thousand Oaks, California 91320.
10. Dilyard, R. John (2017). *Socially Inclusive Economic Growth through Innovative Governance*. 21st Street, 4 A Brooklyn, New York.
11. Esser, M. Irene & Havenga Michele (2008). *Shareholder participating in corporate governance*. Paper delivered at the corporate Law teachers' association conference held in Sidney, Australia.
12. Ghoshal, Sumantra (2005). *Bad Management theories are destroying good management practices*. Advanced Institute of Management Research (AIM), UK and London Business School.
13. Gurria, Angel (2015).*G20/OECD Principles of corporate governance*: The work published under the responsibility of the general secretary of organization of economic cooperation and development (OECD).
14. Huang, H., Xie, and R., (2016). *Impact of shareholders activism on corporate governance in China: Evidence from companies listed on the Shenzhen exchange "A" shares*-Journal 2 (114).
15. Hussain, F. & Mishra, S. (2014).*Shift Shaping Inclusive Finance transformation*: Association of Southeast Asian Nations.
16. Johnstone Elizabeth (2019). *Corporate governance principles and recommendations 4th edition*. ASX corporate governance council, Australia.
17. Keay Andrew, Loughrey John (2015). *The framework for board accountability in corporate governance*. Universities of Leeds, Sheffield & York. Kenya SACCO Report (2010).
18. Lendberg I. Staffan (2009). *Accountability: the concepts and its subtypes*. International development, UK.
19. MacGaughey, Ewan (2014). *Participation in corporate governance*. Department of Law of the London school of economics.
20. Madan Pankaj (2013). *Corporate governance practices, Transparency and performance of Indian Companies*, Indian.
21. Makai, M.J & Olweny Tobias (2016). *Corporate governance and financial growth of savings and credit co-operative societies. A case of Kirinyaga County*, Kenya. International journal of economics, commerce and management Vol. 4 (8).
22. Makabwa (2016). *Corporate governance and its principles*. Kenyan context. CPS a corporate governance Specialist
23. Mutekede, L & Sigauke, N (2015). *Policy options for participatory governance and local economic development in Africa*. African Local governance Action forum phase IV.
24. Mutuku, D. Maundu (2016). *Effects of corporate governance on financial performance of savingsand credit cooperative societies in Machokos and Athi-river sub-county*, Kenya. A project submitted to South Eastern Kenya University for Master of business Administration.
25. Mwangi K.Joseph., Nyachwaya O. Ziporah., Cheruiyot K.Robert (2015). Journal of Economics and Finance (IOSR-JEF): *Effect of Corporate Governance Practices on Financial Performance of Saccosin Kericho*. Maseno, and Jomo Kenyatta Universities, Kenya.

26. Nagy, Szilvia (2015). *Integration through culture? Participatory governance in the European capitals of culture programme*. Master of Arts in political science, a thesis submitted to Central European University. National Association of Corporate Directors, 2006
27. Norton Andrew, Rogerson Andrew (0122). *Inclusive sustainable development: challenges, opportunities and partnership*. Danida's 50th Anniversary conference. Danida International cooperation, Denmark.
28. Odhiambo W. Okinda (2013). *Accountability of donor funding by non-governmental organizationin Kisumu County*. MBA project submitted at University of Nairobi, Kenya.
29. O'Reilly Emily (2009). *Guide to principles of good governance*. British and Irish Ombudman Association, Ireland.
30. Oso, W.Y& Onen, D. (2009). *A general Guide to Writing Research proposal and Report: A Handbook for Beginning Researchers*. Nairobi; Jomo Kenyatta Foundation.
31. Otieno, W (2013). *The relationship between corporative governance practices and the growth of SACCOs in Nairobi County*. A research project for Master of business administration submitted to University of Nairobi, Kenya.
32. Panda. B, Leepsa M.N (2017). *Agency theory*: Review of theory and evidence on problem s and perspectives. Indian Journal of corporate governance Institute of public enterprise. SAGE publicans.
33. Razzano Gabriella (2012).*Transparency in South Africa: A civil society review to facilitate South Africa's open government partnership interventions*. Open Democracy advice Centre, South Africa.
34. Samson, K. Micheni (2014). *Influence of corporate governance on financial performance ofcooperative societies: A case of savings and credit cooperative organizations in Meru County*, Kenya. A research project submitted for Master of Arts in project planning and management at the University of Nairobi.
35. SASRA *Saccos supervision annual report*(2013). Deposit taking Saccos.
36. SASRA *Saccos supervision annual report* (2016). Deposit taking Saccos.
37. Schreiber Deanna, Bader Kalren, Henry. M (2018). *Logistic and linear regression assumptions: Violation. Recognition and Control*. Jackson Foundation.
38. Smith R. Thomas (2011). *Agency theory and its consequences*. Master thesis at Copenhagen University school of Business.
39. Srivastava P., Shenoy R & Sharma K. (2008). *Quantitative Techniques for Managerial Decisions*. New Age International (P) Ltd, Publishers New Delhi, India.
40. Tache M., Getachew (2006): *Sustainable SACCO Development Training material-USAID/*. Chemonics. International Inc.
41. Tapiwa, Michael (2015). *The core principles of corporate governance*. Canadian Limited Partnership whitepaper.
42. Thomsen, Steen (2008). *An Introduction to corporate governance*; Danish National
43. Transparency International (2009).*Global Corruption Report 2009: Corruption and the private sector.* Transparency International, Kenya.
44. Tetlock, P. E. (1999). "*Accountability Theory: Mixing Properties of Human Agents with Properties of Social Systems," in Shared Cognition in Organizations*: The Management of Knowledge.
45. Vance, A., Obsorn, Lowry, P., Benjamin, Eggett Dennis (2015). *Increasing accountability through user interface design artifacts: A new approach to addressing the problem of access-policy violations*-journal 39 (2).
46. Waheduzzaman (2010). *People's participation for good governance: A study of rural development in Bangladesh.* PhD thesis submitted to Victoria University School of management and information systems.
47. Wampler, Brian (2012). *Participatory budgeting: Core principles and key impacts*. Journal of publication deliberation, 8 (2).
48. Samson, K. Micheni (2014). *Influence of corporate governance on financial performance of cooperative societies: A case of savings and credit cooperative organizations in Meru County*, Kenya. A research project submitted for Master of Arts in project planning and management at the University of Nairobi.
49. Wanja A. Kimani (2007). *Determinants of Women participation in corporate governance*. A research project submitted for MBA Department of Accounting & Finance Kenyatta University, Kenya.
50. Wannergren S. Tove (2014). *Access and Accountability- A study of open Data in Kenya*. Communication for Development Sythesis Paper.
51. Wright peter, Mukherji Ananda, Kroll J. Mark (2001). *A reexamination of agency theory assumptions*. University of Buston LA 71272. USA
52. Zainabu, T., Mukyala, V., Ssekiziyivu, B., Tirisa, C.B., Tumwebonire, A. (2018). *Corporate governance, internal audit function and accountability in statutory corporations. Cogent Business & Management*. (5): 1527054. Uganda.

Global Journal of Management and Business Research: C Finance
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# The Effect of Capital Adequacy on Return on Investment: A Study based on Commercial Banks in Bangladesh

By Md. Mehedi Hasan, Md. Shohel Rana & Shafiqul Islam
*Begum Rokeya University*

*Abstract-* The main purpose of study was to establish the effect that capital adequacy have on the investments. It also found at how this capital adequacy was involved in other variables such as liquidity, management efficiency, asset quality and operating efficiency. Side by side, it found at whether other variables had a role to play in the investments. In this study, the collected data were applied in empirical analysis with regression analysis to analysis. A random sample from the population of total commercial bank in Bangladesh was taken as secondary sources of data from financial statement. A linear regression model of the returns on investments versus capital adequacy, liquidity, management efficiency, asset quality, operating efficiency was to test relationship among the variables. The results established that the relationship between capital adequacy of commercial banks and return on investment is negative and significant. The study found that capital adequacy had a negative effect on return on investments while liquidity had a positive impact on the returns. For this negative effect of capital adequacy on the returns in investment, the study recommends that a central depository fund for commercial Banks be set up to assist Banks have cheaper way for short term borrowing to useful to temporary liquidity crisis.

*Keywords: ROI, CAR, NPL, core capital, deposits, central deposits.*

*GJMBR-C Classification: JEL Code: F65*

THEEFFECTOFCAPITALADEQUACYONRETURNONINVESTMENTASTUDYBASEDONCOMMERCIALBANKSINBANGLADESH

# The Effect of Capital Adequacy on Return on Investment: A Study based on Commercial Banks in Bangladesh

Md. Mehedi Hasan [α], Md. Shohel Rana [σ] & Shafiqul Islam [ρ]

*Abstract-* The main purpose of study was to establish the effect that capital adequacy have on the investments. It also found at how this capital adequacy was involved in other variables such as liquidity, management efficiency, asset quality and operating efficiency. Side by side, it found at whether other variables had a role to play in the investments. In this study, the collected data were applied in empirical analysis with regression analysis to analysis. A random sample from the population of total commercial bank in Bangladesh was taken as secondary sources of data from financial statement. A linear regression model of the returns on investments versus capital adequacy, liquidity, management efficiency, asset quality, operating efficiency was to test relationship among the variables. The results established that the relationship between capital adequacy of commercial banks and return on investment is negative and significant. The study found that capital adequacy had a negative effect on return on investments while liquidity had a positive impact on the returns. For this negative effect of capital adequacy on the returns in investment, the study recommends that a central depository fund for commercial Banks be set up to assist Banks have cheaper way for short term borrowing to useful to temporary liquidity crisis. The study also suggests that the taxation laws regarding withholding tax in financial institutions be clearly expounded to protect the bank from double taxation when they keep their funds in term requirement of central bank.

*Keywords: ROI, CAR, NPL, core capital, deposits, central deposits.*

## I. Introduction

### *a) Back ground of the study*

The various financial intermediaries comprising of Banks and Non-Bank institutions build up Bangladesh economy through pooling resources from various savers or investors in order to lend of such funds during the credit creation system. The deposit financial institutions such as commercial banks, savings banks and credit unions among others that provide loans directly to borrowers. It is evident that they play important role in better the performance of an economy and also their useful elements of the financial system. Financial markets and institutions represent a blend of definite elements that are brought jointly with the sole principle of controlling and coping with the massive amount of assets on hand and the income generated by them. However, (Merton, 1990) said that it is important to note that the up-and-coming trends are severing their position and which can guide to instability of the financial method. Financial market consist of some financial institution. Commercial banks act as financial institution which helps monetary transaction of economy of Bangladesh such as mortgage lending, accepting deposits, savings accounts, certificate of deposit. On the other hand, investments banking functions are different from commercial banks. Investments bank acts as underwriter, intermediary between an issuer and the investing public, providing merger facilities and also acting as a broker for its clients. (Investopedia, 2012).

The main function of commercial banks is the creation of credit. Banks are the one of the financial institutions that can make credit through extension of demand deposits as a numerous of their cash reserves, a process called ‘‘Credit creation”. Vaish (1997) calls it a process under which commercial banks advance loans various times greater at the same time as compared to the legal money at the discarding of these banks. A bank credit is prepared up of loans and advances made out of surplus reserves after the bank has content the demand of its depositors by means of generating more income for the institution. Thus, Bank loan creates the same deposit in the bank which leads to the multiple extensions of bank deposits. We see Banks as manufacturers of credit for credit creation. Banks provide loan a main portion of their deposits to the borrowers and keep minor parts of deposits to the customers on demand. Even then the customers of the banks think that the deposits lying in the banks are fairly safe and can be withdrawn on demand. The banks develop this confidence of their clients and enlarge loans by a great deal time than the amount of claim deposits obsessed by them.

A single bank cannot make credit. It is the banking system as a whole which can enlarge loans by many times of its surplus cash reserves. Further, when a loan is advanced to an individual or a business concern, it is not given in cash. A deposit account is disclosed according to borrower’s name and permit him to withdraw from bank when required. Some other banks are gained through the loan advances. Loans thus make deposits and deposits make loans, (Blurt it, 2012) and (Vaish, 1997).Credit creation by banks is the main

*Author α σ ρ: Research Student, Department of Finance and Banking, Begum Rokeya University, Rangpur-5400, Bangladesh.*
*e-mails: ronybrur.2000@gmail.com, shohelranabru@outlook.com*

engine for financial development and comprehensive growth of any economy. Minimum capital requirements form the base of contemporary banking regulation and holding such capital comes with a cost such as trading off financial stability for less liquidity (and efficiency) and inducement of banks to optimize their risk taking. In regard to this, (Blum, 1999) found evidence that a bank may value an additional unit of equity tomorrow more when there are minimum capital requirements than when such requirements are non-existent. Mitchell (1984) argues that capital forms two functions in a bank namely, Financing purchase of assets and protecting creditors. Banks argue that loan loss reserves and should be included in defining bank capital because these accounts perform some of the functions of capital for banks. In a master circular on capital adequacy prudential norms, (Bangladesh Bank, 2011) states that Capital adequacy requirements were defined by Basel 1 as a single number that was the ratio of a bank's capital to its assets. It thus represented the minimum capital balances that each bank is supposed to hold at any given time for the purpose of mitigating risks arising from its operations, credit and the market at large. These requirements were instituted by the Basel Capital accord which is a capital adequacy framework developed by the Basel committee.

The Basel committee banking supervision recommended that banks should provide capital at a particular level to reduce bank failures. This is called capital adequacy requirement and it specifies a minimum capital to assets ratio required to continue operating banks. Requiring more capital would hopefully make the banks safer although at the same time raise the bank's effective cost of capital. The objectives of the requirement can result in either preventing the banks from taking high risk to increase its profits since there is risk sharing between bank's owners and depositors, or to promote financial stability that provides a safeguard against systemic crises, (Gunadi et ah, 2016). The Basel Accord was mainly introduced as a mechanism to control bank risk-taking behavior. The reducing chance of investments through increasing capital adequacy and will be insolvent. The lower the profitability of banks in terms of higher the risk weighted capital adequacy ratios.

Capital is essential and crucial to the continuous stability of a bank as a going concern. Depository institutions must control their capital according to regulation of capital requirement. Capital provides cushion that enables banks to continue to operate even if they suffer temporary losses.

### b) *Statement of the Problem*

In Bangladesh commercial banks, financial intermediation process is characterized the by challenges emanating from high business deal costs arising from rising interest rates, high information asymmetry between banks, investors and borrowers that can give rise to adverse selection and moral hazards, low liquidity owing to little savings as compared to consumption by a mass of households and a problem in delegated monitoring before and after credit competence is advance Saunders and Cornett (2005) stated that banks use about 85% of deposits held to generate credit for their borrowers. Since credit creation is a revenue generating activity for most banks, the process exposes banks to high default risk that can lead to financial distress including bankruptcy. However, this does not stop banks from creating credit in order to make some money, grow and survive stiff competition stemming from the market. The level of capital is crucial the same as riskiness of bank deposits in worried. A bank with inadequate capital is more probable to turn bankrupt in the face of unfavorable growth on the asset side of its balance sheet than a satisfactorily capitalized one.

Capital, being an important managerial conclusion variable has theoretically been seen to influence a bank's capital structure and the loan policy for the function of credit creation and overall wealth maximization. This has implications on the performance of banks as financial intermediaries and hence for the allotment of real resources within the economy.

This research therefore sought to address these gaps and analyze in details the relationship between capital adequacy and return on investments as evident in Bangladesh banks.

### c) *Research Objective*

The main objective of this study was to evaluate the effect of capital adequacy requirements on return on investment in Bangladesh.

*Specific Objectives*

i. To assess the connection between Return on investments and Capital adequacy ratios by commercial banks in Bangladesh.
ii. To assess the relationship between Capital adequacy ratio and credit creation by commercial banks in Bangladesh.

### d) *Importance of the Study*

Credit creation by commercial banks is one of the important and only sources used in generating substantial and sustainable income. The banks serve as an intermediation between the households and the economy sector (finance); therefore the best financial system is that which there is efficient intermediation and credit growth through the credit creation process. The study will have the following importance to various stake holders who include, the banking sector, financial managers, investors, savers, policy makers, government regulators and scholars who may want to further their knowledge.

Global Journal of Management and Business Research ( C ) Volume XIX Issue VII Version I Year 2019
48

*Academicians*

The study will contribute to development of academic literature and theory by providing empirical evidence in this field of study. It will also form a basis for further research on how other regulation indicators such as exchange rates, taxation impacts on the credit creation process by commercial banks. Finally it has been important to the researcher and other Scholars in specifically understanding impact of capital adequacy requirements in the context of commercial banks' credit creation.

## II. Literature Review

*a) Introduction*

This research focused on the impact of capital adequacy on return on investments by commercial banks in Bangladesh. The chapter consists of a review of finance theories related to the study, literature as derived from research work by other researchers, any other relevant literature that may aid in further understanding of this study and a summary of the empirical review.

*b) Theoretical Review*

Theories discussed are in line with Bank management (as agents), Capital structure and Credit theory of money and their relationship with credit creation.

i. *Agency theory*

Agency theory explains that in the modem corporation, in which share ownership is widely held, managerial actions depart from those required to maximize shareholder returns, (Pratt and Zeckhauser 1985).

In agency theory terms, the owners are principals and the managers are agents and there is an agency loss which is the extent to which returns to the residual claimants, the owners, falls below what they would be if the principals, the owners, exercised direct control of the corporation, (Jensen & Meckling, 1976).

Eisenhardt (1989) observes that Agency theory specifies mechanisms which reduce agency loss. These include incentive schemes for managers which reward them financially for maximizing shareholder interests. This projects generally implies plans where executives gained stocks at low price. In those way, the related interest of executives with those stockholders. (Jensen & Meckling, 1976).

Agency theory is applied to Corporate Governance which infers that the company would achieve its concerns with persistence, obligation and accountability owing to maximize shareholder's wealth. This has led to appointment of Board of Directors as agents for the shareholders and also the Audit committees and other managers, all in the name of safeguarding and maximizing the shareholders' wealth. Any gaps in the Corporate Governance structure violate the 'Agency theory' and can lead to heavy losses (Pandey, 2006).

ii. *Capital Structure Theories*

The cost of capital declines and the value of the firm increases when debt level reaches at the optimum point, the cost of capital to increase and the value of the firm to decline (Ezra, 1959).

There has been much discuss on how and why firms decide between the various sources of capital in both developing and developed countries. The basic question asked is whether the debt-equity combine in a firm actually matters. The capital structure discuss is dominated by two theories which are the pecking order theory' and the trade-off theory.

Pecking order theory was first floated by Donaldson in 1961 and the key idea is that mangers raise new finance in a particular sequence, a theory which was later customized by Stewart C. Myers and Nicolas Majluf in 1984. The theory prioritize of least battle, favoring to increase equity as a financing of last resort. Internal funds are used first, and when that is exhausted, debt is issued, and when it is not rational to issue any more debt, equity is issued. Pecking order theory is said to exist due to asymmetric information as managers know more about their company's prospects, risks and value than outsiders or outside investors. Information asymmetry affects the choice between internal and external financing and between the issue of debt or equity. This leads to existence of a pecking order for the financing of new projects and in this case, banks normally go for the cheapest source which is the banks' deposits for the purpose of credit creation.

The trade off theory justifies that firms maximize their value when the additional benefits (marginal benefits) that stem from debt (i.e. interest expense tax deductibility, the disciplinary role of debt, lower informational costs relative to equity) equal the marginal cost of debt (i.e. bankruptcy costs, agency costs between stake holders and bondholders), Myers (1984).

iii. *Capital Adequacy Ratios*

Capital base of financial institutions helps them in the absorption of surprising shocks. It also signals that the institution will continue to respect its obligations.

Bichsel and Blum (2005) found that capital regulations help in reducing negative externalities (e.g. general loss of confidence in the banking system) in addition to boosting the GDP. A minimum quantity of capital is required to make sure safety and reliability of the bank and also construct trust and confidence of the customers.

The overall Capital Adequacy Ratio (CAR) measures the amount of a bank's core capital expressed as a percentage of its weighted credit exposures. Adequate CAR helps banks to absorb unexpected shocks and also indication that the financial institution will carry on honor its obligations. Capital

Global Journal of Management and Business Research ( C ) Volume XIX Issue VII Version I Year 2019

adequacy eventually determines how well financial institutions can handle with shocks to their balance sheets, (Haron, and Azmi, 2004).

Total bank capital comprises total figure of core capital and additional capital. The definition of Core capital can be defined that shareholder's equity in form of issued side by side completely paid up shares of common stocks.(Banking Act Cap 488, 2009).

*c) Empirical Literature Review*

There are numerous literatures that are relevant to the proposed research. There have been surveys and literature on the impact of the effect of capital adequacy on return on investments. On the other hand, past studies have determined most on evaluating the impact of capital adequacy on risk and bank performance. Capital requirements may encourage a credit crunch at certain points of the business series.

Chami and Cosimano, (2001) found there is existence of a "bank capital financial accelerator' that transmits monetary policy to the banking sector's level of credit creation. They pragmatic that, a rigid monetary policy tends to diminish the bank's net interest margin, thereby reducing the value of capital in preserving the bank's contract value. Under such situation the bank would be probable to hold less capital, thereby restricting the supply of loans to the economy as regulator's capital requirements turn into binding therefore hampering credit creation method.

Hall (1993) states that Basel I confident US banks to move away from loans into government securities, thus lessening total loans comprehensive by US commercial banks by $150 billion in the years of Basel I implementation. Though, the question of whether this entire shift was analytic of a Basel-induced credit crunch is mainly an empirical one.

Brinkmann and Horvitz. (1995) examined the availability of loan supply in the wake of the implementation of Basel I without characteristic between required capital and flexible capital that is, where banks may decide to hold a cushion to assemble regulatory capital requirements. They found that banks with larger capital surpluses under Basel I enlarged their lending at twice the rate of banks with lesser surpluses or deficient capital levels signifying that the Basel I capital requirements may have been binding owing to their impact on flexible capital levels.

On the other hand, Peek and Rosengren, (1992) observed that it was loan losses, more willingly than amplified Basel I capital requirements that worn bank capital levels, thereby inducing a credit crisis knowledgeable.

Hahn (2002) studied the effects of Basel 1 on credit growth of 750 universal banks in Austria during the period 1996 to 2000 using a Panel- Econometric approach.

To define the impacts of the opening of Basel 1 from other shocks, he proscribed the impacts caused by loan demand shocks, by counting several variables such as the collective output gap and the collateral value of real estate correspondingly. The findings showed that minimum capital holding had a negative impact on credit creation in that country. The paper also provided proof that amount of obtainable bank capital may work as a binding restraint on liquidity and credit creation. He found his results to be amazing against the background of the continuing repair of the Basel accord.

Diamond and Rajan (2000) also observed that an increase in the capital adequacy requirement can cause a credit crisis for the cash poor and can potentially lessen the debt weight of the cash rich as greater safety has unfavorable distributional penalty.

Even if the optimal bank capital structure is meant to be a shock absorber for the bank against shocks to asset values, they also dispute that it affects liquidity creation, credit creation and capability to influence borrower refund.

Marvin et al. (2012), using Capital adequacy, Management quality, Asset quality, Earnings performance and Liquidity (CAMEL framework), engaged empirical tests to evaluate the possible impact of economic, regulatory, and bank-specific characteristics on bank intermediation and credit creation in the ASEAN+3 region. Data for the period 2006-2010 exposed among other things that bank equity matters in net interest margin but not in the purpose of net loans and regulations do not have uniform effects. More in terms of the effects of regulatory variables, the amplification of reserve requirement reduces the capability of banks to make loans.

On the contrary, Bikker and Hu (2002) found no support for the credit crisis research using an international sample of banks from 26 developed and developing countries. As banks naturally hold capital in surplus of regulatory minimums, they accomplished that capital requirements do not appear to be compulsory constraints on advance supply.

Furfine (2001) incorporated the next four explanations into a hypothetical model that is confronted with real US bank data that replicate bank reactions to changes in capital requirements. He found that collective lending in the US decreased in the early 1990s as a result of: (1) Greater regulatory scrutiny, (2) Lower loan demand due to the economic recession, (3) higher capital requirements mandated by Basel I. He states that "some form of regulatory participation, either raising capital requirements or increasing regulatory monitoring, was a necessary supplier to the credit crisis. That is, the experiential portfolio adjustment undertaken in the early 1990s could not have been merely the result of altering economic circumstances or worldly change" (Furfine, 2001).

Honda (2002) examined Japanese bank credit creation during the period of 1967-1994 and finds that the introduction of Basel I reduced aggregate bank credit significantly.

Using New England data, Peek and Rosengren (1995) found that credit availability is not connected to episodes of disintermediation but rather due to banks facing binding capital constraints an experience they named "capital crunch". They found that it was hard to divide the diminishing in the demand for loans that occurred in a collapse from the diminished supply of loans. To alleviate this they used cross section data on New England banks facing similar local economic downturn and recognized that banking institutions facing capital crisis regularly modified their balance sheets by either issuing new securities (to raise capital) or regularly switching to assets that desirable less equity, from the ones that desirable more, and therefore, reduced loan ease of use to businesses exacerbating the critical situation (Peek & Rosengren, 1995; Brinkmann & Horvitz, 1995).

Mwega (2009), found that capital requirements assist minimize the likelihood that banks will become bankrupt if sudden shocks happen. He distinguished that the higher the risk weighted capita] adequacy ratio, the lower the probability that commercial banks will be bare to the risk of insolvency and therefore a negative connection exists between the risk weighted adequacy ratio and insolvency of commercial banks.

Quite the opposite, opponents such as Sharpe (1995) observed that decreases in lending for the period of capital-constrained downturns in economic action may consequence in abridged loan demand rather than restrictions in credit supply.

*d) Summary*

This chapter tried to wrap a range of theories that are applicable to this study. Try to highlight the Agency theory, two Capital structure theories namely; the Pecking Order and the Trade Off theories respectively.

The second part of this chapter explored general literature on minimum capital requirements and its relationship on bank credit activities. It has completed an attempt to highlight the parameters to be measured in this study being, Capital Adequacy ratios and Bank capital to find out their effects on return on investment in Bangladesh.

The chapter has further covered the empirical literature review. Various scholars have made their contribution as far as this research is concerned. Most of these studies have been conducted in Europe, Asia and USA with little coverage of the African countries.

Most of the studies conducted showed that the opening of capital adequacy requirements had a negative crash on bank performance.

## III. Research Methodology

*a) Introduction*

This chapter includes the research design, Methodology of the study, the target population and the sampling design. Data collection and analysis methods will be also covered.

*b) Research design*

This research design is a plan for operating study and it requires maximum controls over factors that may influence with the validity of the findings. This study adopted empirical research design. Empirical research designs are appropriated in preliminary and exploratory studies to help researchers to gather information, summarize, present and interpret for the purpose of clarification.

*c) Population and Sample*

Population means as the whole group of individuals, events or objects having common characteristics that conform to a given specification. The sample was the 23 Commercial banks were undertaken on basis of data availability.

*d) Data collection*

This research used secondary data such as published annual reports over a five year reporting period between 2013 to 2017.This data collection method was useful because the published figures are audited by registered and licensed auditors.

*e) Data Analysis and Reporting*

Secondary data was used to calculate numerous ratios. The data was analyzed through coding in a spreadsheet where the researcher used descriptive statistics to present the performance of independent variables in tables based on their percentages. A regression was run to determine the coefficients of the independent variables in relation to the dependent variable. This helped the researcher to establish the impact of each independent variable to the dependent variable. The results of the findings have been presented in the form of table easy interpretation and understanding. The aim of regression analysis was to summarize data as well as to quantity relationships among variables expressed via an equation for predicting typical values of one variable given the values of other variables. The model used by the researcher in this study was: Model-

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3\ X_3\ + \beta_4 X_4\ + \beta_5 X_5 + \varepsilon$$

Where, Y=Return On Investment (ROI)

$\alpha$=Constant Term

$X_1$=Capital Adequacy

$X_2$=Liquidity

$X_3$=Management efficiency

$X_4$=Asset Quality

$X_5$=Operating Efficiency

$\beta_{1-5}$=Regression Coefficient

$\varepsilon$=Error Term

*Definition of variables*

The research has to look at the effect of capital adequacy on return on investments of commercial banks of Bangladesh which will conduct to analyze one dependent variable and five independent variables. As follows;

*Dependent variables*

*ROI:* Return on investment interpreting ratio of net income to total investments and firstly it represents of managerial efficiency which how competently the management of bank using the assets into net earnings. The formula as;

ROI = Net income after taxes/Total investment

*Independent variables*

*CAR:* Capital adequacy ratio refers to the total capital of bank which is articulated as a percentage of its total risk weighted assets. The formula of CAR as follows;

Capital adequacy ratio = Total Capital funds/Total risk weighted assets

*Liq:* Liquidity ratio refers the ability of probable investment as loans using total deposits. The relationship of liquidity is positive with return on investments. The formula of Liquidity as follows;

Liquidity ratio = Net loans/Total deposits

*MgtEffi:* Management efficiency measures bank's performance that help to measure how much efficient management of bank. The formula as follows;

Management efficiency ratio = Earning assets/Total assets

*Assqua:* Assets quality ratio refers the risk of bank when a large part of loans is remained default or uncover. Default loans lessen bank's performance. For this reason, it tries to reduce default loans or change loans program patterns in particular financial years.

Assets quality ratio = Non-performing loans/Total loan

*OpEffi:* The ratio refers how much expenditure is occurred than operating income to run smoothly operating activities that affect bank's performance. The formula as follows

Operating efficiency ratio = Operating expense/ Operating income

## IV. Data Analysis, Results and Discussions

### a) *Introduction*

This chapter presents the analysis of data, result and discussion the effect of capital adequacy on return on investments of commercial banks in Bangladesh. A linear regression model of return on investments as function of capital adequacy, liquidity, management efficiency, asset quality and operating efficiency was applied to examine the relationship between the variables.

*Table 4.2:* Descriptive Statistics

| | Mean | Median | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ROI | 6.979133 | 6.762968 | 3.765749 | 0.51 | 16.19188 |
| CapAd | 13.450863 | 10.935005 | 9.0945719 | 6.6240874 | 80.43 |
| Liq | 72.934221 | 82.64 | 24.48893 | 2.07 | 99.65 |
| MgtEffi. | 77.0006377 | 81.6249749 | 12.5959269 | 35.28 | 91.9717661 |
| Ass.qua. | 6.068214286 | 5.21 | 5.238809818 | 0.26 | 35.28 |
| Op.Effi. | 52.800927 | 49.61 | 13.368069 | 28.64 | 94.01 |

From Table 4.2, Return on investments averaged 6.979133 with minimum and maximum value of 0.51and 16.19188 respectively. This indicates that the use of shareholders fund to generate earning moderately low in this period of study. Again, Capital adequacy has a mean of 13.450863 with the minimum and maximum value of 6.6240874 and 80.43 respectively. This implies that the most of banks of Bangladesh keep minimum capital adequacy ratio in Bangladesh Bank to ensure the safety of clients. Bangladesh Bank imposes more capital requirement to establish new bank. Then, Commercial Bank will fall liquidity crisis for investments, instant demands of clients. Liquidity has a mean of 72.934221 with minimum and maximum value of 2.07 and 99.65 respectively. It indicates that banks do not depends on other sources of fund. Management efficiency averaged 77.0006377 with minimum and maximum value of 35.28 and 91.9717661 respectively. It indicates that Management of bank is better. Asset quality averaged 6.068214286 with minimum and maximum value of 0.26 and 35.28 respectively. This indicates a relatively low concentration of non-performing loan ratio among commercial banks. Operating efficiency ratio relatively high that is not expected in Bangladesh perspectives.

*Table 4.3:* Correlation

| | ROI | CapAd | Liq | MgtEffi. | Ass.qua. | Op.Effi. |
|---|---|---|---|---|---|---|
| ROI | 1 | | | | | |
| CapAd | -0.18929 | 1 | | | | |
| Liq | -0.05584 | -0.21362 | 1 | | | |
| MgtEffi. | 0.342363 | -0.29679 | 0.07919 | 1 | | |
| Ass.qua. | -0.04786 | -0.08599 | -0.23763 | -0.17282 | 1 | |
| Op.Effi. | -0.14745 | 0.126382 | -0.12826 | -0.10815 | 0.416829 | 1 |

The correlation matrix of the variable included in the model is presented in table 4.3. The correlation matrix is to show that the data is random, implying that it is reliable and stable. Anyway, as the number of significant exceeds the insignificant, we can proceeds for hypothesis testing.

*Table 4.4:* Regression analysis

```
Fixed-effects (within) regression              Number of obs    =     112
Group variable: Code                           Number of groups =      23

R-sq:  within  = 0.3823                        Obs per group: min  =    2
       between = 0.0005                                       avg  =  4.9
       overall = 0.0205                                       max  =    5

                                               F (5, 84)    =    10.40
corr(u_i, Xb)  = -0.7421                       Prob> F      =   0.0000

------------------------------------------------------------------------------
     ROI |      Coef.     Std. Err.      t     P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   CapAd | -.1065221   .0342381    -3.11   0.003    -.1746084   -.0384359
     Liq |  .0735027   .0411902     1.78   0.078    -.0084085    .1554139
 MgtEffi |   .116398   .0448632     2.59   0.011     .0271827    .2056134
  Assqua | -.5030996   .1621949    -3.10   0.003     -.825642   -.1805573
  OpEffi | -.0005165   .0448056    -0.01   0.991    -.0896174    .0885843
   _cons |  -2.925464  5.686065    -0.51   0.608    -14.23283      8.3819
-------------+----------------------------------------------------------------
 sigma_u |  4.9609798
 sigma_e |  2.0586364
     rho |  .85309927   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:   F(22, 84) =    10.66          Prob> F = 0.0000
```

Using STATA software, we get results from regression analysis from table 4.4

We can see from the table that we have got three significant variables at a significance level of 5%. Capital adequacy (CapAd), management efficiency (MgtEffi), asset quality (Assqua) have been found to be significant in describing the variation in the Return on investment of banks. Side by side, liquidity (Liq), operating efficiency (OpEffi) was found to be statistically insignificant for the Return on investment but negative relationship. An F value less than 0.05 indicates the validity of the model.

From the analysis, we have got significant predictor variables, Capital adequacy, Asset quality have a negative relationship with the dependent variables. Management efficiency has a positive relationship with the return on investment and liquidity were insignificant but positive relationship.

# V. Summary, Conclusion and Recommendation

### a) Summary

The study aimed at establishing the effect of capital adequacy requirements on return on investments by commercial banks in Bangladesh. It specifically required establish the connection between capital adequacy ratios and return on investments; and also between capital adequacy ratio and credit creation. From the research findings, there is a strong relationship between Capital adequacy requirements and return on investments by banks in Bangladesh. After introducing of capital adequacy requires in Bangladesh. Find that return on investments qualified a downturn giving a negative trend as evidenced in the tabulated frequencies while holding other factors constant. This could be as a result of banks stressed to lift their core capital levels at the cost of credit creation actions.

### b) Conclusion

The banking sector constitutes a main component of financial sanders trade where creation of credit forms the core business of every bank by utilizing 85% of deposits available, Saunders and Cornett (2005). Financial institutions have a great role in financing process to gain economic growth and this reason that they are highly monitored through various regulatory measures. The capital adequacy requirements may have played some major role in causing several bank mergers, acquisitions, conversions and liquidations which occurred in Bangladesh for compliance purposes. It has also been proved that in this new competitive environment, large banks will survive and small banks could only survive if they specialized in a few of their activities (Fabozzi 1999).This paper has established a significant relationship between capital adequacy requirements and return on investments by commercial banks in Bangladesh. Findings of the study indicate that greater capital adequacy requirements affect return on investments activities.

### c) Policy Recommendations

These capital adequacy requirements may have played some key role in causing several bank acquisitions, mergers, conversions and liquidations which occurred between 2000 and 2017 for fulfillment purposes. Policy makers should make sure there is adequate capital in the banks to support self-assurance of depositors but the capital adequacy requirements should not be very disciplinary as to contain bank activities and the performance of the overall economy. Those concerned with policy making should also make sure that global regulations and requirements are appropriately refined as a result they can fit in to Bangladesh without compromising the overall global trend. Additional policy makers should make certain proper timing while implementing policy so that banks do not undergo multi-shocks during other negative macro-economic conditions.

As it is clear from the study that there is a strong relationship among the three variables with return on investments, policy makers should guarantee that they revise the ratios with numerous caution to achieve the desired results without troublesome institutional and overall macro-economic stability.

### d) Limitations of the study

I experienced some limitations while conducting the study on return on investments as highlighted below. The study was limited only to the factors that originate from capital adequacy- requirements but did not think other shocks that come with interest rates and variations in demand for credit and other macro economic shocks which are equally vital.

Time available was a restriction and therefore I could not have done an in depth study of all banks alone for better approaching of the magnitude and impact that the capital adequacy requirements had on specific banks.

# References Références Referencias


1. Agrawal, V., Vaish, A. K., & Vaish, P. (1997). Groundwater quality: focus on fluoride and fluorosis in Rajasthan. *Current Science*, *73*(9), 743-746.
2. Berger, A. N., & Udell, G. F. (1994). Did risk-based capital allocate bank credit and cause a" credit crunch" in the United States?. *Journal of Money, credit and Banking*, *26*(3), 585-628.
3. Berger, A. N., Herring, R. J., & Szegö, G. P. (1995). The role of capital in financial institutions. *Journal of Banking & Finance*, *19*(3-4), 393-430.
4. Bernanke, B. S., Lown, C. S., & Friedman, B. M. (1991). The credit crunch. *Brookings papers on economic activity*, *1991*(2), 205-247.
5. Bichsel, R., & Blum, J. (2005). Capital regulation of banks: Where do we stand and where are we going?. *Swiss National Bank, Quarterly Bulletin*, *4*, 42-51.
6. Bikker, J. A., & Hu, H. (2012). Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. *PSL Quarterly Review*, *55*(221).
7. Blum, J. (1999). Do capital adequacy requirements reduce risks in banking?. *Journal of Banking & Finance*, *23*(5), 755-771.
8. Brinkmann, E. J., & Horvitz, P. M. (1995). Risk-based capital standards and the credit crunch. *Journal of Money, Credit and Banking*, *27*(3), 848-863.
9. Chami, R., & Cosimano, T. F. (2010). Monetary policy with a touch of Basel. *Journal of Economics and Business*, *62*(3), 161-175.
10. Clark, R. C., Pratt, J. W., & Zeckhauser, R. J. (1985). Principals and agents: The structure of business.

11. Collins, B. M., & Fabozzi, F. J. (1999). Derivatives and risk management. *The Journal of Portfolio Management*, *25*(5), 16-27.
12. Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. *The Journal of Finance*, *55*(6), 2431-2465.
13. Donaldson, G. (1961). Corporate Debt Policy. *Division of Research, Harvard Business School*, 92-112.
14. Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.
15. Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.
16. Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of financial economics*, *67*(2), 217-248.
17. Furfine, C. (2001). Bank portfolio allocation: The impact of capital requirements, regulatory monitoring, and economic conditions. *Journal of Financial Services Research*, *20*(1), 33-56.
18. Gaud, P., Jani, E., Hoesli, M., & Bender, A. (2005). The capital structure of Swiss companies: an empirical analysis using dynamic panel data. *European Financial Management*, *11*(1), 51-69.
19. Ghosh, S., Nachane, D. M., Narain, A., & Sahoo, S. (2003). Capital requirements and bank behaviour: An empirical analysis of Indian public sector banks. *Journal of International Development: The Journal of the Development Studies Association*, *15*(2), 145-156.
20. Gilbert, R. A., & Wheelock, D. C. (2007). Measuring commercial bank profitability: proceed with caution.
21. Gunadi, A., Rushton, P. J., McHale, L. K., Gutek, A. H., & Finer, J. J. (2016). Characterization of 40 soybean (Glycine max) promoters, isolated from across 5 thematic gene groups. *Plant Cell, Tissue and Organ Culture (PCTOC)*, *127*(1), 145-160.
22. Gunadi, I., Deriantino, E., & Budiman, A. Increasing Banking Capital for Promoting Financial Stability and Banking Response to Monetary Policy: Evidence from Indonesia1
23. Hahn, F. R. (2002). *The Effects of Bank Capital on Bank Credit Creation. Panel Evidence from Austria* (No. 188). WIFO Working Papers.
24. Hall, B. J. (1993). How has the Basle accord affected bank portfolios?. *Journal of the Japanese and international economies*, *7*(4), 408-440.
25. Hancock, D., & Wilcox, J. A. (1993). Has there been a" capital crunch" in banking? The effects on bank lending of real estate market conditions and bank capital shortfalls. *Journal of housing Economics*, *3*(1), 31-50.
26. Hancock, D., Laing, A. J., & Wilcox, J. A. (1995). Bank capital shocks: dynamic effects on securities, loans, and capital. *Journal of Banking & Finance*, *19*(3-4), 661-677.
27. Haron, S. (2004). Determinants of Islamic bank profitability. *Global Journal of Finance and Economics*, *1*(1), 11-33.
28. Harris, M., & Raviv, A. (1991). The theory of capital structure. *the Journal of Finance*, *46*(1), 297-355.
29. Haubrich, J. G., & Wachtel, P. (1993). *Capital requirements and shifts in commercial bank portfolios*. New York University Salomon Center, Leonard N. Stern School of Business.
30. Honda, Y. (2002). The effects of the Basle accord on bank credit: the case of Japan. *Applied Economics*, *34*(10), 1233-1239.
31. Hovakimian, A., Opler, T., & Titman, S. (2001). The debt-equity choice. *Journal of Financial and Quantitative analysis*, *36*(1), 1-24.
32. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.
33. Merton, R. C. (1990). The financial system and economic performance. In *International Competitiveness in Financial Services* (pp. 5-42). Springer, Dordrecht.
34. Mitchell, J. (1984). *Women: The Longest Revolution: Essays on Feminism, Literature and Psychoanalysis* (p. 291). London: Virago.
35. Myers, S. C. (1984). The capital structure puzzle. *The journal of finance*, *39*(3), 574-592.
36. Shafie, S., Azmi, W. N. W., & Haron, S. (2004). Adopting and measuring customer service quality in Islamic banks. *Journal of Muamalat and Islamic Finance Research*, *1*(1), 1-12.
37. Wangui, W. M. (2012). *The Effect of Capital Adequacy Requirements On-Credit Creation by Commercial Banks in Kenya* (Doctoral Dissertation, School of Business, University of Nairobi).

Global Journals Guidelines Handbook 2019

www.GlobalJournals.org

## FELLOW OF ASSOCIATION OF RESEARCH SOCIETY IN BUSINESS (FARSB)

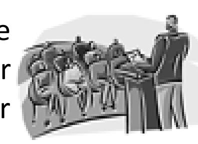
Global Journals Incorporate (USA) is accredited by Open Association of Research Society (OARS), U.S.A and in turn, awards “FARSBA” title to individuals. The 'FARSBA' title is accorded to a selected professional after the approval of the Editor-in-Chief/Editorial Board Members/Dean.

- The “FARSB” is a dignified title which is accorded to a person’s name viz. Dr. John E. Hall, Ph.D., FARSBA or William Walldroff, M.S., FARSBA.

FARSBA accrediting is an honor. It authenticates your research activities. After recognition as FARSBA, you can add 'FARSBA' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, and Visiting Card etc.

*The following benefits can be availed by you only for next three years from the date of certification:*

FARSBA designated members are entitled to avail a 40% discount while publishing their research papers (of a single author) with Global Journals Incorporation (USA), if the same is accepted by Editorial Board/Peer Reviewers. If you are a main author or co-author in case of multiple authors, you will be entitled to avail discount of 10%.



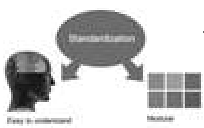
Once FARSBA title is accorded, the Fellow is authorized to organize a symposium/seminar/conference on behalf of Global Journal Incorporation (USA).The Fellow can also participate in conference/seminar/symposium organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent.

You may join as member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer. In addition, it is also desirable that you should organize seminar/symposium/conference at least once.


We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The FARSBA can go through standards of OARS. You can also play vital role if you have any suggestions so that proper amendment can take place to improve the same for the benefit of entire research community.

As FARSBA, you will be given a renowned, secure and free professional email address with 100 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.



The FARSBA will be eligible for a free application of standardization of their researches. Standardization of research will be subject to acceptability within stipulated norms as the next step after publishing in a journal. We shall depute a team of specialized research professionals who will render their services for elevating your researches to next higher level, which is worldwide open standardization.

The FARSBA member can apply for grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A. Once you are designated as FARSBA, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria. After certification of all your credentials by OARS, they will be published on your Fellow Profile link on website https://associationofresearch.org which will be helpful to upgrade the dignity.


The FARSBA members can avail the benefits of free research podcasting in Global Research Radio with their research documents. After publishing the work, (including published elsewhere worldwide with proper authorization) you can upload your research paper with your recorded voice or you can utilize chargeable services of our professional RJs to record your paper in their voice on request.


The FARSBA member also entitled to get the benefits of free research podcasting of their research documents through video clips. We can also streamline your conference videos and display your slides/ online slides and online research video clips at reasonable charges, on request.

The FARSBA is eligible to earn from sales proceeds of his/her researches/reference/review Books or literature, while publishing with Global Journals. The FARSBA can decide whether he/she would like to publish his/her research in a closed manner. In this case, whenever readers purchase that individual research paper for reading, maximum 60% of its profit earned as royalty by Global Journals, will be credited to his/her bank account. The entire entitled amount will be credited to his/her bank account exceeding limit of minimum fixed balance. There is no minimum time limit for collection. The FARSC member can decide its price and we can help in making the right decision.

The FARSBA member is eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get remuneration of 15% of author fees, taken from the author of a respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account.

## MEMBER OF ASSOCIATION OF RESEARCH SOCIETY IN BUSINESS (MARSBA)

The ' MARSBA ' title is accorded to a selected professional after the approval of the Editor-in-Chief / Editorial Board Members/Dean.

The “MARSBA” is a dignified ornament which is accorded to a person’s name viz. Dr. John E. Hall, Ph.D., MARSBA or William Walldroff, M.S., MARSBA.

MARSB accrediting is an honor. It authenticates your research activities. After becoming MARSBA, you can add 'MARSBA' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, Visiting Card and Name Plate etc.

*The following benefitscan be availed by you only for next three years from the date of certification.*

MARSBA designated members are entitled to avail a 25% discount while publishing their research papers (of a single author) in Global Journals Inc., if the same is accepted by our Editorial Board and Peer Reviewers. If you are a main author or co-author of a group of authors, you will get discount of 10%.

As MARSBA, you will be given a renowned, secure and free professional email address with 30 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.


We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The MARSBA member can apply for approval, grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A.


Once you are designated as MARSBA, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria.

It is mandatory to read all terms and conditions carefully.

# Auxiliary Memberships

## Institutional Fellow of Open Association of Research Society (USA)-OARS (USA)

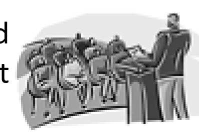
Global Journals Incorporation (USA) is accredited by Open Association of Research Society, U.S.A (OARS) and in turn, affiliates research institutions as "Institutional Fellow of Open Association of Research Society" (IFOARS).

The "FARSC" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSC or William Walldroff, M.S., FARSC.

The IFOARS institution is entitled to form a Board comprised of one Chairperson and three to five board members preferably from different streams. The Board will be recognized as "Institutional Board of Open Association of Research Society"-(IBOARS).

*The Institute will be entitled to following benefits:*

The IBOARS can initially review research papers of their institute and recommend them to publish with respective journal of Global Journals. It can also review the papers of other institutions after obtaining our consent. The second review will be done by peer reviewer of Global Journals Incorporation (USA) The Board is at liberty to appoint a peer reviewer with the approval of chairperson after consulting us.
The author fees of such paper may be waived off up to 40%.



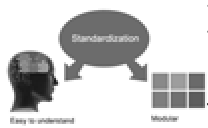
The Global Journals Incorporation (USA) at its discretion can also refer double blind peer reviewed paper at their end to the board for the verification and to get recommendation for final stage of acceptance of publication.

The IBOARS can organize symposium/seminar/conference in their country on behalf of Global Journals Incorporation (USA)-OARS (USA). The terms and conditions can be discussed separately.


The Board can also play vital role by exploring and giving valuable suggestions regarding the Standards of "Open Association of Research Society, U.S.A (OARS)" so that proper amendment can take place for the benefit of entire research community. We shall provide details of particular standard only on receipt of request from the Board.

The board members can also join us as Individual Fellow with 40% discount on total fees applicable to Individual Fellow. They will be entitled to avail all the benefits as declared. Please visit Individual Fellow-sub menu of GlobalJournals.org to have more relevant details.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time. This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.




After nomination of your institution as “Institutional Fellow” and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

**The following entitlements are applicable to individual Fellows:**

Open Association of Research Society, U.S.A (OARS) By-laws states that an individual Fellow may use the designations as applicable, or the corresponding initials. The Credentials of individual Fellow and Associate designations signify that the individual has gained knowledge of the fundamental concepts. One is magnanimous and proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice.


Open Association of Research Society (US)/ Global Journals Incorporation (USA), as described in Corporate Statements, are educational, research publishing and professional membership organizations. Achieving our individual Fellow or Associate status is based mainly on meeting stated educational research requirements.

Disbursement of 40% Royalty earned through Global Journals : Researcher = 50%, Peer Reviewer = 37.50%, Institution = 12.50% E.g. Out of 40%, the 20% benefit should be passed on to researcher, 15 % benefit towards remuneration should be given to a reviewer and remaining 5% is to be retained by the institution.

We shall provide print version of 12 issues of any three journals [as per your requirement] out of our 38 journals worth $ 2376 USD.

**Other:**

**The individual Fellow and Associate designations accredited by Open Association of Research Society (US) credentials signify guarantees following achievements:**

- The professional accredited with Fellow honor, is entitled to various benefits viz. name, fame, honor, regular flow of income, secured bright future, social status etc.

- In addition to above, if one is single author, then entitled to 40% discount on publishing research paper and can get 10%discount if one is co-author or main author among group of authors.
- The Fellow can organize symposium/seminar/conference on behalf of Global Journals Incorporation (USA) and he/she can also attend the same organized by other institutes on behalf of Global Journals.
- The Fellow can become member of Editorial Board Member after completing 3yrs.
- The Fellow can earn 60% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.
- Fellow can also join as paid peer reviewer and earn 15% remuneration of author charges and can also get an opportunity to join as member of the Editorial Board of Global Journals Incorporation (USA)
- • This individual has learned the basic methods of applying those concepts and techniques to common challenging situations. This individual has further demonstrated an in–depth understanding of the application of suitable techniques to a particular area of research practice.

**Note :**

"

- In future, if the board feels the necessity to change any board member, the same can be done with the consent of the chairperson along with anyone board member without our approval.
- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone. "

# Preferred Author Guidelines

**We accept the manuscript submissions in any standard (generic) format.**

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from https://globaljournals.org/Template.zip

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

## Before and during Submission

Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

1. Authors must go through the complete author guideline and understand and *agree to Global Journals' ethics and code of conduct,* along with author responsibilities.
2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s') names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
6. Proper permissions must be acquired for the use of any copyrighted material.
7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

**Declaration of Conflicts of Interest**

It is required for authors to declare all financial, institutional, and personal relationships with other individuals and organizations that could influence (bias) their research.

## Policy on Plagiarism

Plagiarism is not acceptable in Global Journals submissions at all.

Plagiarized content will not be considered for publication. We reserve the right to inform authors' institutions about plagiarism detected either before or after publication. If plagiarism is identified, we will follow COPE guidelines:

Authors are solely responsible for all the plagiarism that is found. The author must not fabricate, falsify or plagiarize existing research data. The following, if copied, will be considered plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures

- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

## Authorship Policies

Global Journals follows the definition of authorship set up by the Open Association of Research Society, USA. According to its guidelines, authorship criteria must be based on:

1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

**Changes in Authorship**

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

**Copyright**

During submission of the manuscript, the author is confirming an exclusive license agreement with Global Journals which gives Global Journals the authority to reproduce, reuse, and republish authors' research. We also believe in flexible copyright terms where copyright may remain with authors/employers/institutions as well. Contact your editor after acceptance to choose your copyright policy. You may follow this form for copyright transfers.

**Appealing Decisions**

Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

**Acknowledgments**

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

**Declaration of funding sources**

Global Journals is in partnership with various universities, laboratories, and other institutions worldwide in the research domain. Authors are requested to disclose their source of funding during every stage of their research, such as making analysis, performing laboratory operations, computing data, and using institutional resources, from writing an article to its submission. This will also help authors to get reimbursements by requesting an open access publication letter from Global Journals and submitting to the respective funding source.

## Preparing your Manuscript

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

***Manuscript Style Instruction (Optional)***

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

***Structure and Format of Manuscript***

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.

## Format Structure

***It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.***

All manuscripts submitted to Global Journals should include:

**Title**

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

**Author details**

The full postal address of any related author(s) must be specified.

**Abstract**

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

**Keywords**

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

**Numerical Methods**

Numerical methods used should be transparent and, where appropriate, supported by references.

**Abbreviations**

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

**Formulas and equations**

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

**Tables, Figures, and Figure Legends**

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

**Figures**

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

## Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

## Tips for writing a good quality Management Research Paper

Techniques for writing a good quality management and business research paper:

***1. Choosing the topic:*** In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

***2. Think like evaluators:*** If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

***3. Ask your guides:*** If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

***4. Use of computer is recommended:*** As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

***5. Use the internet for help:*** An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.

***6. Bookmarks are useful:*** When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

***7. Revise what you wrote:*** When you write anything, always read it, summarize it, and then finalize it.

***8. Make every effort:*** Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

***9. Produce good diagrams of your own:*** Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

***10. Use proper verb tense:*** Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

***11. Pick a good study spot:*** Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

***12. Know what you know:*** Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

***13. Use good grammar:*** Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.
Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

***14. Arrangement of information:*** Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

***15. Never start at the last minute:*** Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

***16. Multitasking in research is not good:*** Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

***17. Never copy others' work:*** Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

***18. Go to seminars:*** Attend seminars if the topic is relevant to your research area. Utilize all your resources.

***19. Refresh your mind after intervals:*** Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

***20. Think technically:*** Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

***21. Adding unnecessary information:*** Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

***22. Report concluded results:*** Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

***23. Upon conclusion:*** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

## Informal Guidelines of Research Paper Writing

***Key points to remember:***

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

**Final points:**

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

*The introduction:* This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

**The discussion section:**

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

**General style:**

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

**To make a paper clear:** Adhere to recommended page limits.

*Mistakes to avoid:*

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.

- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

**Title page:**

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

**Abstract:** This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

*Reason for writing the article—theory, overall issue, purpose.*

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

**Approach:**

- o Single section and succinct.
- o An outline of the job done is always written in past tense.
- o Concentrate on shortening results—limit background information to a verdict or two.
- o Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

**Introduction:**

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

*The following approach can create a valuable beginning:*

- o Explain the value (significance) of the study.
- o Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- o Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- o Briefly explain the study's tentative purpose and how it meets the declared objectives.

**Approach:**

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

**Procedures (methods and materials):**

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

**Materials:**

*Materials may be reported in part of a section or else they may be recognized along with your measures.*

**Methods:**

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

**Approach:**

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

**What to keep away from:**

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

**Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

**Content:**

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

**What to stay away from:**

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

**Approach:**

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

**Figures and tables:**

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

**Discussion:**

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

**Approach:**

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

## The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

*Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection*.

*Segment draft and final research paper:* You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

*Written material:* You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.

## Criterion for Grading a Research Paper (Compilation) by Global Journals

**Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.**

| Topics | Grades | | |
|---|---|---|---|
| | **A-B** | **C-D** | **E-F** |
| ***Abstract*** | Clear and concise with appropriate content, Correct format. 200 words or below | Unclear summary and no specific data, Incorrect form<br><br>Above 200 words | No specific data with ambiguous information<br><br>Above 250 words |
| ***Introduction*** | Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited | Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter | Out of place depth and content, hazy format |
| ***Methods and Procedures*** | Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads | Difficult to comprehend with embarrassed text, too much explanation but completed | Incorrect and unorganized structure with hazy meaning |
| ***Result*** | Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake | Complete and embarrassed text, difficult to comprehend | Irregular format with wrong facts and figures |
| ***Discussion*** | Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited | Wordy, unclear conclusion, spurious | Conclusion is not cited, unorganized, difficult to comprehend |
| ***References*** | Complete and correct format, well organized | Beside the point, Incomplete | Wrong format and structuring |

# INDEX

save our planet

# Global Journal of Management and Business Research

Visit us on the Web at www.GlobalJournals.org | www.JournalofBusiness.Org
or email us at helpdesk@globaljournals.org

ISSN 9755853