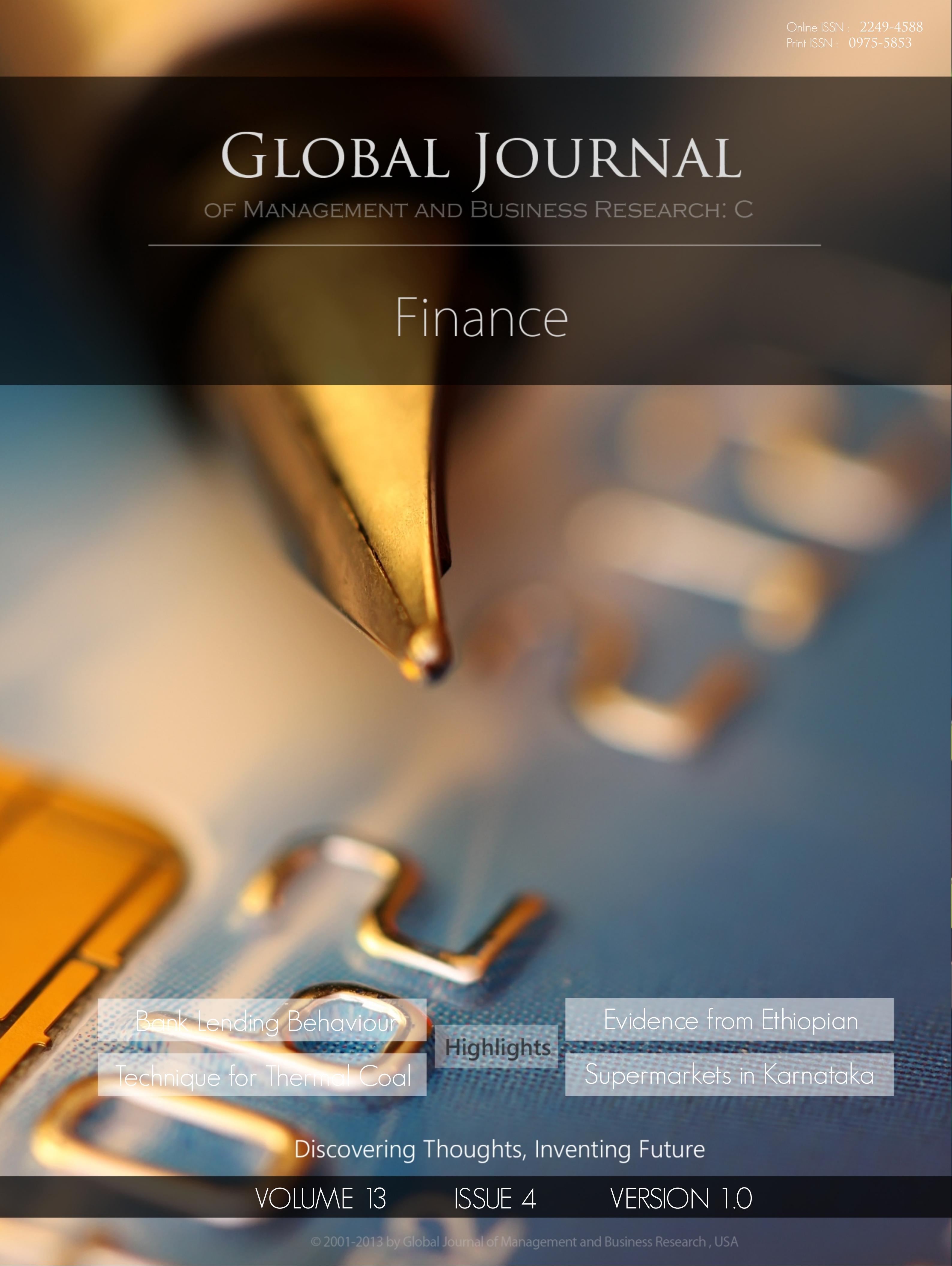
Online ISSN : 2249-4588
Print ISSN : 0975-5853

Global Journal

of Management and Business Research: C

Finance



Bank Lending Behaviour

Technique for Thermal Coal

Highlights

Evidence from Ethiopian

Supermarkets in Karnataka

Discovering Thoughts, Inventing Future

VOLUME 13 ISSUE 4 VERSION 1.0

© 2001-2013 by Global Journal of Management and Business Research , USA

Global Journal of Management and Business Research : C
Finance

Global Journal of Management and Business Research : C
Finance

Volume 13 Issue 4 (Ver. 1.0)

Open Association of Research Society

© Global Journal of Management and Business Research.2013.

All rights reserved.

This is a special issue published in version 1.0 of "Global Journal of Management And Business Research." By Global Journals Inc.

All articles are open access articles distributed under "Global Journal of Management And Business Research"

Reading License, which permits restricted use. Entire contents are copyright by of "Global Journal of Management And Business Research" unless otherwise noted on specific articles.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission.

The opinions and statements made in this book are those of the authors concerned. Ultraculture has not verified and neither confirms nor denies any of the foregoing and no warranty or fitness is implied.

Engage with the contents herein at your own risk.

The use of this journal, and the terms and conditions for our providing information, is governed by our Disclaimer, Terms and Conditions and Privacy Policy given on our website http://globaljournals.us/terms-and-condition/menu-id-1463/.

By referring / using / reading / any type of association / referencing this journal, this signifies and you acknowledge that you have read them and that you accept and will be bound by the terms thereof.

All information, journals, this journal, activities undertaken, materials, services and our website, terms and conditions, privacy policy, and this journal is subject to change anytime without any prior notice.

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 Inc., Headquarters Corporate Office, Cambridge Office Center, II Canal Park, Floor No. 5th, ***Cambridge (Massachusetts)***, Pin: MA 02141 United States

USA Toll Free: +001-888-839-7392
USA Toll Free Fax: +001-888-839-7392

Offset Typesetting

Open Association of Research Society, Marsh Road, Rainham, Essex, London RM13 8EU
United Kingdom.

Packaging & Continental Dispatching

Global Journals, 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: *investers@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

Pricing (Including by Air Parcel Charges):

For Authors:

22 USD (B/W) & 50 USD (Color)

Yearly Subscription (Personal & Institutional):

200 USD (B/W) & 250 USD (Color)

Editorial Board Members (HON.)

John A. Hamilton,"Drew" Jr.,
Ph.D., Professor, Management
Computer Science and Software Engineering
Director, Information Assurance Laboratory
Auburn University

Dr. Henry Hexmoor
IEEE senior member since 2004
Ph.D. Computer Science, University at Buffalo
Department of Computer Science
Southern Illinois University at Carbondale

Dr. Osman Balci, Professor
Department of Computer Science
Virginia Tech, Virginia University
Ph.D.and M.S.Syracuse University, Syracuse, New York
M.S. and B.S. Bogazici University, Istanbul, Turkey

Yogita Bajpai
M.Sc. (Computer Science), FICCT
U.S.A.Email: yogita@computerresearch.org

Dr. T. David A. Forbes
Associate Professor and Range Nutritionist
Ph.D. Edinburgh University - Animal Nutrition
M.S. Aberdeen University - Animal Nutrition
B.A. University of Dublin- Zoology

Dr. Wenying Feng
Professor, Department of Computing & Information Systems
Department of Mathematics
Trent University, Peterborough,
ON Canada K9J 7B8

Dr. Thomas Wischgoll
Computer Science and Engineering,
Wright State University, Dayton, Ohio
B.S., M.S., Ph.D.
(University of Kaiserslautern)

Dr. Abdurrahman Arslanyilmaz
Computer Science & Information Systems Department
Youngstown State University
Ph.D., Texas A&M University
University of Missouri, Columbia
Gazi University, Turkey

Dr. Xiaohong He
Professor of International Business
University of Quinnipiac
BS, Jilin Institute of Technology; MA, MS, PhD,. (University of Texas-Dallas)

Burcin Becerik-Gerber
University of Southern California
Ph.D. in Civil Engineering
DDes from Harvard University
M.S. from University of California, Berkeley & Istanbul University

Dr. Bart Lambrecht
Director of Research in Accounting and FinanceProfessor of Finance
Lancaster University Management School
BA (Antwerp); MPhil, MA, PhD (Cambridge)

Dr. Carlos García Pont
Associate Professor of Marketing
IESE Business School, University of Navarra
Doctor of Philosophy (Management), Massachusetts Institute of Technology (MIT)
Master in Business Administration, IESE, University of Navarra
Degree in Industrial Engineering, Universitat Politècnica de Catalunya

Dr. Fotini Labropulu
Mathematics - Luther College
University of ReginaPh.D., M.Sc. in Mathematics
B.A. (Honors) in Mathematics
University of Windso

Dr. Lynn Lim
Reader in Business and Marketing
Roehampton University, London
BCom, PGDip, MBA (Distinction), PhD, FHEA

Dr. Mihaly Mezei
ASSOCIATE PROFESSOR
Department of Structural and Chemical Biology, Mount Sinai School of Medical Center
Ph.D., Etvs Lornd University
Postdoctoral Training,
New York University

Dr. Söhnke M. Bartram
Department of Accounting and FinanceLancaster University Management SchoolPh.D. (WHU Koblenz)
MBA/BBA (University of Saarbrücken)

Dr. Miguel Angel Ariño
Professor of Decision Sciences
IESE Business School
Barcelona, Spain (Universidad de Navarra)
CEIBS (China Europe International Business School).
Beijing, Shanghai and Shenzhen
Ph.D. in Mathematics
University of Barcelona
BA in Mathematics (Licenciatura)
University of Barcelona

Philip G. Moscoso
Technology and Operations Management
IESE Business School, University of Navarra
Ph.D in Industrial Engineering and Management, ETH Zurich
M.Sc. in Chemical Engineering, ETH Zurich

Dr. Sanjay Dixit, M.D.
Director, EP Laboratories, Philadelphia VA Medical Center
Cardiovascular Medicine - Cardiac Arrhythmia
Univ of Penn School of Medicine

Dr. Han-Xiang Deng
MD., Ph.D
Associate Professor and Research Department Division of Neuromuscular Medicine
Davee Department of Neurology and Clinical NeuroscienceNorthwestern University
Feinberg School of Medicine

Dr. Pina C. Sanelli
Associate Professor of Public Health
Weill Cornell Medical College
Associate Attending Radiologist
NewYork-Presbyterian Hospital
MRI, MRA, CT, and CTA
Neuroradiology and Diagnostic
Radiology
M.D., State University of New York at
Buffalo,School of Medicine and
Biomedical Sciences

Dr. Roberto Sanchez
Associate Professor
Department of Structural and Chemical
Biology
Mount Sinai School of Medicine
Ph.D., The Rockefeller University

Dr. Wen-Yih Sun
Professor of Earth and Atmospheric
SciencesPurdue University Director
National Center for Typhoon and
Flooding Research, Taiwan
University Chair Professor
Department of Atmospheric Sciences,
National Central University, Chung-Li,
TaiwanUniversity Chair Professor
Institute of Environmental Engineering,
National Chiao Tung University, Hsin-
chu, Taiwan.Ph.D., MS The University of
Chicago, Geophysical Sciences
BS National Taiwan University,
Atmospheric Sciences
Associate Professor of Radiology

Dr. Michael R. Rudnick
M.D., FACP
Associate Professor of Medicine
Chief, Renal Electrolyte and
Hypertension Division (PMC)
Penn Medicine, University of
Pennsylvania
Presbyterian Medical Center,
Philadelphia
Nephrology and Internal Medicine
Certified by the American Board of
Internal Medicine

Dr. Bassey Benjamin Esu
B.Sc. Marketing; MBA Marketing; Ph.D
Marketing
Lecturer, Department of Marketing,
University of Calabar
Tourism Consultant, Cross River State
Tourism Development Department
Co-ordinator , Sustainable Tourism
Initiative, Calabar, Nigeria

Dr. Aziz M. Barbar, Ph.D.
IEEE Senior Member
Chairperson, Department of Computer
Science
AUST - American University of Science &
Technology
Alfred Naccash Avenue – Ashrafieh

President Editor (HON.)

Dr. George Perry, (Neuroscientist)
Dean and Professor, College of Sciences
Denham Harman Research Award (American Aging Association)
ISI Highly Cited Researcher, Iberoamerican Molecular Biology Organization
AAAS Fellow, Correspondent Member of Spanish Royal Academy of Sciences
University of Texas at San Antonio
Postdoctoral Fellow (Department of Cell Biology)
Baylor College of Medicine
Houston, Texas, United States

Chief Author (HON.)

Dr. R.K. Dixit
M.Sc., Ph.D., FICCT
Chief Author, India
Email: authorind@computerresearch.org

Dean & Editor-in-Chief (HON.)

Vivek Dubey(HON.)
MS (Industrial Engineering),
MS (Mechanical Engineering)
University of Wisconsin, FICCT
Editor-in-Chief, USA
editorusa@computerresearch.org

Sangita Dixit
M.Sc., FICCT
Dean & Chancellor (Asia Pacific)
deanind@computerresearch.org

Suyash Dixit
(B.E., Computer Science Engineering), FICCTT
President, Web Administration and
Development , CEO at IOSRD
COO at GAOR & OSS

Er. Suyog Dixit
(M. Tech), BE (HONS. in CSE), FICCT
SAP Certified Consultant
CEO at IOSRD, GAOR & OSS
Technical Dean, Global Journals Inc. (US)
Website: www.suyogdixit.com
Email:suyog@suyogdixit.com

Pritesh Rajvaidya
(MS) Computer Science Department
California State University
BE (Computer Science), FICCT
Technical Dean, USA
Email: pritesh@computerresearch.org

Luis Galárraga
J!Research Project Leader
Saarbrücken, Germany

Contents of the Volume

Global Journal of Management and Business Research
Finance
Volume 13 Issue 4 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Does Asset Quality Persist on Bank Lending Behaviour? Empirical Evidence from Ghana

By Abdul Latif Alhassan, Freeman Owusu Brobbey & Michael Effah Asamoah
University of Ghana Business School, Legon, Ghana

Abstract - Purpose: The objective of this study is to examine the persistence of bank asset quality on bank lending behaviour in Ghana.

Data/Methodology: Using a dataset from the Bank of Ghana for 25 Ghanaian banks from 2005 to 2010, the study employed a random effects (RE) model with AR(1) and heteroskedastic disturbances to test the relationship between bank lending behaviour proxied as the ratio loans and advances to total asset and bank asset quality (ratio of nonperforming loans to gross loans and advances) while controlling for deposit mobilization, equity, management efficiency, intermediation spread and income diversification.

Findings: The empirical estimation found that the effect of the deterioration of bank asset quality (high levels of non-performing loans) on bank lending behaviour is persistence and not contemporaneous. Additionally, bank deposit mobilization, intermediation spread and equity were also found to influence bank lending behaviour.

Originality/Value: This paper is the first study to examine the persistence impact of the three classes of asset quality on bank intermediation functions in Ghana.

Keywords : asset quality, non-performing loans, bank lending, persistence, deposit, equity, ghana.

GJMBR-C Classification : JEL Code: G21

Strictly as per the compliance and regulations of:

© 2013. Abdul Latif Alhassan, Freeman Owusu Brobbey & Michael Effah Asamoah. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Does Asset Quality Persist on Bank Lending Behaviour? Empirical Evidence from Ghana

Abdul Latif Alhassan α, Freeman Owusu Brobbey σ & Michael Effah Asamoah ρ

Abstract - Purpose: The objective of this study is to examine the persistence of bank asset quality on bank lending behaviour in Ghana.

Data/Methodology: Using a dataset from the Bank of Ghana for 25 Ghanaian banks from 2005 to 2010, the study employed a random effects (RE) model with AR(1) and heteroskedastic disturbances to test the relationship between bank lending behaviour proxied as the ratio loans and advances to total asset and bank asset quality (ratio of non-performing loans to gross loans and advances) while controlling for deposit mobilization, equity, management efficiency, intermediation spread and income diversification.

Findings: The empirical estimation found that the effect of the deterioration of bank asset quality (high levels of non-performing loans) on bank lending behaviour is persistence and not contemporaneous. Additionally, bank deposit mobilization, intermediation spread and equity were also found to influence bank lending behaviour.

Originality/Value: This paper is the first study to examine the persistence impact of the three classes of asset quality on bank intermediation functions in Ghana.

Keywords : asset quality, non-performing loans, bank lending, persistence, deposit, equity, ghana.

I. Background of the Study

Commercial banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, these roles make them an important phenomenon in economic growth and development. In performing this role, it must be realized that banks have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investments. Both theoretical and empirical finance literature suggests that the availability of bank credit is important determinants of economic growth and development in developing economies. However evidence shows that banks in these economies are reluctant to extend long-term credit to private businesses. Some factors influencing this reluctance are the unstable local government economic policies and the riskiness and opacity of business borrowers in these countries Djiogap and Ngomsi (2012).

Many firms especially those in developing economies rely on banks for financing since capital markets in those countries may not be well-developed and efficient. These firms that are rather small and medium-scaled cannot finance their projects by issuing securities in financial markets. They usually borrow funds at loanable funds market from financial institutions and often through banks. Therefore, changes in credit supply directly affect the investment projects and budget constraints of firms and thus their spending decisions (Saarenheime, 1995).

A deterioration in a banks' asset quality serve as indicator of the risk levels being assumed by banks, hence tighten credit standards leading to a reduction in future banks' lending to reduce its risk levels. The impact of bank asset quality on lending behaviour is both direct and indirect. With the direct effect, a deterioration in bank loan assets indicates that banks are taking on high risks and hence banks cannot build up its risk levels ad infinatum, they tighten credit standards which will reduce the number of loan applicants as well as successful loan applicants. With the indirect effect, incurring losses from non-performing loans demands loan write-offs which depletes the equity capital of banks. This would in-turn affect the bank's ability to write more loan businesses, hence reduction in lending, called the capital crunch by Richard Syron former president of the Boston Federal Reserve (Bernanke et. al., 1991).

With the asset quality posing a threat to the financial stability of the banking sector (IMF, 2011), this study seeks to examine the persistence of bank asset quality of Ghanaian banks on the lending behaviour of Ghanaian banks. The rest of the paper is organized into section 2 focused on stylized facts about the Ghanaian banking industry, section 3 reviews the empirical literature, methodology is discussed in section 4 and discussion of findings dealt in section 5. Section 6 concludes the study.

II. Overview of Ghanaian Banks

The first bank to be established in West Africa was the branch of Africa Banking Corporation of South Africa (ABC) in September 1891 in Lagos, Nigeria. Due to disputes with local powerful merchants, the directors of ABC with their predominately South African interest withdrew from Lagos in March, 1893. However, one Sir Alfred Jones and his assistant bought the Lagos office of ABC and incorporated a new banking company to take over the ABC Lagos branch, Known as the Bank of British West Africa Ltd (BBWA), the new bank was registered in the UK on 30th March 1894 (Anin, 2000). A

Author α σ ρ : Department of Finance, University of Ghana Business School, Legon, Ghana.

© 2013 Global Journals Inc. (US)

branch of BBWA was established in Accra in 1896 followed by the opening of new branches in Sekondi (1902) and Kumasi (1906). The BBWA's expansion programme closely followed the parallel expansion of both the rail and the road development programme of the colonial government with the result that by 1916, 12 branches of the Bank had been opened in Accra, Sekondi, Obuasi, Tarkwa, Prestea, Half-Assini, Cape Coast, Kumasi, Winneba, Axim, Nsawam and Koforidua.

The BBWA enjoyed banking monopoly at this time. However, this monopoly ended in 1917 with the establishment in Accra of a branch of the Colonial Bank which had since 1836, operated in the West Indies, Anin (2000). Soon after the end of the First World War, the colonial bank expanded its branch network by opening branches in Sekondi and Kumasi. In 1925, Barclays concluded all the financial agreement which led to the merger of the colonial bank, the Anglo Egyptian Bank and the National Bank of South Africa to form a new bank known as Barclays DCO (Dominion, Colonial and Overseas). Thus, in 1926 the six branches of the Colonial Bank became branches of the Barclays Bank (DCO).

Financial distress afflicted all the public sector banks in the 1980s. The DFIs appear to have run into serious difficulties first, while the emergence of distress in the two main commercial Banks, GCB and SSB was delayed until the mid-1980s. All the banks were rendered insolvent by non-performing assets (NPAs) and had to be restructured in 1989-91. The NPAs included non-performing loans, letters of credit and equity investments which yielded no income. Non-performing loans amounted to ₵32 billion, representing 41% of all outstanding loans to the non-government sector (Kapur et al, 1991, pp 60-61).

After 1983, the banking sector saw a lot of reforms and entry of new banks into the country. Financial Sector Adjustment Programme (FINSAP II and I), Non-Performing Assets Recovery Trust (NPART) and the Foreign 41 Exchange Bureau legislation. A new Banking Law was also promulgated. Aside these reforms, prudential regulations were enacted to protect the stability of the financial system and deposits in ensuring the safety and soundness of the banking system. . The banking laws instituted in the Ghana since the financial distress of state banks include, the Banking Law, 1989 (P.N.D.C.L. 225), Bank of Ghana Act 2002, Act 612, the Banking Act, 2004 (Act 673) and the Banking Amendment Act 2007, (Act 783).

The new banks that entered the Ghanaian banking scene included; Ecobank, First Atlantic Bank, Continental Acceptances (now Cal Bank), Metropolitan and Allied Bank, Prudential Bank, Meridian/ The Trust Bank, International Commercial bank, Unibank, UT bank, Bank of Baroda, Sahel Sahara bank, Stanbic bank, HFC Bank, Amalgamated Bank and recently Standard Trust Bank (now United Bank of Africa, UBA), Zenith Bank, Intercontinental Bank, Access Bank and Guaranty Trust Bank all of Nigerian origin. Thus the banking system in Ghana consists of the Central Bank (BoG), 26 banks and about 151 Rural Banks. The rural banks are supervised by the ARB Apex Bank under the direction of Bank of Ghana.

Various products have been developed in the banking industry over the last decade. Automated teller machines (ATMs) have become common giving clients the freedom to transact business at their own convenience. Also home banking, for example telephone banking, SMS banking and internet banking have been introduced. the Payment Systems Act 2003 (Act 662) empowered the BoG to establish, operate, promote and supervise payment, fund transfers, clearing and settlement systems, subject to rules as it may publish and to designate any other payment, fund transfers, clearing and settlement systems operating in the country which the BoG considers to be in the public interest for it to supervise under the PSA. This lead to the roll out of rolled out the e-zwich, a national payment and settlements system that creates an electronic clearing house for all banking and financial institutions, as well as a biometric smartcard which is a very secure way of paying for goods and services.

Credit Reporting Act 2007 (Act 726) led to the creation of the credit reference bureau which is a repository of credit information and neutral entity that collates consumer credit information by soliciting creditors such as banks and other lending institutions to contribute and share their credit information on consumers. The main importance of the reference bureau is to bridge the information asymmetry in credit markets.

The Cheque Codeline Clearing (CCC) system was introduced in January 2010 to enable banks and other financial institutions to speed up the processing and settlement of cheque transactions. Under the system, depositors of cheques are expected to get value within three days.

III. Determinants of Bank Lending Behaviour : Related Studies

a) *Asset Quality*

The level of non-performing loans in bank's loan portfolio depicts the quality of bank loans which gives an an indication of the profitability bank lending activities. It requires the provision for write-offs of either portions or all of the loans. The write-offs are losses that the banks absorb with its equity capital, hence the banks reluctance to take new risks and commit new 'loans which is described as the credit crunch'. Lower bank asset quality signals banks as to their risk levels, therefore their reluctance to take on more risk through lending. This variable is entered in the model in both levels and lags forms. Amidu and Hinson (2006) found a

© 2013 Global Journals Inc. (US)

contemporaneous between bank lending and credit risk. This study posits that it's rather the experience from giving bad loans that influences banks decision to extend more credit.

b) Deposits

Deposits forms majority of banks liabilities and plays an important role in the intermediation activities of banks. The decisions of banks management to lend are greatly influenced by the volume and cost of deposits to the banks. The interest paid on deposits ensures that banks should earn return over and above their cost of funds, hence the transformation of these liabilities to loan assets to generate interest income. The larger the volume of bank deposits, the more loan able funds available to the banks, hence the higher likelihood of given out more loans and advances.

A positive relationship is thus expected between deposits and bank lending behaviour. The deposits ratio is measured as the ratio of customer deposits to total bank liabilities.

c) Management Efficiency

The quality of banks' management is captured by the expenses they pay their employees with a highly skilled work force attracting higher salaries. A highly skilled banking staff are assumed to have better appreciation of loan markets, hence are able to differentiate bad loan from good ones, hence the less likelihood of granting loans which have low probability of default.

d) Equity Ratio

The equity ratio is an indication of the risk characteristics which is risk aversion. Bank capitalization can affect bank willingness and ability to extend long-term loans in several different ways. Banks with larger capital cushion against credit risks should have higher capacity to extend risky, long-term loans. Therefore increasing bank equity enhances the bank's capacity to increase lending. Bank capitalization is measured by the book equity to assets ratio. In addition, better capitalized banks can attract more creditworthy borrowers that will qualify for longer term loans. Alternatively, high levels of capital can reveal risk averse and conservatively managed banks that may be reluctant to issue risky long-term loans. Bouvatier and Lepetit (2007) and Djiogap and Ngomsi (2012) found that poorly capitalized banks are constrained to expand credit.

e) Income Diversification

The diversification of banking activities serves to stabilise bank income by focusing other sources of bank income which leads to decreased intermediation activities. This study proxies diversification as the ratio of non-interest income to total income. A negative relationship is expected between diversification and bank lending since diversification ensures that banks use its resources in non-interest generating activities.

f) Intermediation Spread

The spread between interest income and expense gives an indication of bank profitability. A higher spread means lending is profitable and thus profit driven bank management are more likely to lend more. Therefore, it is expected that higher interest margin will induce banks to give out more loans and advances. On the other hand, a higher spread gives an indication of a costly lending business leading to low risk borrowers being charged above average rates. This would reduce the loan customers, hence demand for loanable funds.

The point of departure of this study from literature (ie Amidu and Hinson, 2006) lies in its methodological approach. The often used non-performing loan ratio was used as a proxy for bank lending whereas it was hypothesised that the asset quality also has a persistence effect on bank lending behaviour. This study hypothesizes that, after building up its loan portfolio, there is a year's lag assessment of the performance of the portfolio by management after which decisions are made as to whether to continue expanding their loan portfolio to be more profitable or concentrate its efforts on improving its existing portfolio.

IV. Data and Methodology

This research considered 25 banks in Ghana covering the period from 2005 to 2010 using annual bank data. The data was obtained from the Bank of Ghana which serves as the regulatory body for Ghanaian banks. A pooled time series cross-section analysis was employed in the analysis of the data.

a) Measures of Asset Quality

In line with literature, this study posits the use of the non-performing loans ratio as a proxy for bank asset quality (ASQ) which is measured as the ratio of non-performing loans to gross loans and advance. Making use of a unique dataset which decomposes the non-performing loans into substandard loans ratio (SSLR), doubtful loans ratio (DLR) and loss loans (LLR). A more robust evidence is brought to the studies by also using the ratios of the three classes of non-performing loans as proxies for assets quality.

b) Empirical Model

To examine the impact of asset quality on bank lending behaviour, the study estimated the model below which was adopted and modified from Olokoyo (2011) and Djiogap and Ngomsi (2012) for the panel data analysis.

$$LEND_{i,t} = \alpha_i + \beta_1 ASQ_{i,t-1} + \beta_2 ASQ_{i,t} + \beta_3 DEPR_{i,t} + \beta_4 INTSPRD_{i,t} + \beta_5 INCDIV_{i,t} + \beta_6 MEFF_{i,t} + \beta_7 EQR_{i,t} + \varepsilon_{i,t}$$

© 2013 Global Journals Inc. (US)

$$LEND_{i,t} = \alpha_i + \beta_1 LLR_{i,t-1} + \beta_2 LLR_{i,t} + \beta_3 DEPR_{i,t} + \beta_4 INTSPRD_{i,t} + \beta_5 INCDIV_{i,t} + \beta_6 MEFF_{i,t} + \beta_7 EQR_{i,t} + \varepsilon_{i,t}$$

$$LEND_{i,t} = \alpha_i + \beta_1 DLR_{i,t-1} + \beta_2 DLR_{i,t} + \beta_3 DEPR_{i,t} + \beta_4 INTSPRD_{i,t} + \beta_5 INCDIV_{i,t} + \beta_6 MEFF_{i,t} + \beta_7 EQR_{i,t} + \varepsilon_{i,t}$$

$$LEND_{i,t} = \alpha_i + \beta_1 SSLR_{i,t-1} + \beta_2 SSLR_{i,t} + \beta_3 DEPR_{i,t} + \beta_4 INTSPRD_{i,t} + \beta_5 INCDIV_{i,t} + \beta_6 MEFF_{i,t} + \beta_7 EQR_{i,t} + \varepsilon_{i,t}$$

$LEND_{i,t}$ is the ratio of loans and advances to total assets for bank *i* in period *t*, ASQ_{it-1} represents the lag of asset quality, $ASQ_{i,t}$ is the banks' assets quality, the non-performing loans ratio for bank *i* in period *t*, $LLR_{i,t}$ is the loss loan ratio for bank *i* in period *t*, $LLR_{i,t-1}$ is the lag of loss loan ratio, $DLR_{i,t}$ is the doubtful loan ratio for bank *i* in period *t*, $DLR_{i,t-1}$ is the lag of doubtful loan ratio, $SSLR_{i,t}$ is the substandard loan ratio for bank *i* in period *t*, $SSLR_{i,t-1}$ is the lag of substandard loan ratio, $DEPR_{i,t}$, the ratio of bank deposits to total liabilities of bank *i* in period *t*, $INTSPRD_{i,t}$, the interest spread for bank *i* in time *t*, $INCDIV_{i,t}$, proxied as the ratio of non-interest income to total income for bank *i* in time *t* $MEFF_{i,t}$ represents the ratio of staff and administration expenses to total operating expenditure for bank *i* at time *t*, $EQR_{i,t}$, the ratio of equity to total assets for bank *i* in time *t*, , and ε_{it} is the error term for bank *i* in time t while α_i is the firm-specific fixed effects.

Table 4.1 : Expected Results

VARIABLE	SYMBOL	EXPECTED SIGN
Asset Quality.L1	ASQ_{t-1}	Negative
Asset Quality	ASQ	Negative
Loss Loan Ratio.L1	$LLR_{i,t-1}$	Negative
Loss Loan Ratio	LLR	Negative
Doubtful Loan Ratio.L1	$DLR_{i,t-1}$	Negative
Doubtful Loan Ratio	DLR	Negative
Substandard Loan Ratio.L1	$SSLR_{i,t-1}$	Negative
Substandard Loan Ratio	SSLR	Negative
Deposit Ratio	DEP	Positive
Management Efficiency	MEFF	Negative
Equity	EQR	Positive
Income Diversification	INCDIV	Positive
Interest Spread	NITI	Negative

c) Estimation Technique

The tendency for a correlation between the unobservable heterogeneity μ_i of each firm and the explanatory variables of the model makes the ordinary least squares (OLS) biased. If there is a correlation, $E(\mu_i, x_{1i,t}) = E(\mu_i, x_{2i,t}) \neq 0$ *or* $cov(\mu_i, x_{1i,t}) \neq 0$, it would be possible to obtain the consistent estimation by means of the within-group estimator of fixed effects. Otherwise (random effects) a more efficient estimator can be achieved by estimating the equation by generalized least squares (GLS). The normal strategy to determine whether the effects are fixed or random is to use the Hausman (1978) test under the null hypothesis of random effects model. If the null hypothesis is rejected, the effects are considered to be fixed, and the model is then estimated by OLS. If the null hypothesis is accepted, there would be random effects, and the model is then estimated by GLS, which according to Baltagi (1995) allows the Random Effects Model to support inference for the population, assuming the sample is representative of the underlying population.

© 2013 Global Journals Inc. (US)

V. Discussion of Findings

a) Summary Statistics and Test for Multicollinearity

The study sought to establish the impact of bank asset quality on bank lending over the study period. An empirical model was estimated with bank lending, the dependent variable measured as the ratio gross loans and advances to total assets while the independent variables included the lag of asset quality, asset quality, deposit ratio, management efficiency, equity ratio, income diversification and net interest spread. The summary statistics of the variables are displayed in Table 5.8. From the table, the mean value of bank lending (LEND), 0.6706 indicates that an average Ghanaian banks uses 67.06 percent of its assets as to make loans (loans forms 67 percent of banks total assets), with the deposit ratio (DEPR) of 0.7394 also indicating that most banks liabilities are sourced from deposits. This implies that the banks are more focused on their intermediation activities of deposit taking and granting of loans. Management efficiency (MEFF), measured as the ratio of staff and administration expenses to operational expenses has a mean of 0.7738 indicating that the banks spend 77.38 percent of their income on staff and administration costs. The means for equity ratio (EQR), interest spread (INTSPRD), income diversification (INCDIV) and asset quality (ASQ) are 0.1428, 0.6366, 38.91 and 0.1157 respectively.

Table 5.1 : Summary Statistics and Correlation Matrix

SUMMARY STATISTICS										
	LEND	ASQ	LLR	DLR	SSLR	DEPR	NITI	INCDIV	MEFF	EQR
Mean	0.67	0.115	0.058	0.031	0.026	0.74	8.67	0.39	0.54	0.14
Std. Dev.	0.83	0.12	0.08	0.04	0.03	0.15	69.89	0.12	31.53	0.11
Minimum	0.01	0.00	0.00	0.00	0.00	0.24	0.29	0.12	0.35	0.03
Maximum	.550	0.70	0.54	0.29	0.14	0.99	.813	0.71	0.361	0.76
N	140	140	140	140	140	141	141	141	141	137
CORRELATION MATRIX										
LEND	1									
ASQ	-0.059	1								
LLR	-0.050	0.88***	1							
DLR	-0.092	0.76***	0.47***	1						
SSLR	0.023	0.51***	0.17*	0.38***	1					
DEPR	0.140*	0.016	0.0007	0.05	-0.01	1				
NITI	-0.075	-0.09	-0.06	-0.07	-0.08	0.044	1			
INCDIV	-0.128	-0.14*	-0.20**	0.03	-0.05	0.024	-0.01	1		
MEFF	-0.069	-0.09	-0.06	-0.07	-0.07	0.112	0.25***	-0.06	1	
EQR	0.36***	-0.1	-0.09	-0.09	-0.04	0.177	-0.015	-0.21**	-0.03	1

Lend=Gross Loans/Assets ASQ=Non-performing Loans Ratio, LLR=Loss Loan Ratio, DLR=Doubtful Loan Ratio, SLR= Substandard Loan Ratio, DEP=Deposits/Total Liabilities, MEFF=Staff and Administration Expenses/Total Expenditure EQR=Equity Ratio NITI=Net Interest Income/Total Income, INCDIV=Non-Interest Income/Total Income,

The strength of relationships among the independents can affect the regression coefficients. In order to arrive at robust and consistent estimates, a correlation coefficient was estimated to measure the strength of the relationship among the independent variables. The results as presented in Table 5.1 indicates a weaker relationships among the independent variables hence the issue of multi-collinearity with the independent variables which produces biased regression estimates was avoided.

b) Regression Results

Panel regression is also estimated depending on the relationship between the unobserved terms and the explanatory variables. To determine the whether to use the random effects or fixed effects estimation, a Hausman (1978) specification test was carried out with the null hypothesis that difference in coefficients is not systematic. The results for four models do not reject the null hypothesis that random effects estimation provides consistent and unbiased estimates of the regression

© 2013 Global Journals Inc. (US)

model. On other model diagnostics, the error terms were found to be serially correlated and heteroskedastic, hence the random effects model was estimated taking into account the behaviour of the disturbance terms.

For the random effects models, the Wald χ^2 results (Prob > χ^2 = 0.0000) indicates a rejection of the null hypothesis implying that that the independent variables jointly explains the variations in bank lending. The R-squared of 0.6366, 0.6615, 0.5980, 0.6325 indicates that 63.66 percent, 66.15 percent, 59.80 percent and 63.35 percent variations in bank lending behaviour is explained by the models 1, 2, 3 and 4 respectively as shown in table 5.2. The results of the random effects (RE) estimation as shown in Table 5.2 find a significant negative relationship between the lags of asset quality (ASQ.L1), loss loan (LLR.L1), doubtful loan (DLR.L1) and bank lending. Also, deposits ratio (DEPR), management efficiency (MEFF) and equity ratio (EQR) were found to significantly influence the lending behaviour of Ghanaian banks as measured by the ratio of gross loans and advances to total assets.

Table 5.2 : Random Effects Model with First Order Autocorrelation and Heteroskedastic Disturbances

DEPENDENT VARIABLE : BANK LENDING				
	Model 1	Model 2	Model 3	Model 4
Constant	0.109 (0.29)	0.074 (0.2)	0.073 (0.18)	-0.042 (-0.1)
ASQ.L1	-0.809 (-1.99)**			
ASQ	-0.198 (-0.39)			
LLR.L1		-1.279 (-1.92)*		
LLR		-0.154 (-0.13)		
DLR.L1			-1.916 (-1.96)**	
DLR			-1.542 (-1.4)	
SSLR.L1				-0.832 (-0.33)
SSLR				0.215 (0.12)
DEPR	0.826 (2.14)**	0.849 (2.25)**	0.797 (1.97)**	0.788 (2.13)**
NITI	-0.003 (-0.84)	-0.004 (-0.93)	-0.003 (-0.63)	-0.003 (-0.91)
INCDIV	-0.850 (-1.0)	-0.901 (-1.09)	-0.755 (-0.86)	-0.698 (-0.76)
MEFF	-0.002 (-2.86)***	-0.002 (-2.47)**	-0.002 (-2.71)***	-0.001 (-2.41)**
EQR	3.503 (2.69)***	3.528 (2.67)***	3.613 (2.83)***	3.656 (2.83)***
MODEL DIAGNOSTICS				
Wald χ^2 (7)	67.09***	61.22***	74.39***	61.5***
R-square	0.6366	0.6615	0.5980	0.6325
Adj. R-square	0.6124	0.6389	0.5712	0.6080
BP-CW Hettest χ^2 (1)	111.11***	114.77***	112.34***	108.43***
AR(1) F(1, 21)	16.857***	18.857***	15.984***	9.182***
Hausman χ^2 (7)	3.98	3.82	9.31	4.85
Prob>χ^2	0.7826	0.8008	0.2314	0.6781
Number of Banks	25	25	25	25
Observations	113	113	113	113

****, ** and * denotes significance levels of 1%, 5% and 10% respectively, z-statistics are in parentheses, BW/CW Hettest=Breusch-Pagan/Cook Weisberg Heteroskedasticity test, AR(1)=Autocorrelation test*

The lag of asset quality was found to be negatively related to bank lending. This can be explained that current levels of a bank's non-performing loans to mean an unprofitable lending business, hence the banks reluctance to extend more credit in future. Higher levels of non-performing loans (lower asset quality) inhibit the bank's ability to extend more credit since it will concentrate its efforts on improving on the performance of its current loan portfolio. This finding supports the credit crunch theory (Bernanke et al. 1991) that problem loans (non-performing) clog credit channels making it difficult for businesses and households to obtain credit. This relationship is significant at 5 percent. The coefficient of -0.809, which denote elasticity of lending with respect to bank asset quality indicates that a percent deterioration in asset quality reduces any future bank lending by 80.9 percent. Jordan et al. (2002) found that the cyclicality of loan loss provisions directly affects bank profits and bank capital which could influence the bank's incentive to grant new loans. Amidu and Hinson (2006) and Bouvatier and Lepetit (2007) also provided evidence of the influence of asset quality on bank lending behaviour. However, this study finds that such a relationship is not contemporaneous but persistent as evident by the insignificant negative coefficient between asset quality

© 2013 Global Journals Inc. (US)

(ASQ) and bank lending. With the lags of the three classes of bank asset quality, both loss loan and doubtful loan ratios exhibited significant negative relationship with bank lending behaviour at 1 percent and 5 percent significance levels respectively. This supports the persistence impact of bank asset quality on lending behaviour.

In terms of the deposit ratio, the z-statistics reveal that volume of deposits of banks liabilities is significant at 5 percent level with a positive coefficient in all four models, portraying that the amount of loanable funds banks are able attract positively impact on the banks' lending behaviour. This means that, as banks continuously accumulate deposits which attract interest expense, they must generate enough returns to cover that interest expense and make profit hence, the extension of loans and advances to earn interest income cover their deposit cost. Similar relationship was found by Olokoyo (2011) in Nigeria and Bouvatier and Lepetit (2007) on European banks. Management inefficiencies also showed a negative relationship with lending behaviour.

A positive and significant relationship was found between bank equity capital and lending behaviour confirming a priori expectation that riskier lending businesses culminating in loan write-offs depletes banks equity capital which affect banks capacity to take on more risk at a 5 percent significant level.. This finding supports the capital crunch argument of Richard Syron (cited by Bernanke et. al, 1991).

Interest spread (NITI), a proxy for bank lending rate and the proxy for bank income diversification (INCDIV) were found to have insignificant negative relationship with bank lending, Olokoyo (2011) found no significant relationship between bank lending and lending rate in Nigeria.

VI. Conclusion and Recommendations

The importance of the banking institutions as intermediaries in channeling funds from the surplus spending units to deficit spending units cannot be overemphasized with regards to its contributions to growth in developing countries. Therefore, factors that inhibits the banking institutions decisions to extend credit which is vital for growth has to be identified and remedied. In this direction, this study examined the relationship between bank lending behaviour and asset quality of Ghanaian banks. By employing a random effects (RE) estimation with both auto-correlated and heteroskedastic disturbance term to bank level data of 25 banks from 2005 to 2010, a robust evidence on the determinants of bank lending behaviour in an environment where deteriorating bank asset quality poses a great challenge to the stability of the financial system. Banking lending was found to be the dominant function of Ghanaian banks over the study period. The empirical evidence that the deteriorating loan portfolio of banks (low bank asset quality) has a persistence and not contemporaneous effect on bank lending. Banks with poor loan portfolio reduces the loan originations in favour of improving the performance of its loan portfolio. Shortage of loanable funds, inefficient bank management and less-capitalized banks are more lend (credit slowdown/crunch). Based on the findings of the study, it is recommended that efforts should be made to improve the performance of bank loan portfolios and innovative ways devised to bring in more deposits to enhance bank lending in Ghana.

References Références Referencias

1. Amidu, M. and Hinson, R. (2006) "Credit Risk, Capital Structure And Lending Decisions Of Banks In Ghana" *Banks and Bank Systems / Volume 1, Issue 1, 2006.*
2. Anin, T. E. (2000), *Banking in Ghana,* Woeli Publishing Services.
3. Ayuso, J., Perez, D. and Saurina, J. (2004), "Are capital buffers pro-cyclical? Evidence from Spanish panel data", *Journal of Financial Intermediation,* Vol. 13, pages 249–264.
4. Banking Law, 1989 (P.N.D.C.L. 225).
5. Bank of Ghana (1992), Annual Report and Accounts Accra.
6. Bank of Ghana Act (2002) Act 612.
7. Banking Act, 2004 (Act 673).
8. Baltagi, H.B., (1995), *"Econometric Analysis of Panel Data",* John Wiley and Sons, New York.
9. Bernanke, B. S., Cara S. L. and Benjamin M. F. (1991), "The Credit Crunch", *Brookings Papers on Economic Activity,* Vol. 1991, No. 2, pages 205-247.
10. Bernanke, B.S. and Gertler, M. (1995), "Inside the black box: the credit channel of monetary policy transmission", *Journal of Economic Perspectives,* Vol. 9, pages 27–48.
11. Bouvatier, V. and Lepetit, L. (2007), " Banks' procyclical behavior: Does provisioning matter?" *Journal of International Financial Markets, Institutions and Money,* 321, pages 1-14. online from: 10.1016/j.intfin.2007.07.004.
12. De Haas, R., Ferreira, D. and Taci, A. (2010), "What determines the composition of banks' loan portfolios? Evidence from transition countries", *Journal of Banking & Finance,* Vol. 34, pages 388–398.
13. Djiogap, C.P. and Ngomsi, A. (2012), "Determinants of Bank Long-term Lending Behavior in the Central African Economic and Monetary Community (CEMAC)", *Review of Economics & Finance,* Academic Research Centre of Canada, ISSNs: 1923- 7529; 1923-8401, pages 107-114.
14. Gambera, M. (2000), "Simple Forecasts of Bank Loan in the Business Cycle", *Emerging Issues Series,* Vol. 3, pages 1–27.

© 2013 Global Journals Inc. (US)

15. Ehrmann, M., Gambarcota, L., Martinez-Pag`es, J., Sevestre, P. and Worms, A. (2003), Financial system and the role of banks in monetary policy transmission in the Euro Area. In: Angeloni, I., Kashyap, A., Mojon, B. (Eds.), Monetary Policy Transmission in the Euro Area. Cambridge University Press.
16. Gambacorta, L. and Mistrulli, P.E. (2004), "Does bank capital affect lending behavior?" *Journal of Financial Intermediation,* Vol. 13, pages 436-57.
17. Furfine, C. (2001) "Bank portfolio allocation: the impact of capital requirements, regulatory. Monitoring and economic conditions", *Journal of Financial Services Research,* Vol. 20, pages 33–56.
18. Hausman, J. A. (1978), "Specification tests in econometrics", *Econometrica* 46:6, pages 1251-1271.
19. International Monetary Fund, (2011), "Ghana: Financial System Stability Assessment Update", *IMF Country Report No*. 11/131.
20. Kapur, I., Hadjimichael, M. T., Hilber P., and Szymczak, P. (1991) "Ghana: Adjustment and Growth, 1983-1991, Washington, DC: *IMF Occasional Paper,* No. 86, September".
21. Kashyap, A.K. and Stein, J.C. (1995), "The impact of monetary policy on bank balance sheets", *Carnerige Rochester Conference Series on Public Policy,* Vol. 42, pages 151–195.
22. Kashyap, A.K. and Stein, J.C. (2000), "What do a million observations on bank say about the transmission of monetary policy", *The American Economic Review,* Vol. 90, pages 407–428.
23. Jokipii, T. and Milne, A. (2008),"The cyclical behaviour of European bank capital buffers, *Journal of Banking and Finance,* 32, 1440–1451.
24. Olokoyo, F.O. (2011), "Determinants of Commercial Banks' Lending Behavior in Nigeria", *International Journal of Financial Research,* Vol. 2, No. 2; pages 61-72.
25. Saarenheimo, Thomas (1995), "Credit Crunch Caused Investment Slump?" *Bank of Finland Discussion Papers,* 6/95, pages 1-27.
26. Payment Systems Act 2003 (Act 662).
27. Van den Heuvel, S.J. (2002), "The Bank Capital Channel of Monetary Policy", University of Pennsylvania, Mimeo.
28. Zicchino, L. (2005), "A model of bank capital, lending and the macro economy: Basel I versus Basel II", *Bank of England, Working Paper,* No. 270.

© 2013 Global Journals Inc. (US)

Global Journal of Management and Business Research
Finance
Volume 13 Issue 4 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Innovative Price Adjustments Technique for Thermal Coal: A Study of Operation Function under Changing Techno Environment

By Dr. Sumeet Gupta, Dr. Manvinder Singh Pahwa & Mr. Ankur Gupta
University of Petroleum and Energy Studies, Dehradun

Abstract - Coal is a vital source of energy in India. Major portion of energy requirement in India fulfill by coal based thermal power plant. Price of electricity indirectly depends on raw material (coal). In India coal trading generally done on over the counter basis, in which price of coal is depend on settlement price of coal as per the quality of coal. Coal price is generally calculated on certain parameter moisture content, calorific value, ash content, sulfur content. India supplier settles coal prices on some formula to adjust coal price.

The object of this paper is to highlight the price adjustment formula which buyer and seller used to calculate price settlement for their contract agreement. Price of coal is generally decided by their calorific value, moisture content, ash content and sulphur content in coal. So for the adjustment in price Coal supplier and buyer use some formula as per quality to adjust quantity.

The aim of this paper is to amend existed formula, and to give innovative approach to implement a price adjustment formula of coal as per the quality bases.

Keywords : moisture content, sulphur content, Ash content, calorific value, price adjustment.

GJMBR-C Classification : JEL Code: P22, O31

INNOVATIVEPRICEADJUSTMENTSTECHNIQUEFORTHERMALCOALASTUDYOFOPERATIONFUNCTIONUNDERCHANGINGTECHNOENVIRONMENT

Strictly as per the compliance and regulations of:

© 2013. Dr. Sumeet Gupta, Dr. Manvinder Singh Pahwa & Mr. Ankur Gupta. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Innovative Price Adjustments Technique for Thermal Coal: A Study of Operation Function under Changing Techno Environment

Dr. Sumeet Gupta [α], Dr. Manvinder Singh Pahwa [σ] & Mr. Ankur Gupta [ρ]

Abstract - Coal is a vital source of energy in India. Major portion of energy requirement in India fulfill by coal based thermal power plant. Price of electricity indirectly depends on raw material (coal). In India coal trading generally done on over the counter basis, in which price of coal is depend on settlement price of coal as per the quality of coal. Coal price is generally calculated on certain parameter moisture content, calorific value, ash content, sulfur content. India supplier settles coal prices on some formula to adjust coal price.

The object of this paper is to highlight the price adjustment formula which buyer and seller used to calculate price settlement for their contract agreement. Price of coal is generally decided by their calorific value, moisture content, ash content and sulphur content in coal. So for the adjustment in price Coal supplier and buyer use some formula as per quality to adjust quantity.

The aim of this paper is to amend existed formula, and to give innovative approach to implement a price adjustment formula of coal as per the quality bases.

Keywords : moisture content, sulphur content, Ash content, calorific value, price adjustment.

I. Introduction

Coal is a vital source of energy in India. Major portion of energy requirement in India fulfill by coal based thermal power plant. Cost of electricity indirectly depends on raw material (coal). In India coal trading generally done on over the counter bases, in which price of coal is depend on settlement price of coal as per the quality of coal. Coal price is generally calculated on certain parameter moisture content, calorific value, ash content, sulfur content. India supplier settles coal prices on some formula to adjust coal price.

Coal being a commodity does not have uniform quality of coal. The quality of coal changes with every shipment and is different for every rake supplied to power utilities. Commercially, in India and various countries some adjustment is done in case of variation in quality of coal. There are some quality parameters guaranteed by supplier within the quality range, as finalized with their Suppliers.

a) Price Adjustment Formula

The imported coal to be supplied under any agreement between two parties follow price adjustment formula based on calorific value of coal specification. There is specified range of guaranteed parameters which depends on agreement specified earlier:

Typical price basis for supply of coal to major thermal power plants in India
Total Moisture: 16%
Ash content: 10%
Sulphur content: 80%
Gross calorific value: 6400kcal/kg

Generally a range of coal parameters are specified along with base parameter for price. The indices of these base parameters are published daily e.g. API4, NEX, global Coal Index.

Based on the published indices and actual quality of coal supplied, price of coal is determined.

II. Adjustments Due to Quality Variation

In the variation of the quality parameter, suitable adjustment will carried out as per the formula given here:

a) Total Moisture (ARB)

If there are moisture present in the coal then adjustment in quantity of coal in weight for x% increase over the guarantee total moisture, total weight is reduced by x%.

But the in case of decrease in total Moisture below the guaranteed value is ignored.

ARB: as received bases.

b) Ash Content (ADB)

For every increase of x% of the ash content, the weight of coal reduced by x%.

But the decrease in the ash content below the guaranteed value will be ignored.

c) Sulphur (As Dried Bases)

If the sulphur content in delivered coal quantity is increased by some percentage then penalty should be levied as per the agreement in the contract.

Author α : Assistant Prof Selection Grade Department of Accounting and Finance University of Petroleum and Energy Studies, Dehradun.
E-mail : sumeetbgh2007@gmail.com
Author σ : Associate Prof and Head Department of Accounting and Finance University of Petroleum and Energy Studies, Dehradun.
E-mail : mspahwacs@gmail.com
Author ρ : Student – MBA Energy Trading.
E-mail : ankuruptti@gmail.com

© 2013 Global Journals Inc. (US)

d) Objectives of the Study

1. To compute Adjustment in quantity of Coal as per moisture content.
2. To compute penalty should be levied on quantity of coal as per sulphur content.

e) Research Design

Research Methods which have been used for this project are as follow:

i. *Exploratory Research Method*

This research is considered as an exploratory due to the following reasons:

- The research aims is to provide a comprehensive insight study into a newly developed situation.
- The research primarily relies on secondary sources of data.

f) Source of Data

In this study of project secondary data used:

i. *Secondary Source of Data*

For this research several source of secondary data have been used.

- Tender report for Coal trading contract.
- Modern ***ABC*** of ***Textbook Chemistry*** Vol. I & II For by Dr. S.P.Jauhar Modern.
- Internet search
- Research paper publish on world /India energy market
- Report published on Coal trading.

III. Adjustment Due to Moisture Content in Imported Coal

If coal contains moisture then extra energy in form of heat require to burn coal. The amount of heat can be calculated as:

a) Amount of Heat Required to Evaporate Moisture Contain in Thermal Coal

The amount of heat required to heat a subject from one temperature level to another can be expressed as:

$$Q = c_p\, m\, DT$$

Where

Cp = Specific Heat (kJ/kg.K),
Q = Amount of heat (kiloJoule) and
M = mass (kg)
dT = temperature difference between hot and cold side (K)

b) If Coal Contains Moisture in form of Water then Amount of Energy Required to Evaporate Water is

Let the energy (in form of heat) needed to heat 1.0 kg of water from 0 °C to 100 °C when if the specific heat of water is 4.19 kJ per kg K:

$$Q = (4.19 \text{ kJ/kg.K})*(1.0 \text{ kg})*((100\,^{\circ}\text{C}) - (0\,^{\circ}\text{C})) = 419 \text{ (kJ)}$$

c) Boiling Water at 100°C, 0 Bar Atmospheric Pressure

At atmospheric pressure water boils at 100 °C, and 417.51 kilo joule of energy will be required to heat 1 kg of water from 0 °C to its evaporating temperature of 100 °C.

Another 2257.92 kJ of energy in form of heat are also required to evaporate 1 kg of water at 100 °C into 1 kg of steam at 100 °C

Total heat requires to evaporating water is:

$$Hs = (417.51 \text{ kJ/kg}) + (2257.92 \text{ kJ/kg}) = 2675.43 \text{ kilojoules/kg} = 639.443 \text{Kcal/KG}$$

So from the above result we justified that 640 kilo cal heat is required if coal contain 1 kg of water as form of moisture. So there should be a requirement of amendment of price adjustment formula of coal as specified above.

d) Adjustment

In moisture contain adjustment generally we reduced weight of coal by x% if moisture is excess by x%.

- One kg of coal equivalent to 6300kcal of energy.
- One kg of water requires 640kcal of heat to evaporate.

So in a adjustment formula 1 kg of water = 0.1 kg of coal

e) Finding

Actual amendment in price adjustment should be 1.1x% of reduction in quantity of coal if there is x% moisture contain in imported coal. Because this excess of amendment should be done due to equivalent the amount of heat require to evaporate water inform of moisture present in coal.

f) Mechanical Work done on Excess of Moisture Contain in Coal

There are also some mechanical work should be done to uplift the weight of coal due to the excess of moisture which can be calculated as:

Work = Force x Distance

Example - Work done by Force

Let if 100 kg of coal have 1% moisture that means it have 1kg of water, so to lift this excess amount of coal work has to be done, which can be calculated as follow:

The work done by force 1 kg water moving a body 50 m can be calculated as

W = F*L =mg*l where m is weight and g is gravitational force.

=1*10*50=500Nm

Work is described as the product of the applied pressure and the displaced volume:

Work = Displaced volume x Applied pressure

Global Journal of Management and Business Research (C) Volume XIII Issue IV Version I Year 2013

© 2013 Global Journals Inc. (US)

The unit of work is joule, which is defined as the amount of work done when a force of 1 Newton acts for a distance of 1 m in the direction of the force.

$$1\ J = 1\ Nm$$

So total energy required is 500 joule.

Example - Work due to Gravitational Force

The work done when lifting a mass of 1kg an elevation of 10 m can be calculated as

$$W = m^* g^* h$$
$$= (1\ kg)^* (10\ m/s^2)^* (10\ m)$$
$$= 100Nm\ (J)$$

IV. Result

Energy required lifting and transport of moisture contain in coal can be calculate by excess of work done on weight of moisture. Amount of this energy is variable in nature depends upon distance travelled by coal.

Finding: First finding of our report due to moisture content require following amendments:

- ❖ If imported coal content x% moisture above the agreed limit then we should decrease coal quantity by 1.1x% because of extra energy requirement of burning of coal.
- ❖ There should be amendment because of uplifting the excess moisture, which cause excess of freight charges to transport coal.

V. Adjustment Due to Sulphur Content in Coal

Sulphur is a most harmful and environmentally damaging pollutant in our air. Each year, uncontrolled power plants release much more sulphur into the air then cars, truck and factories. Power plants sulphur comes from burning coal. SO_2 emissions are a major problem in the burning of coal and depend on the level of their sulphur concentration. Thermal coal is used in power plant is,a major source of sulphur emission in India.

a) Price Adjustment for Sulphur: (Air Dried Bases)

i. *Present Penalty Adjustment in Indian Industry*

The sulphur content in coal should be limited to 0.8 % and there shall not be any penalty for sulphur content in the coal received upto 0.8 %. The penalty for sulphur content upto 0.9% shall be @ Rs.10/- per MT for every 0.1% rise and the same above 0.9% shall be @ Rs.15/- per MT for every 0.1% rise .

It is to be noted that if the sulphur content exceed 0.9% for which buyer has to pay penalty for SOx emission above permissible limit that has to be borne by the party.

Calculation of penalty for Sulphur Content (ADB) above 0.8 %

Let the coal sample is having sulphur content of 1 %.

Thus the penalty for high sulphur will be levied in two slabs as below: 5

- @ Rs. 10/- per MT for every 0.1% rise in Sulphur upto 0.9%. As per this, penalty will be for 0.9 (-) 0.8 = 0.1 % = Rs.10/-
- @ Rs. 15/- per MT for every 0.1% rise in Sulphur above 0.9%. As per this, penalty will be for 1.0 (-) 0.9 = 0.1% = Rs.15/-

Hence, penalty deduction per MT for coal received having Sulphur 1.0% the penalty will be:

= Rs. [(i) + (ii)]
= Rs. (10 + 15) = Rs. 25 per MT

Here above rate of penalty change depends upon prior agreements.

b) Penalty Associated with Sulphur Content in Imported Coal Depends Upon Following

Sulphur content in coal is removing by scrubbers, so total cost incurred in purification of flue gas desulphurization is associated as penalty of imported coal .Capital costs for So2 scrubbers applied to electric utilities are reported to be approximately $150/Kw.

Type of scrubber	Size of unit in (MW)	Capital Cost in ($/KW)	O&M Cost ($/KW)	Cost per annum ($/KW)	Cost per tonne of Pollutant Removed ($/ton)
Wet	>400	1000-2500	2-8	20-50	200-500
	<400	2500-1500	8-20	50-200	500-5000
Spray Dry	>200	40-150	4-10	20-50	150-300
	<200	150-1500	10-300	50-500	500-4000

Source : EIA, EPA 2001

Global Journal of Management and Business Research (C) Volume XIII Issue IV Version I Year 2013

© 2013 Global Journals Inc. (US)

c) Calculation

Since the desulphurization cost data is of 2001 and in absence of current data, we may make price adjustment for the inflation.

Assuming a minimum of 5% inflation, compounded inflation factor for 10 years becomes $(1.05)^{10} = 1.63$

So from the above calculation average cost per ton of pollutant removed is 500$/ton.

=500*54 * 1.63 Rs per ton

=44000 per ton

=44 Rs per kg of pollutant removed

Such that if our coal sample content 0.1% of excess of sulphur per metric ton of coal

= 1 kg of sulphur per metric ton of coal

So penalty should be levied should be more than the cost of desulphurization i.e. Rs 44.00 per Mt of coal.

More aware, consumers of steam coal are aware of the fact and have updated the penalty of sulphur. M/s West Bengal Power Development corporation Limited charges Rs 50 PMT for 0.1% increase in sulphur from the guaranteed parameter of 0.8% and charges rs 150 for every 0.1%

VI. Recommendation

Sulphur content in coal is also a major problem for environment. Coal based Thermal power plant are reluctant to cut sulphur contain and their policies are not stringent to contain sulphur pollution in future. Sulphur has ill effect for environment as well as health. Penalty levied on imported coal should be more than cost of desulphurization there should be proper regulation on sulphur emission act.

References Références Referencias

1. www.cea.nic.in
2. www.coalindia.in
3. www.mospi.nic.in
4. www.cea.nic.in
5. www.worldcoal.org
6. www.epa.gov
7. www.iea.com
8. www.planningcommission.nic.in
9. GWC Coal Handbook, ASTM & ISO Standards & others.
10. *Eurostat year book 2008.*

© 2013 Global Journals Inc. (US)

Global Journal of Management and Business Research
Finance
Volume 13 Issue 4 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Financial Performance of Supermarkets in Karnataka

By Dr. Ramappa K.B & Shivaprasad G
Acharya Bangalore B-School, Bangalore

Abstract - Global supermarket food products sales are predicted to generate revenue in excess of $1.70 trillion by 2015, according to research from Global Industry Analysts. Market growth has been driven by the rising importance of consumerism. Since supermarkets first appeared in the US, they have been rolled out all over the globe, with supermarket chains securing their place at the top of the world's retail chain. Due to the effects of the economic recession, the number of consumer visits to supermarkets has fallen over recent years. Currently the UK is undergoing a sustained period of retail growth, with the high level of consumer confidence witnessed in previous years holding up. However, this situation is fragile and could change rapidly. Slower earnings, coupled with speculation about changes in interest rates and job insecurity could affect the rate of growth. Consequently retailers will suffer from even a minor economic downturn as profit margins have already been cut to sustain levels of sales. Overall, however, it is apparent that many retailers are committed to expansion with many new sites due to open over the next few years.

GJMBR-C Classification : JEL Code: F65

FINANCIALPERFORMANCEOFSUPERMARKETSINKARNATAKA

Strictly as per the compliance and regulations of:

Open Association of Research Society, USA
Research | Diversity | Ethics

© 2013. Dr. Ramappa K.B & Shivaprasad G. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Financial Performance of Supermarkets in Karnataka

Dr. Ramappa K.B [α] & Shivaprasad G [σ]

Abstract - Global supermarket food products sales are predicted to generate revenue in excess of $1.70 trillion by 2015, according to research from Global Industry Analysts. Market growth has been driven by the rising importance of consumerism. Since supermarkets first appeared in the US, they have been rolled out all over the globe, with supermarket chains securing their place at the top of the world's retail chain. Due to the effects of the economic recession, the number of consumer visits to supermarkets has fallen over recent years. Currently the UK is undergoing a sustained period of retail growth, with the high level of consumer confidence witnessed in previous years holding up. However, this situation is fragile and could change rapidly. Slower earnings, coupled with speculation about changes in interest rates and job insecurity could affect the rate of growth. Consequently retailers will suffer from even a minor economic downturn as profit margins have already been cut to sustain levels of sales. Overall, however, it is apparent that many retailers are committed to expansion with many new sites due to open over the next few years.

India, with its large, young, and growing population, presents an attractive target for expanding supermarket chains, especially from other less-developed countries. India is attractive to foreign retailers demographically and perhaps economically. Even the local marketers in the developing countries are renovating their traditional shops into a modern supermarket. With this regards an attempt has been made to understand the financial performance of supermarkets (both traditional & organized) in different cities across Karnataka. Various financial ratios were worked out for the year and presented in this paper.

I. Introduction

Retailing in India is one of the pillars of its economy and accounts for 14 to 15 percent of its GDP (Jonathan, A., et.al, 2007). The Indian retail market is estimated to be US$ 450 billion (Majumder, S., 2011)) and one of the top five retail markets in the world by economic value. India is one of the fastest growing retail markets in the world, with 1.2 billion people (Bharadwaj, V. T., et al, 2005).

The retail market has been the subject of some profound changes over the recent past. The mix of social and economic conditions which prevailed in the 1980s triggered the arrival of a much more discerning consumer, driven not just by value for money but also increased selectivity and a demand for higher quality shopping environments. These conditions continue to impinge on the nature of today's retail market where consumer loyalty has become a vital ingredient in the success of retailers. Increasingly, successful shopping facilities have to fulfill the role of a destination location. In large parts this means providing a wide range of shopping and leisure facilities able to attractand retain the interest of the entire family. In return such schemes benefit not only from much wider catchment areas, but also from substantially longer shopping trips.

Financial performance refers to any company's ability to generate new resources, from day to day operations, over a given period of time. The financial ratio represents the relationship between two accounting figures expressed mathematically. In financial analysis, a ratio is used as an index or yardstick for evaluating the financial performance or status of any institution against certain standards. Ratio analysis technique is popular in the accounting system of enterprises in general and helps in spotting trends towards better or poor performance. It is helpful in finding significant deviations from an average or pre-determined standard.

II. Review of Literature

Arora and ZebulNisha (1996) in their study on rural food processing in Rampur district of UP concluded that even with a low level of operation rural food processing complexes are making profits. Their annual net returns, operating profit to revenue ratio, net profit to revenue ratio, operating ratio and operating efficiency are 23.70, 25.03, 41.81, 34.49 and 58.18, respectively. The working capital intensity, operating profit to capital employed, net profit to capital employed and interest coverage ratios of 51.16, 68.38, 57.01 and 5.90, respectively, prove their financial soundness.

Devaraja (2000) study examined the performance of the Horticultural Producers Cooperative Marketing and Processing Society Limited in Karnataka, India, during the period 1958/59-1995/96. Physical and financial indicators of performance such as membership, retail outlets, share capital, owned funds, total assets, long-term investments, fixed assets, working capital, total liabilities, and sales, were analysed. Results show that there were substantial increases both in physical and financial indicators over the period of study.

Gustafson (2003) study revealed that in Fargo, USA, on an average, both food manufacturing and food retailing small businesses had positive financial

Author α σ : Associate Professor, Acharya Bangalore B-School, Bangalore-91.

© 2013 Global Journals Inc. (US)

characteristics. Although, they were only marginally profitable and liquid, they were highly solvent. Accounts receivable and inventory comprise nearly half of food manufacturers' total assets and a third of food retailers' assets. By most financial measures, food retailers were statistically smaller than food manufacturers. Both food manufacturers and food retailers utilized computers, primarily for accounting/book keeping, inventory management, and administration. Primary financial services used were for transactions and trade credit. Nearly three-fourths of food manufacturing and one-half of food retailing supply purchases involve trade credit from a large number of trade credit suppliers, on average. Both firm types have higher credit risks and were tardy with repayment of trade credit.

III. Methodology

The present study is mainly concerned with the food retailing activities of the supermarkets across selected five cities in particular and Karnataka state in general.

To fulfill the objectives related to the supermarkets operations of the study a multistage random sampling technique was used. In the initial stage, Karnataka state was selected as it is one of the leading states in organized retailing in India. At the second stage, five cities across Karnataka such as Bangalore, Hubli-Dharwad, Mangalore, Belgaum and Mysore were selected as the majority of organized retailers were existed in these areas. Recently, most of the local retailers in these areas also modernizing their stores in the form of modern formats like supermarkets. In the last stage, three supermarkets (one outlet/ branch) from each city were selected randomly, so, that the total sample size selected for the study were 15. Among the number of supermarkets existing in these areas, only three supermarketers who were agreed to provide the data are selected. However, supermarkets which were in operation for at least two successive years were selected and their performances were studied for the last financial year.

The detailed information required for the study was collected from secondary sources in order to accomplish the objective of the study.

The data on financial management aspects like different assets and liabilities, owned fund, inventory, working capital, sales and returns were collected from their records like Balance sheet, Profit and Loss account and Trade account were collected to know the financial status of these supermarkets.

a) Analytical Techniques Employed

The financial ratio analysis technique was considered in evaluating the performance of the supermarkets and they mainly point out the relative importance of the selected items. The financial statements used in this study correspond to the financial year of the supermarkets. The ratio analysis technique has been heavily relied upon, to test the solvency, liquidity, profitability, turnover and sales of the supermarkets.

IV. Results & Discussions

The financial ratios relevant to supermarkets in retailing are grouped under four different categories namely, solvency ratios, liquidity ratios, profitability ratios and turnover ratios and are presented in Table 4. 28.

a) Solvency Ratios

The solvency ratios indicate the extent of amount borrowed per rupee of owned funds in the business. Solvency refers to the ability of the supermarket to repay its outside long-term liabilities/total liabilities in turn it indicates long-term stability of a concern. The solvency ratios analyzed during the study were identified as total liabilities to owned funds ratio and fixed assets to owned funds ratio.

The ratio of total liabilities to owned funds was found to be 0.798, 0.600, 1.905, 3.535, 0.345 in Bangalore, Mysore, Mangalore, Hubli-Dharwad and Belgaum, respectively. Even the ratio of fixed assets to owned funds was found to be highest in Mangalore (1.731) followed by Hubli-Dharwad (1.367) and Bangalore (0.697). This indicated that the amount of borrowed fund per rupee was higher in Hubli-Dharwad followed by Mangalore, Bangalore, Mysore and Belgaum. This was because the amount pooled by the Hubli-Dharwad and Mangalore markets was low when compared to other cities. On the overall across cities, it was 1.400 which indicates the soundness of the supermarket business in the state. The recent conversion of traditional stores to modern type of supermarkets in these cities also made these supermarkets to be more dependency on external funds. Therefore, the supermarkets should taken care for improving the own funds and volume of business to the need of improving financial strengths of the supermarkets.

b) Liquidity Ratios

Liquidity ratio indicates the continuous operation of the supermarkets. These ratios are used to measure the ability of an institution to possess adequate cash to meet immediate obligations. The liquidity position of the supermarkets was examined using two ratios namely liquid assets to total assets ratio and current assets to current liabilities ratio.

It was noticed from the table (Table 4.28) that in all the supermarkets the liquid assets to total assets ratio was less than 0.5, which is 0.459 in Bangalore, 0.404 in Mysore, 0.399 in Mangalore, 0.157 in Belgaum and 0.268 in Hubli-Dharwad and hence the overall was 0.337. It indicated that more than 50 per cent of the assets were not in liquid assets form. Therefore, all the

Global Journal of Management and Business Research (C) Volume XIII Issue IV Version I Year 2013

© 2013 Global Journals Inc. (US)

units should increase the proportion of liquid assets in the total assets so as to improve the liquidity status of all the supermarkets.

The current ratio (ratio of current assets to current liabilities) presented in the table indicates that the ratio was more than one in all the cities supermarkets except Mysore, wherein the ratio was 0.994. It means to say the supermarkets had more than one rupee of current assets per rupee of current liabilities. The minimal acceptable level for value of this ratio is two. Hence, there existed a need for improving the liquidity position of the supermarkets by reducing its dependency on the short-term borrowings.

c) Profitability Ratios

In the present study, the profitability ratios were analysed for measuring the efficiency of the firms in utilizing their resources for generating profits. The profitability of the study supermarkets in this case was analysed through net profits to fixed assets ratio, net profits to total assets ratio, net profits to owned funds ratio and net profits to total sales ratio were calculated and presented in Table 4.28.

Net profits to fixed assets ratio were found to be high in Mysore wherein the ratio was 1.297 and least in Bangalore (0.572) and in other cities also the ratio was more than 0.677. This indicated that the profit generated per rupee of fixed assets was quite good in all the cities in turn it indicates the efficient use of fixed assets by the supermarkets. Similarly, the overall net profit to total assets was 2.499 which indicate that the profit generated per rupee of total assets was nearly 2.50 rupees which indicated the improved efficiency of supermarkets in utilizing the total assets. The ratio of net profits to owned funds ratio point outs the net profits for each rupee of own funds used in the business, which were 4.621 incase of Mangalore, while 1.773 in case of Hubli-Dharwad and the least was observed in Belgaum (0.537). This ratio shows that the supermarkets were quite able to protects its equity and hence generate profits on the equity. Net profits to total sales were also found to be very significant in all the cities across the state indicating more than a 0.170 rupee contribution to per rupee total sales and still there is a need for improving capacity utilization and sales performances.

d) Turnover Ratio

The turnover ratio indicates the operational efficiency of the supermarkets in the study area. The efficiency of supermarkets in the selected cities was compared using the indicators such as working capital turnover ratio and fixed assets turnover ratios.

The working capital turnover ratio indicated the efficiency of a supermarket in utilizing its working capital for generating sales revenues. The ratio was highest of 5.156 in Belgaum followed by 1.890 in Bangalore, 1.576 in Mangalore, 1.539 in Hubli-Dharwad and 1.331 in Mysore supermarkets. This indicated the turnover per unit of working capital was higher in Belgaum over all other supermarkets and good in all other cities. This shows the lack of efficiency in sales even with higher working capital. In contrast, the fixed assets to turnover ratios were higher in the order of Mysore, Hubli-Dharwad, Mangalore, Belgaum and in Bangalore (6.784, 4.319, 3.971, 3.931 and 3.581, respectively). This was because these supermarkets were able to achieve higher sales targets with less investment in fixed assets accordingly.

The above all financial statuses of the retailers/supermarketers were similar to the study conducted by Gustafson (2003). The study revealed that in Fargo, USA, on an average, both food manufacturing and food retailing small businesses had positive financial characteristics. Although, they were only marginally profitable and liquid, they were highly solvent. Accounts receivable and inventory comprise nearly half of food manufacturers' total assets and a third of food retailers' assets.

V. Summary & Conclusions

The ratio of total liabilities to owned funds was found to be 0.798, 0.600, 1.905, 3.535, 0.345 in Bangalore, Mysore, Mangalore, Hubli-Dharwad and Belgaum, respectively. The ratio of fixed assets to owned funds was found to be the highest in Mangalore (1.731) followed by Hubli-Dharwad (1.367) and Bangalore (0.697).

It was noticed that in all the supermarkets, the liquid assets to total assets ratio was less than 0.5, which is 0.459 in Bangalore, 0.404 in Mysore, 0.399 in Mangalore, 0.157 in Belgaum and 0.268 in Hubli-Dharwad and hence the overall was 0.337. It indicated that more than 50 per cent of the assets were not in liquid assets form.

The current ratio (ratio of current assets to current liabilities) presented in the table indicated that the ratio was more than one in all the cities supermarkets except Mysore, wherein the ratio was 0.994. It means to say the supermarkets had more than one rupee of current assets per rupee of current liabilities.

Net profits to fixed assets ratio were found to be high in Mysore wherein the ratio was 1.297 and least in Bangalore (0.572) and in other cities also the ratio was more than 0.677. This indicated that the profit generated per rupee of fixed assets was quite good in all the cities in turn it indicates the efficient use of fixed assets by the supermarkets. Similarly, the overall net profit to total assets was 2.499 which indicate that the profit generated per rupee of total assets was nearly 2.50 rupees which shown the improved efficiency of supermarkets in utilizing the total assets. The ratio of net profits to owned funds ratio point outs the net profits for each rupee of own funds used in the business, which

© 2013 Global Journals Inc. (US)

were 4.621 incase of Mangalore, while 1.773 in case of Hubli-Dharwad and the least was observed in Belgaum (0.537). This ratio shows that the supermarkets were quite able to protect its equity and hence generate profits on the equity. Net profits to total sales were also found to be very significant in all the cities across the state indicating more than a 0.170 rupee contribution to per rupee total sales.

The working capital turnover ratio was highest of 5.156 in Belgaum followed by 1.890 in Bangalore, 1.576 in Mangalore, 1.539 in Hubli-Dharwad and 1.331 in Mysore supermarkets. This indicated the turnover per unit of working capital was higher in Belgaum over all other supermarkets and good in all other cities. In contrast, the fixed assets to turnover ratios were higher in the order of Mysore, Hubli-Dharwad, Mangalore, Belgaum and in Bangalore (6.784, 4.319, 3.971, 3.931 and 3.581, respectively). This was because these supermarkets were able to achieve higher sales targets with less investment in fixed assets accordingly.

The solvency and liquidity ratios of the supermarkets were found to be very negligible and hence they should be taken care for improving the own funds, volume of business and liquidity position to the need of improving financial strengths of the supermarkets.

References Références Referencias

1. ARORA, V.P.S. AND ZEBUL NISHA, 1996, Rural food processing: Management, performance and implications on infrastructural requirements, *Indian Journal of agricultural marketing,* 10:58-59.
2. BHARADWAJ V. T., GAUTAM M. SWAROOP, AND IREENA VITTAL., 2005, "Winning the Indian consumer", Sept 2005, McKinsey and Company Report, 2005.
3. DEVARAJA, T. S., 2000, Performance of HOP-COMS, Karnataka - an economic evaluation, *Indian Cooperative Review,* 38(2): 82-96.
4. GUSTAFSON, C. R., 2003, Financial analysis of small food manufacturing and retailing businesses, Staff Paper Department of Agribusiness and Applied Economics, North Dakota State University. (AAE 03006): 12.
5. JONATHAN ABLETT, AADARSH BAIJAL, ERIC BEINHOCKER, ANUPAM BOSE, DIANA FARRELL, ULRICH GERSCH, EZRA GREENBERG, SHISHIR GUPTA, AND SUMIT GUPTA., May 2007, "The 'bird of gold': The rise of India's consumer market", McKinsey and Company Report, 2007.
6. MAJUMDER, SANJOY, 2011, "Changing the way Indians shop", BBC News, 25th November 2011.

Table 1 : Financial Performance of Supermarkets

Ratios	Particulars	Bangalore	Mysore	Mangalore	Hubli-Dharwad	Belgaum	Overall
Test of Solvency	Ratio of total liability to owned funds	0.798	0.600	1.905	3.353	0.345	1.400
	Fixed assets to owned funds ratio	0.697	0.317	1.731	1.367	0.154	0.853
Test of Liquidity	Ratio of liquid assets to total assets	0.459	0.404	0.399	0.268	0.157	0.337
	Ratio of current assets to current liabilities	1.275	0.994	1.943	1.741	3.623	1.915
Tests of Profitability	Net profits to fixed assets ratio	0.572	1.297	0.677	0.717	0.705	0.811
	Net profits to total assets ratio	1.373	3.146	2.187	0.868	4.509	2.499
	Net profits to owned funds ratio	0.856	1.229	4.621	1.773	0.537	1.989
	Net profits to total sales ratio	0.205	0.191	0.170	0.180	0.178	0.189
Test of Turnover	Working capital turnover	1.431	1.331	1.576	1.375	5.156	2.174
	Fixed assets turnover ratio	2.716	6.784	3.971	3.974	3.931	4.275

© 2013 Global Journals Inc. (US)

Global Journal of Management and Business Research
Finance
Volume 13 Issue 4 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Analysis of the Determinants of Earnings Smoothing: The Case of Tunisian Companies

By Myriam Boudiche
El Manar University, Tunis Cedex, Tunisia

Abstract - The objective of this paper is to analyze the impact of the determinants of income smoothing in Tunis, which is to reduce the volatility of results.

From a sample of 50 companies listed on the stock exchange of Tunis (Tunis Stock Exchange) during the period 2006-2010. We have developed an explanatory model of earnings management practices based on logistic regression. Our results show that the use of debt companies, calling the companies audited by a firm of "big six" provides a smoothing of results high.

In the end, this original work of Tunisian data led to very carefully reinterpret the results of previous studies.

Keywords : *earnings management, manager, operating profit.*

GJMBR-C Classification : *FOR Code: 150201, JEL Code: F65*

ANALYSISOFTHEDETERMINANTSOFEARNINGSSMOOTHINGTHECASEOFTUNISIANCOMPANIES

Strictly as per the compliance and regulations of:

© 2013. Myriam Boudiche. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Analysis of the Determinants of Earnings Smoothing: The Case of Tunisian Companies

Myriam Boudiche

Abstract - The objective of this paper is to analyze the impact of the determinants of income smoothing in Tunis, which is to reduce the volatility of results.

From a sample of 50 companies listed on the stock exchange of Tunis (Tunis Stock Exchange) during the period 2006-2010. We have developed an explanatory model of earnings management practices based on logistic regression. Our results show that the use of debt companies, calling the companies audited by a firm of "big six" provides a smoothing of results high.

In the end, this original work of Tunisian data led to very carefully reinterpret the results of previous studies.

Keywords : earnings management, manager, operating profit.

I. Introduction

It is commonly accepted that leaders seek to change the perception of stakeholders on the financial situation of the company managing the results according to their objectives. Managers results "down" to reduce the amount of taxes, manage "upward" to meet the expectations of financial analysts or the smooth (Dechow and Skinner, 2000). Indeed, in a context of asymmetric information and bounded rationality stakeholders, smoothing results may provide various gains, reducing the volatility of results.

Our contribution is to highlight the importance of some specific incentives smoothing results in the context of the Tunisian economic environment. We analyze the impact of specific factors that potentially influence the policy of smoothing results.

Smoothing is done in order to achieve the forecasts made by financial analysts or announced by the leaders. Indeed, Bartov, Givoly and Hayn (2002) noted that leaders are forced to manage the results according to these forecasts prove to shareholders and much of their information.

The approach adopted by the authors to study the impact of earnings management is essentially based on a quantitative approach. However, Durtschi and Easton (2005) have questioned the appropriateness of the models used because of the researchers' ability to measure reliably the observed phenomenon. Ramana and Watts (2007) admit that the motivation to manage different results from one society to another and that the expected gains from smoothing are more important for the most indebted companies, smaller and operate in sectors business more competitive.

In the end, this paper adds to the literature in two ways, in one hand, it analyzes the high sensitivity of smoothing to methodological choices. In this sense, it leads to very carefully reinterpret the results highlighted by Leuz, Nanda and Wysocki (2003), who retained a measure of specific smoothing. On the other hand, our study complements the international literature by providing current results on the determinants of income smoothing by Tunisian companies such as debt, the size of the company, the industry, the leaders in capital and audit quality.

This paper is organized as follows. In second section, we describe our methodology. The third section is devoted to the analysis of the determinants of smoothing. A final section summarizes our results and concludes.

II. Methodology

a) *Sample*

In a baseline study of smoothing results at international level, Leuz, Nanda and Wysocki (2003) find that companies located in countries where shareholders protection is better protected, tend to be more smooth earnings, compared to companies located in countries where shareholders protection is weaker. Our study of Tunisian data, is part of this current research which aims to deepen the results of three main ways.

First, we check if the findings are contingent on the extent of smoothing measure used. These authors proposed a specific measure that focuses on operating profit corporations. However, it is possible that different measures of smoothing significantly alter these conclusions.

Second, we analyze the smoothness of Tunisian companies, traded, during a more recent period (2006-2010), six years, to verify whether the conclusions are contingent on the study period. Third, we observe the impact of smoothing on the determinants of riskier companies.

Finally, this study expands the literature in two main ways. On one hand, it leads to reinterpret carefully the results highlighted by Leuz, Nanda and Wysocki (2003), who retained a measure of specific smoothing. On the other hand, our study complements the international literature by providing current results on the smoothing results by Tunisian companies.

Author : Department of Finance, Faculty of Economic Sciences and Management of Tunis, El Manar University, Tunis Cedex,Tunisia.
E-mail : mboudich@yahoo.fr.

© 2013 Global Journals Inc. (US)

b) The Smoothing Measures

Various measures have been proposed smoothing in the literature, one of them seems to be particularly interesting. The measure used by Leuz, Nanda and Wysocki (2003), which retains the variability of operating cash flows to assess the smoothing. It consists of comparing the variability of the results with the variability of cash flows, therefore, the variability results lower than cash flow which will lead to smooth results.

$$\text{Liss} = \frac{\partial BN/\partial TA}{\partial FTO/\partial TA}$$

With:

∂: Standard deviation of changes

BN: Net profit of the company

TA: Total assets of the company

FTO: Operating cash flow of the company.

III. The Determinants of Income Smoothing

If previous results tell us about the behavior of companies smoothing, however they do not provide any information about the reasons for smoothing which is considered as more or less important between the companies.

This section aims to introduce the factors that motivate companies to smooth their results more strongly, apprehended using the following five factors: debt, size, and sector of companies' activities, the leaders in capital and audit quality.

a) The Debt

Debt increases the risk borne by shareholders and the risk perceived by other partners. Smoothing is supposed to reduce the risk, to expect gains in terms of financing's cost.

Truemann and Titman (1988) find that information asymmetry between managers and an external user of information is an incentive for earnings management practices. Empirically, Carlson and Bathala (1997) found a positive relationship between smoothing and debt levels.

i. *Hypothesis 1a*

The debt should positively influence the smoothing results.

b) The Size

Size presents another variable to explain the smoothing. Indeed, large companies are more diversified and less risky. Moreover, leaders are encouraged to naturally smooth results due to the pressure of financial analysts. The empirical results provide conflicting results, Fern, Brown and Dickey (1994) confirm the importance of the size, against the research and Chenail Breton (1997) cannot connect to the smoothing size of the company.

i. *Hypothesis1b*

The larger companies should have more influence on smoothing results.

ii. *Hypothesis1b*

Larger companies do not smooth results.

c) Sector

Also, Sector is a variable that can explain the smoothing. Companies operating in less competitive sectors are less risky. Belkaoui and Picur (1984) confirm that companies belonging to the sector competitive smooth their results more than other companies in order to neutralize the uncertainty of the environment. These findings are contradicted by Breton and Chenail (1997) who find that there is no difference between the behaviors of firms in both sectors.

i. *Hypothesis1c*

The sector is expected to positively influence. the smoothing

ii. *Hypothesis1c*

The area has no influence on the smoothing.

d) The Proportion of Leaders in the Capital

Smoothing results preserved human capital management, it has a better picture that can help to protect against the risk. Holthausen, Larker and Sloan (1995) find that increasing the leaders in the capital to align the interests of executives with those of shareholders. Also, Mork, Shleifer and Vishney (1998) find a positive influence of the concentration of capital in the hands of the leader on the level of smoothing.

i. *Hypothesis1d*

Leaders are encouraged to smooth earnings when their shares in the capital of the company are high.

e) The Quality Audit

Listeners can constrain the smoothing results. Previous studies of Becker, Defond, Jiambalvo and Subramanyam (1998) and those of Francis, Maydew and Sparks (1999) suggest that audit quality is often reflected in a lower income smoothing. Listeners "big six" are presumed to be more competent and therefore provide a better quality of service than auditors' non big six. "

i. *Hypothesis1e*

Managers have less incentive to perform smoothing accounting results when the company is audited by a firm of "big six."

© 2013 Global Journals Inc. (US)

Table 1 : Summary table presenting an overview of empirical studies and hypotheses on the determinants of income smoothing

Variables	Authors	Sample	Period	Assumptions Authors
Debt: (H1a)	Truemann et Titman (1988)	Qualitative	1987	There is a positive relationship between smoothing and debt levels.
	Carlson et Bathala (1997)	100 companies	1990 to 1995	
Size: (H1b)	Fern, Brown et Dickey (1994)	26 companies	1971 to 1989	Larger companies more heavily smooth results.
	Defon M et Park C (1997)	20 companies	1994	Larger companies do not smooth results.
Sector: (H1c)	Watts et Zimmerman (1990)	26 companies	1988	The sector should positively influence the smoothing.
	Defon M et Park C (1997)	20 companies	1994	Sector has no influence on the smoothing.
Percentag e-retention leaders: (H1d)	Mork, Shleifer et Vishney (1989)	500 companies	1980	Leaders are encouraged to smooth earnings when their shares in the capital of the company are high.
	Holthausen, Larker et Sloan (1995)	Three groups of manager A,B et C	1980 to 1990	
Quality Audit: (H1e)	Becker, Defond, Jiambalvo et Subramanyam (1998)	10,379 big six 2,179 non big six	1995	Leaders have fewer incentives to exercise accounting income smoothing when the company is audited by a firm of "big six."
	Francis, Maydew et Sparks (1999)	100 companies that use big 6 auditors	1975 to 1994	

f) The Measures of the Determinants of Smoothing Tunisian Companies

To assess the importance of the five factors discussed in the smoothing results, we define the following five variables:

- Debt: The debt ratio (total debt / total assets) median of the study period considered (2006-2010);
- Size: the median of the natural logarithm of total assets over the study period fixed;
- Sector: the sector of society. This variable is used to assess the level of competition in the sector. If the company belongs to a competitive industry, the variable takes the value 1, otherwise it equals 0;
- Percentage-retention leaders: This variable is used to test the influence of the concentration of capital in the hands of the leaders on the level of earnings management;
- Quality Audit: This variable can capture audit quality. If the company is audited by a firm of "big six", the variable takes the value 1 if it is equal to 0.

Table 2 : Definition of variables smoothing results

Hypotheses tested	operational definition	operational name	Sign	Data source
H1a	$\frac{Total\ debt}{Total\ assets}$	Indebt	+	Annual Report
H1b	Ln (total assets)	Size	+	Annual Report
H1b'			-	
H1c	dichotomous variable High technology: 1 Other: 0	Sect	+	Annual Report
H1c'			-	
H1d	% Retention of managers	DIR	+	Annual Report
H1e	0 : agency « non big six » 1 : agency « big six » (binary variable)	Audit	-	Annual Report

IV. Empirical Results

a) Methodology

To reflect the level of smoothing Tunisian companies and the impact of the various measures used on the results, we analyze the relationship between the level and determinants of smoothing contained in the financial records, through the logistic regression model.

© 2013 Global Journals Inc. (US)

To assess the determinants of earnings management, we use the following model:

$$\text{Liss} = \alpha_0 + \alpha_1 \text{Endett} + \alpha_2 \text{Taille} + \alpha_3 \text{Sect} + \alpha_4 \text{DIR} + \alpha_5 \text{Audit} + \varepsilon_{i,j} \quad (1)$$

i. *Correlation Matrix*

It is appropriate to examine the correlations of the explanatory variables may bias the conclusions of this analysis to detect collinearity between them.

Variables	Dettes	Taille	Secteur	Dir	Audit
Dettes	1	0.5216981	-0.07712473	-0.1282415	-0.103064
Taille	0.5216981	1	-0.11845	-0.0711245	0.0242464
Secteur	-0.0771247	-0.11845	1	0.225473	-0.030009
Dir	-0.128241	-0.071124	0.225473	1	-0.103064
Audit	0.155129	0.024246	-0.0300099	-0.103064	1

An examination of the correlation matrix shows that there is no problem of collinearity between the explanatory variables because they have a low correlation, consequently, we are not obliged to take corrective action.

Correlation coefficients range from a minimum equal to -0030 to a maximum equal to 0225, with the exception of the relationship between the size and the debt, the correlation coefficient is equal to 0.521 respectively.

According to Kennedy (1992), these two values do not reveal the presence of a serious collinearity problem, as it confirms that this problem exists when the correlation coefficient exceeds the threshold of 0.8. So we will use all the variables in our model.

In addition, our model explained 18% of the Durbin-Watson statistics are almost equal to 2, hence no problem of autocorrelation.

ii. *Model Estimation*

Variable	Coefficient	Prob.
C	0.006754	0.9924
AUDIT	**-0.298197	0.0454
DETTE	***-1.40E-09	0.0891
DIR	0.114747	0.7632
SECT	0.139653	0.6173
TAILLE	0.128592	0.1647

R-squared	0.181461	Mean dependent var	0.748637
Adjusted R-squared	0.088445	S.D. dependent var	0.472864
S.E. of regression	0.451469	Durbin-Watson	2.417478

iii. *Interpretation of the Significance of the Signs of the Estimated Coefficients*

We note that the explanatory variables completely different depending on the extent of smoothing. More specifically, the debt variable has a negative sign (-1.40E-09), which implies that when the company is leveraged, the smoothing is more important. However, the debt variable is significant at a level of risk equal to 10%. These results allow us to conclude that the debt is a factor smoothing. This conclusion can accept the first hypothesis (H1a), that the debt should positively influence the smoothing results. Thus, the most indebted companies strongly smooth the result because they find it more difficult to raise new funds.

Regarding the Audit variable, although the coefficient on this variable is negative (-0.298197), this supports the companies audited by a firm of "big six" smooth stronger result. Variable is significant at a level of risk equal to 5%. This conclusion can accept the fifth hypothesis (H1e). This result in Tunisian companies, auditors "big six" can not compel leaders against a high smoothing.

With regard to the variable size, the sign is positive (0.128592), which means that corporations smooth less strongly than smaller. Certainly, large corporations, subject to closer monitoring by financial analysts are better diversified and should show results more smoothed. Despite its positive sign, the coefficient on the size variable is not significant. The size of Tunisian companies does not seem to have a major impact on income smoothing.

Also, the sector variable admits a positive coefficient (0.139653), implying that the sector has a positive effect on smoothing. By cons, this coefficient is not significant, reflecting the idea that smoothing is not different in more competitive areas.

© 2013 Global Journals Inc. (US)

Finally, the coefficient on the variable measuring the percentage of Dir ownership concentration in the hands of leaders is positive (0.114747), however, is not significant, hence the leaders in the capital n 'is not a determinant of smoothing, this result allows us to reject the fifth hypothesis. We conclude that a high concentration of capital in the hands of management cannot overcome the conflicts of interest between managers and shareholders.

V. Conclusion

This work devoted to Tunisian data smoothing results by Tunisian companies' which aims to verify the importance of the five factors that assess the behavior of smoothing companies.

The main results are as follows. First, the use of debt companies provides high performance smoothing because they find it more difficult to raise new funds. More specifically, it appears that the debt positively influences the smoothing results.

Second, the use of audited companies with a firm "big six" influences the quality of the explanatory model smoothing. This is true because the companies audited by a firm of "big six" smooth stronger result. More specifically, it appears that in Tunisian firms, auditors "big six" cannot compel leaders against a high smoothing.

These results lead us to conclude that the results of previous studies conducted around the world, should be explained with some caution, since the choice of measures used differs from one country to another that may cause an impact on the results set evidence.

To conclude, we assume that the smoothing is far from being exhausted, since many events can affect companies such as changes in management, changes in accounting standards, which are likely to significantly influence the smoothing. Hence further studies will be necessary to determine whether these events affect the smoothing result and will help us to identify it correctly.

The classical limits for this type of study, the choice of variables or measures of these variables can be highlighted. Also, we encourage researchers to conduct further research on this topic and on other samples with various methodological refinements to complete these initial results.

References Références Referencias

1. Bartov E., Givoly D.et Hayn C. (2002), «The rewards to meeting or beating earnings expectations.», Journal of Accounting and Economics, vol. 33, pp. 173-204.
2. Becker C. L., DeFond M.L., Jiambalvo J. et Subramanyam K. R. (1998), ''The effect of audit quality on earnings management'', Contemporary Accounting Research, vol. 15, Spring, pp. 1-24.
3. Belkaoui A. et Picur R. (1984), « The smoothing of income numbers: some empirical evidence on systematic differences between core and periphery industrial sectors», Journal of Business Finance and Accounting, vol.11, p. 524-545.
4. Breton G. et Chenail J-P. (1997), «Une étude empirique du lissage des bénéfices dans les entreprises canadiennes», *Comptabilité Contrôle Audit,* tome 3, p. 53-67.
5. Carlson S. et Bathala C. (1997), «Ownership differences and firms' income smoothing behavior», Journal of Business, Finance and Accounting, vol. 24, p. 179-196.
6. Dechow P. et Skinner, D., 2000. «Earnings management: reconciling the views of accounting academics, practitioners, and regulators», Accounting Horizons, vol. 14, p. 235–250.
7. Durtschi C. et Easton P. (2005), «Earnings management? The shapes of the frequency distributions of earnings metrics are not evidence ipso facto", Journal of Accounting Research, Vol 43, n°4,pp557-593.
8. Francis J. R., Maydew E. L., et Sparks, H. C., (1999), "The role of Big six auditors in the credible reproting of accruals", Auditing: A Journal of Practice and theory, vol. 18, pp. 17-35.
9. Fern R., Brown B. et Dickey S. (1994), «An empirical test of politically-motivated income smoothing in the oil refining industry», *Journal of Applied Business Research,* vol. 10, p. 92-100.
10. Holthausen R., Larker D. et Sloan R. (1995). "Annual bonus schemes and the manipulation of earnings", Journal of Accounting and Economics, vol. 19, pp. 29-74.
11. Leuz, C., Nanda, D., Wysocki, P. (2003). Earnings management and investor protection: an international comparison. Journal of Financial Economics 69 (3): 505–527.
12. Mork R., Shleifer A. et R.W. Vishney R.W. (1998), "Management ownership and market Valuation", Journal of Financial Economics, vol. 20, pp 293-315.
13. Ramanna K. et Watts R., Evidence on the Effects of Unverifiable Fair-Value Accounting (August 31, 2007). Harvard Business School Working Paper No. 08-014.
14. Trueman B. et Titman S. (1988), «An explanation for accounting income smoothing», Journal of Accounting Research, vol. 26, p.127-139.

© 2013 Global Journals Inc. (US)

This page is intentionally left blank

© 2013 Global Journals Inc. (US)

Global Journal of Management and Business Research
Finance
Volume 13 Issue 4 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Impact of Firm Level Factors on Capital Structure: Evidence from Ethiopian Insurance Companies

By Bayeh Asnakew Kinde
University of Gondar, Ethiopia

Abstract - The purpose of this study is to investigate important firm-level determinants of capital structure on Ethiopian insurance companies. The study employs panel regression model. The results show that growth, profitability and age of the firm were found to have significant influence on Ethiopian insurance companies' capital structure. Liquidity and business risk were also significant for long term debt and total debt ratio respectively. However, among the hypothesized capital structure determinants asset tangibility and size of the firm were found to have statistically insignificant contribution on capital structure of Ethiopian insurance companies.

Keywords : capital structure, ethiopia, firm level factors, insurance companies.

GJMBR-C Classification : JEL Code: G32

IMPACTOFFIRMLEVELFACTORSONCAPITALSTRUCTUREEVIDENCEFROMETHIOPIANINSURANCECOMPANIES

Strictly as per the compliance and regulations of:

© 2013. Bayeh Asnakew Kinde. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Impact of Firm Level Factors on Capital Structure: Evidence from Ethiopian Insurance Companies

Bayeh Asnakew Kinde

Abstract - The purpose of this study is to investigate important firm-level determinants of capital structure on Ethiopian insurance companies. The study employs panel regression model. The results show that growth, profitability and age of the firm were found to have significant influence on Ethiopian insurance companies' capital structure. Liquidity and business risk were also significant for long term debt and total debt ratio respectively. However, among the hypothesized capital structure determinants asset tangibility and size of the firm were found to have statistically insignificant contribution on capital structure of Ethiopian insurance companies.

Keywords : capital structure, ethiopia, firm level factors, insurance companies.

I. Introduction

In one way or another, business activity must be financed. Without finance to support their fixed assets and working capital requirements, business could not exist. There are three primary sources of finance for companies: Cash surplus from operating activities, new equity funding, borrowing from bank and non- bank sources. By taking into account a company's particular circumstances, management should decide what the most appropriate mix of internal and external funding i.e. how the company should structure the necessary capital to finance its activities. This leads to capital structure decision, which affects the financial performance of the firm and it is one of the tough challenges that firms face (Abor, 2005).

The roots of the modern capital structure theory can be assumed to be grown up on the seminal paper of Modigliani and Miller (1958) commonly known as the MM theory, dating back to 1958 as one of the most influential papers in the economics literature. It states that based on the assumption of no brokerage, tax and bankruptcy costs, investors can borrow at the same rate as corporations and they would tend to have the same information as management about the firm's future investment opportunities. The MM theory proves that under some restrictions a firm's value would be unaffected by its capital structure and thus assumes that earnings before income tax (EBIT) would not have been related to the use of debt, that leads to the inference that capital structure may be considered irrelevant, and the fundamental assumptions of the theory can be assumed unrealistic in the eyes of investors and other economic agents (Modigliani & Miller, 1963). In line with these theoretical fundamentals, the preceding arguments lead to the development of trade off theory which suggests that a firm's target leverage is determined by taxes and costs of financial distress.

II. Statement of the Problem

Brounen & Eichholtz (2001) explain that in the trade off theory the interest payments tend to be tax deductible, this makes debt less expensive than the use of equity financing; which leads us to assume that there would be a positive relationship between the corporate tax shield and the value of the firm. Brounen & Eichholtz (2001) further states, in practice, the firms rarely use 100% debt financing. Because, when a firm raises excessive debt to finance its operations, it may default on this debt and thus can be exposed to bankruptcy costs. For these reasons, trade off theory claims that tax shield benefits of debt financing need to be adjusted for financial distress costs that rise with increasing debt levels, creating an optimal capital structure that balances both forces.

However, according to the pecking order theory of Myers (1984), companies prioritize their sources of financing - from internal financing to equity issues- according to the law of least effort, or preferring to raise equity as a financing means of last resort. Hence, internal funds are likely to be used first, and only when they are depleted, the firms apply to the new debt issues. Similarly, Mary *et al.* (2011) put in plain words that in case of using external financing, the firms issue the cheapest security first so they start with debt, and then possibly apply to hybrid securities such as convertible bonds, and they issue equity only as a last resort. Thus, in contrast to the trade-off theory, there is no well-defined target leverage ratio in the pecking order theory.

Mary *et al.* (2011) further elucidate that if a company has too much debt; it may overextend its ability to service the debt and can be vulnerable to business downturns and changes in interest rates, and thus would be viewed to be financially risky. On the other hand, too much equity dilutes ownership interest

Author : Lecturer, Faculty of Business and Economics, University of Gondar, P. O. Box 196, Ethiopia. E-mail : basnakew@yahoo.com

© 2013 Global Journals Inc. (US)

and exposes the company to outside control. This may be discouraging to investors, because it means less profits being distributed to them. All these lead to non-stopping debates that make the topic to be researched in various countries.

So far most studies have been conducted on an effort to preview capital structure decision and its impact on firm value on developed countries perspective. Thus, the purpose of this paper is to present empirical evidence on the determinants of capital structure of insurance companies in the context of a developing country since a design feature that works well in one country may not in another. As Bird 2005 (cited in Yesegat, 2009) noted this may be referred to as The No-One-Size-Fits-All (the NOSFA) principle. Specifically in Ethiopia, though few studies have been conducted on the determinants of capital structure, to the best of the researcher's knowledge, insurance industry has received little attention. Therefore, the current study investigates empirically the firm-specific determinants of capital structure of insurance companies in Ethiopia over the period 2004-2010.

III. Objective of the Study

The main objective of the study is to empirically examine the link between a number of potential firm-specific capital structure determinants and debt level, and to identify relevant theories as well, for the insurance industry in Ethiopia.

IV. Literature Review

This section discusses the literature concerning the capital structure determinants. First it considers the general theory of capital structure. This is followed by a review of the empirical studies on the determinants of capital structure choice.

a) Theoretical Framework

The theoretical principles underlying the capital structure, financing and lending choices of firms can be described either in terms of a static trade-off choice or pecking order framework. Trade-off hypothesis, developed by Myers (1984), proposes that firm should have optimal capital structure based on balancing between the benefits of debt and costs of debt. It also postulates that a firm will borrow up to the point where the marginal value of tax shields on additional debt is balanced by increasing the present value of possible bankruptcy costs (Myers, 2001).

According to the trade-off theory, higher profitability lowers the expected costs of distress; however, firms increase their leverage to take advantage from tax benefits. Moreover, agency theory supports this positive relation because of the free cash flow theory of Jensen (1986). Therefore, leverage and profitability are positively related. On the other hand, according to pecking order theory, Myers (2003) discusses that firms prefer to finance with internal funds rather than debt if internal equity is sufficient due to the asymmetric information. Hence, profitability is expected to have negative relation with leverage.

The pecking order theory was developed by Myers and Majluf (1984) and it focuses on asymmetric information costs. It states that external investors do not have access to required information on the topic of the value of the firm's assets and growth opportunities. The information asymmetry may also explain why existing investors do not support new equity financing. The reason is that the new investors may require higher returns to reimburse the risk of their investment and this request dilutes the returns of existing investors, and thus the firm should follow specific hierarchy for financing its assets. At the outset, the firm utilizes internally produced fund i.e. retained earnings followed by debt and if more funds are required, as a final option, assets are financed by equity capital. Therefore, according to the pecking order hypothesis, firms that are profitable generate high earnings are expected to use less debt capital than that do not generate high earnings.

b) Review of Empirical Studies

Following from above theoretical standpoints, a number of empirical studies have identified firm-level characteristics that affect the capital structure of firms. Among these characteristics are: liquidity, firm risk, growth, tangibility of assets, size of the firm, profitability and firm age.

i. *Liquidity*

Various researchers investigated the link between liquidity and capital structure, and some find positive relation and some others provided negative relation evidences.

Morellec (2001) gives a comprehensive analysis of the implications of liquidity that build up the asset transformation theme by applying dynamic model of a levered firm; and they showed that partial asset sale increases the value of equity and reduces the value of debt. Thus, asset liquidity reduces the value of the firm and the debt capacity of the firm. Consequently, asset liquidity can result in underinvestment relative to the illiquid asset benchmark case, and leads to an inverse relationship with the level of debt. Similarly, Lipson and Mortal (2010) discover that firms with more liquid equity carry less debt, as predicted by the trade-off model. Further, when considering external financing, firms with more liquidity are more inclined to raise equity than debt. Likewise, the finding of Naveed *et al.* (2010) empirical investigation on Pakistan Life Insurance Sector shows a negative relation between liquidity and leverage.

ii. *Business Risk*

Despite the broad consensus that firm risk is an important inverse determinant of corporate debt policy, empirical investigation has led to contradictory results.

© 2013 Global Journals Inc. (US)

For instance, unusually, Rafiq et al. (2008) found positive relationship between leverage and risk. Likewise, an empirical study by Mary *et al.* (2011) on the determinants of capital structure in listed Egyptian Corporations also indicates a positive relation between business risk and leverage, which contradicts the theoretical background and the findings observed in most developed and developing countries. However; most theories and empirical findings (Titman & Wessels 1988) indicate an inverse relationship between risk and debt ratio.

iii. *Growth*

Most researchers evidenced that higher growth firms use less debt. For instance, Rajan and Zingales (1995) performed upon a firm-level sample from each of the countries, and although the results of their regression analysis differ slightly across countries, they appear to uncover some fairly strong conclusion; and find a negative relationship between growth and the level of leverage on data from the developed countries. This is consistent with trade-off theory. On the other hand, some others found positive relationships between growth and leverage; for example, Booth *et al.* (2001).

The empirical investigation of Naveed *et al.* (2010) on Pakistan life insurance companies indicates a positive relationship between growth and debt ratio. However, this positive relationship is found statistically insignificant. Though positive sign confirms that growing firms are expected to have high debt ratio (Pecking order theory) but insignificant result indicates that growth is not considered as a proper explanatory variable of leverage in life insurance sector.

iv. *Asset Tangibility*

Tangible assets are likely to have an impact on the borrowing decisions of a firm because they are less subject to informational asymmetries and usually have a greater value than intangible assets in case of bankruptcy. Static trade-off and pecking order theories maintain that there is a positive correlation between debt ratio and tangibility. The majority of empirical studies in developed countries also found a positive relationship between tangibility and leverages (Rajan & Zingales, 1995). However, empirical studies for developing countries found mixed relationship between these variables. On the other hand, some studies reported a negative relation between tangibility of assets and debt level; for example, Booth et *al.* (2001).

v. *Firm Size*

The effect of size on debt ratios is ambiguous from the theoretical point of view; some authors encountered a positive relation between size and leverage; some others reported negative relation and others also found statistically insignificant relationship between them.

Mary *et al.* (2011) recent work on the actively listed Egyptian corporations, the findings of the estimated model and the various other tests confirm the existence of a significant positive relation between the firm size and the debt-equity ratio. This finding conforms to those of the other empirical studies conducted in countries all over the world. These results also confirm the notion that large firms are employed more debt because these are less risky and diversified in nature (static trade- off theory). In addition, larger firms are preferred to issue more debt because it reduces direct bankruptcy costs due to market confidence. Moreover, smaller firms prefer to acquire lower debt because these firms might face the risk of liquidation at the time of financial distress.

Contrary to the above, Faris (2010) found a negative relationship between leverage and firm size. A quite different result was also obtained by Dilek *et al.* (2009) using panel data analysis within the time period 2000-2007 on Turkish firms; and they report as the coefficient of the size of the firm is statistically insignificant and also its coefficient takes a value about zero.

vi. *Profitability*

Chittenden *et al.* (1996) state that empirical evidence from previous studies examining on capital structure is consistent with pecking order arguments with leverage being found to be negatively related to profitability. Akhtar (2005) also found significant and negative coefficients of profitability variable which conform to the pecking order theory. Similarly, Naveed *et al.* (2010) analysis on Pakistan Life Insurance Sector indicates the negative relationship between leverage and profitability and predicts that, in Pakistan, profitable life insurance companies are preferred to utilize small portion of debt. This result confirms the notion that Pakistani life insurance companies follow pecking order pattern i.e. preferred to employ internal financing than debt.

However, Mohammad (2007) made empirical analysis on Bangladeshi companies and found that the coefficient of profitability is positive which is contrary to the researcher's previous argument; but statistically insignificant. Finally, the researcher gave the conclusion that the positive signs could be explained by the argument that profitable firms will be able to attract more debts from banks and the capital market and these firms will prefer debt in order to reduce their higher tax rate on profit. However, the fact that the coefficients are not significant implies that profitability does not have any material impact on capital structure decision for Bangladeshi companies. Likewise, Dilek *et al.* (2009) also found profitability to be the most significant variable with a positive sign.

vii. *Firm Age*

Age of the firm is a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business and, therefore, increases its capacity to take on more debt; hence age is positively related to debt (Myers, 2001).

© 2013 Global Journals Inc. (US)

Contrary to the theory, negative coefficient of variable age by Naveed *et al.* (2010) on Pakistan insurance companies specifies the negative relationship between age of the insurance companies and debt ratio. This inverse relationship predicts that in Pakistan older or mature insurance companies are preferred to utilize small portion of debt in formation of capital. According to Naveed *et al.* (2010) one key reason to employ less debt ratio is that when firm survives in business for a long time then it can accumulates more funds for running the operations of the business and subsequently keeps away the firm to go for debt financing.

V. Research Methodology

The study examines firm level factors that determine the capital structure of insurance companies in Ethiopia. Currently, twelve insurance companies are working in Ethiopia; and the researcher believe that, for meaningful analysis, there is no need to sample from the twelve insurance companies as they are already few in number to collect information over the period of 2004-2010. However, three insurance companies (Lion, Oromia and Ethio-Life) did not have information for the required period; their year of service was below five, and thus they were excluded in the sampling frame to make the panel data model structured.The data was collected from each insurance company's annual report over the proposed period. Following (Chkir & Cosset, 2001; Dilek *et al.*, 2009) the two dependent variables were total debt and long term debt ratios.

The debt (DEBT) ratio is total debt to total asset while the long-term debt (LTD) ratio is the total long-term debt divided by total asset. The explanatory variables include liquidity (LQ), business risk (BR), growth (GR), tangibility (TA), size of the firm (SZ), profitability (PR) and age of the firm (AG). The entire variable for this study is based on book value in line with the argument by Myers (1984) that book values are good proxies for the value of assets in place.

The nature of data used in this study enables the researcher to use panel data model which is deemed to have advantages over cross section and time series data methodology. As Brook (2008) states the advantages of using the panel data set; first it can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross-sectional data alone. Second, it is often examine how the relationships between variables change dynamically. Besides, by combining cross-sectional and time series data, one can increase the number of degrees of freedom, and thus the power of the test. It can also help to mitigate problems of multicollinearity among explanatory variables that may arise if time series are modeled individually. Third, by structuring the model in an appropriate way (fixed or random effect), we can remove the impact of certain forms of omitted variables bias in regression results and it can allow controlling for individual unobserved heterogeneity among the cross sections. Thus, the general model for this study, as is mostly found in the extant literature is represented by:

$$\begin{aligned} Y_{it} &= \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \text{----} + \beta_k X_{kit} + e_{it} \\ &= \beta_0 + \beta X_{it} + e_{it} \qquad (1) \end{aligned}$$

With the subscript *i* denoting the cross-sectional dimension and *t* representing the time series dimension. The left-hand variable, Y_{it}, represents the dependent variable in the model. X_{it} contains the set of explanatory variables in the estimation model, β_0 is the constant, β represents the coefficients and e_{it} is the error term.

In this study, the empirical methodology is adopted mainly from Naveed *et al.* (2010) with some modifications. Therefore, the models for the empirical investigation, built in line with the findings of previous studies, are given as follows:

$$LTD_{it} = \beta_0 - \beta_1(LQ_{it}) - \beta_2(BR_{it}) + \beta_3(GR_{it}) + \beta_4(TA_{it}) + \beta_5(SZ_{it}) - \beta_6(PR_{it}) + \beta_7(AG_{it}) + \acute{\varepsilon} \qquad (2)$$

$$DEBT_{it} = \beta_0 - \beta_1(LQ_{it}) - \beta_2(BR_{it}) + \beta_3(GR_{it}) + \beta_4(TA_{it}) + \beta_5(SZ_{it}) - \beta_6(PR_{it}) + \beta_7(AG_{it}) + \acute{\varepsilon} \qquad (3)$$

Where LTD_{it}, ratio of long-term debt to total asset for firm *i* in period t; $DEBT_{it}$, ratio of total debt to total asset for firm *i* in period *t*; LQ_{it}, current asset to current liability for firm *i* in period *t*, BR_{it}, standard deviation of operating income for firm *i* in period *t*, GR_{it}, annual changes in total assets for firm *i* in period *t*, TA_{it}, ratio of fixed assets to total assets for firm *i* in period *t*; SZ_{it}, natural log of total assets for firm *i* in period *t*, PR_{it}, operating income to total asset for firm *i* in period *t*; and e¨ the error term.

VI. Empirical Results

a) Regression Analysis

To test the capital structure theories, the relationship between the leverage and explanatory variables representing liquidity, business risk, growth, tangibility, size, profitability and age of the firm were analyzed over the period 2004-2010. This relationship belonging to leverage can be explained as follows:

© 2013 Global Journals Inc. (US)

Book leverage= f (liquidity, business risk, growth, tangibility, size, profitability and age)

The relationship was analyzed by the panel data analysis. An appropriate model for this analysis, testing random versus fixed effects models, was selected in this study. To perform this comparison, the character of the individual effects is tested through the Hausman's specification test. According to the Hausman's test, as indicated in Appendix 1 the fixed effects estimate was found to be more appropriate with the significance level of 1% for DEBT model whereas the significant level for LTD model was 5%. Thus, the relationship between leverage and the explanatory variables were examined by the fixed effects model in this study and the results obtained by the fixed effect models are reported in Appendix 2.

The results of fixed effect model indicate that liquidity has a positive impact on long term debt and total debt. This result implies that considering external financing, firms with more liquidity are more inclined to raise debt than equity. According to trade-off models of capital structure there is a positive relationship between the liquidation value of the firm and its leverage. Thus, expected liquidation values are higher for firms with more liquid assets, which imply that firm's debt is positively associated with asset liquidity (Harris and Raviv, 1990). In addition, companies with higher liquidity ratios might support a relatively higher debt ratio due to greater ability to meet short-term obligations. Thus, a high asset liquidity ratio could be considered by institutional investors to be a positive signal because it indicates that the firm can easily pay its obligations and hence face a lower risk of default. The positive and statistically significant influence of liquidity in this study is consistent with the theoretical analysis of firms with high liquidity ratios may have relatively higher debt ratios due to their greater ability to meet short-term obligations and the trade-off theory. It is also in line with the empirical investigation of Faris (2010) and Basil and Peter (2008).

The results also show a positive relationship between risk and leverage and its relationship was statistically significant at 1% level with total debt ratio. This may suggest that higher risk may leave the indebted firms to demand more debt; it is in line with the agency theory and supported by Naveed *et al.* (2010) and Mary *et al.* (2011) empirical study. This indicates that in order to fulfill the claims of the insurance policyholder and depositors, risky companies acquire external funds. A probable justification of such result could be that investors in Ethiopian insurance companies might be highly risk averse and low-trusting relative to their counterparts in other foreign countries.

According to the theoretical discussions above, the researcher expect a positive relationship between growth and leverage due to higher costs of financial distress (trade-off and agency theory). Contrary to the theory, growth has significant negative impact on long term debt and total debt ratio, significant at 5% level, in this study. The negative association between growth with long term debt and total debt ratio is in line with Akhtar (2005), agency theory and trade-off (financial distress) theory. This suggests that firms with more investment opportunities have less leverage ratio because they have stronger incentives to avoid under-investment and asset substitution that can arise from stockholder-bondholder agency conflict.

A positive relationship is expected between tangibility and leverage from the theoretical point of view. In this study, tangibility was found to be positive but insignificant impact on long-term debt. The positive correlation is in line with the pecking order theory. On the other hand, the relationship was found negative with total debt ratio. This implies that since it has a positive relation with long term debt, tangibility has significant negative relation with short term debt. Consistent with the findings of previous studies (Ebru, 2011); the relationship between tangibility and short term debt was negative and significant. It is generally expected with respect to the short term debt that firms tend to match their duration of assets and debts. This means that firms with more fixed assets rely more on long term while those with more contemporary assets depend more on short term debt for financing their assets (Abor, 2005). A negative relationship between tangibility and total debt ratio, in this study, is also in line with information asymmetries theory. According to this theory, companies with smaller share of tangible assets tend to be more subject to information asymmetries. It is because intangible assets are more difficult to price. Therefore, intangible firms will face underinvestment problem more often. Hence, ceteris paribus, these firms will tend to accumulate more debt over time. However, insignificant result indicates that tangibility is not considered as a proper explanatory variable of leverage in Ethiopian insurance companies since this sector holds less fixed assets.

As firms size increases, they become more diversified and have more stable cash flows. They are less often bankrupt compared to small firms so that they can afford higher levels of leverage. Similarly in this study, size positively affects leverage ratios, and it is in line with trade-off theory and agency theory. This result is also supported by Rajan and Zingales (1995) and Akhtar (2005) findings. However, it was statistically insignificant; the reason might be that the inability of log of assets to serve as a good proxy for firm size; other more significant results might be obtained by using another measures (proxy) for size, for instance, log of sales, commonly used proxy for size of insurance companies. Otherwise, almost nil regression coefficients of size can also taken to show absence on the part of lending institution of considering size of the firm as a component of their credit analysis.

© 2013 Global Journals Inc. (US)

The coefficient estimate for profitability was negative for long term debt ratio, suggesting that as profitability increases, leverage decreases. Firms follow pecking order theory (Myers & Majluf, 1984); they use retained earnings first and then move to debt and equity. In this study, supporting the hypothesis, profitability negatively affects long term debt ratio. The negative association between profitability and long term debt is in line with pecking order theory and agency theory. It is also in line with the findings of Rajan and Zingales (1995), Cassar and Holmes (2003), and Akhtar (2005). However, the coefficient was positive and significant (p-value=0.0448) for total debt ratio, which is in line with the tax trade-off model, predicts that profitable firms will employ more short term debt since they are more likely to have a high tax burden and low bankruptcy risk. Also, profitable firms are more capable of tolerating more debt since they may be in a position to service their debt easily and on time. Besides, profitable firms are more attractive to insurance companies as lending prospects; therefore, they can always take on more debt capital.

The regression result also indicates that positive and significant coefficient of variable age for total debt and long term debt ratio. Consistent with the information asymmetry theory and the empirical study by Onaolapo and Kajola (2010), this positive relationship predicts that in Ethiopia older or mature insurance companies prefer to utilize large portion of debt in formation of capital. One key reason to employ more leverage is that when firm survives in business for a long time then it can accumulate more funds for running the operations of the business and uses its reputation in accessing more debt, as firms grow older more information regarding their future viability becomes available and reduces information asymmetries. Lower information asymmetries imply higher leverage. Bondholders would be more likely to lend to firms they know more about than lending to firms they know less about. Besides, Myers (2001) states that as a firm continues longer in business, it establishes itself as an ongoing business and therefore increases its capacity to take on more debt.

To sum up, the difference in long-term versus short-term debt is much pronounced in Ethiopian insurance companies; this might limit the explanatory power of the capital structure models derived from developed economy settings. However, the results of this empirical study suggest that some of the insights from modern finance theory are portable to Ethiopia because certain firm-specific factors that are relevant for explaining capital structures in developed countries are also relevant in Ethiopian insurance companies. Besides, the findings of the fixed effect model on liquidity, business risk, growth, tangibility, size, profitability and age of the firm for this study are in line with the findings of Faris (2010), Naveed *et al.* (2010), Akhtar (2005), Abor (2005), Rajan and Zingales (1995), Cassar and Holmes (2003), Onaolapo and Kajola (2010) respectively. But the magnitude in contribution of these determinants is quite different. These differences may be partly explained by the following factors: sample size, proxy used in the measurement of variables, methodology of data analysis, the difference in the sectors in which the studies were conducted and the different the economic background beyond the industry that differs across countries.

VII. Conclusion

The results of this study provide some useful information about the capital structure of Ethiopian insurance industry. Results obtained from the empirical investigation indicate that growth, profitability, age of the firm and liquidity have significant effect on Ethiopian insurance companies. Moreover, it can also be stated that the findings show evidence that static trade-off theory; pecking order theory and agency theory are partially accepted in insurance sector of Ethiopia though the trade-off theory appears to dominate the Ethiopian insurance sector capital structure.

VIII. Recommendation

- In the study periods, the analysis indicates that the proportion of long term debt is low, and thus it might be advisable for insurance companies to place greater emphasis on the facilitation of equity capital since it provides a base for further borrowing and reduces businesses' uncertainty.
- Having less proportion of long term debt means being more risk averse and this may also slow down the growth of insurance industry. Thus, the firm should increase its leverage without suffering from financial distress. Therefore, it is always recommended to think the capital structure in the way that minimizes the firm's cost of capital and thus maximizes firm value.

IX. Further Research Directions

This study addressed only firm level determinants of capital structure specifically on Ethiopian insurance industry. Therefore, further study can also incorporate macro variables, and it might also extend its scope on Sub-Saharan Africa.

References Références Referencias

1. Abor, J. (2005), "The effect of capital structure on profitability: empirical analysis of listed firms in Ghana", *Journal of Risk Finance,* vol.6, pp. 438-45.
2. Akhtar, S. (2005), "The determinants of capital structure for Australian multinational and domestic corporations", *Australian Journal of Management,* vol. 30, pp. 321-41.
3. Basil Al-Najjar & Peter, T. (2008), "The relationship between capital structure and ownership

structure", *Journal of Managerial Finance,* vol. 34, pp. 919-933.
4. Booth, L., Aivazian, V., Demirgüc-Kunt, A. & Maksimovic, V. (2001), "Capital structure in developing countries", *Journal of Finance, vol.* 56, pp. 87-130.
5. Brooks, C. (2008), *Introductory Econometrics for Finance,* 2nd ed., the ICMA Centre, University of Reading.
6. Brounen, D. & Eichholtz, P. (2001), "Capital structure theory: Evidence from European property companies capital offerings", *Journal of Real Estate Economics,* vol. 2, pp. 4-21.
7. Cassar, G. & Holmes, S. (2003), "Capital structure and financing of SMEs: Australian Evidence", *Journal of Accounting and Finance,* vol. 43, pp. 123-47.
8. Chittenden, F., Michaelas, N. and Poutziouris, P. (1996), "Financial policy and capital structure choice in UK SMEs: empirical evidence from company panel data", *Journal of Small Business Economics,* vol. 12, pp. 113–30.
9. Chkir, E. & Cosset, J. (2001), "Diversification strategy and capital structure of multinational Corporations", *Journal of Multinational Financial Management,* vol.11, pp. 17-37.
10. Dilek, T., Ozlem, T. & Ayca, T. (2009), "Determinants of capital structure for Turkish firms: A panel data analysis", *International Research Journal of Finance and Economics,* vol. 29, pp. 1450-2887.
11. Ebru,Ç. (2011), "An empirical investigation on the determinants of capital structures of Turkish firms", *Journal of Finance and Economics,* vol. 9, pp. 35-42.
12. Faris AL- Shubiri (2010), "Determinants of capital structure choice: A case study of Jordanian Industrial Companies", *An-Najah Univ. J. of Res,* vol. 24, pp. 2457-94.
13. Harris, M. & Raviv, A. (1990), "Capital structure and the informational role of debt", *Journal of Finance,* vol. 45, pp.321-49.
14. Insurance Companies 2004-2010, 'Annual report', Ethiopian Insurance Companies, Addis Ababa Jensen, M. C. (1986), "Agency costs of free cash flow, corporate finance, and take-overs", *American Economic Review,* vol. 76, pp. 323-29.
15. Lipson, M. & Mortal, S. (2010), "Liquidity and capital structure", *Journal of Financial Markets,* vol. 28,pp. 345-56.
16. Mary, A., El-Sayeda, M. & Mohamed, S. (2011), "The determinants of capital structure in Egyptian", *Journal of Middle Eastern Finance and Economics,* vol. 9, pp. 84-99.
17. Modigliani, F. & Miller, M. (1958), "The cost of capital, corporation finance and the theory of Investment", *American Economic Review,* vol. 48, pp. 261-97.
18. Modigliani, F. & Miller, M. (1963), "Corporation income taxes and the cost of capital: a Correction", *American Economic Review,* vol. 53, pp. 433–43.
19. Mohammad, S. (2007): "The determinants of capital structure for selected Bangladeshi listed Companies", Working Paper, Jahangirnagar University.
20. Morellec, E. (2001), "Asset liquidity, capacity choice and the pricing of corporate securities", *Journal of Financial Economics,* vol. 61, pp. 173-206.
21. Myers, S C. (1984), "The capital structure puzzle", Journal *of Finance,* vol. 39, pp. 575-92.
22. Myers, S C. (2001), "Capital structure", *Journal of Economic Perspectives,* vol. 15, pp. 81–102.
23. Myers, S C. (2003), "Financing of corporations", *Handbook of the Economics of Finance,* vol. 1, pp. 216-253.
24. Myers, S C. & Majluf, N. (1984), "Corporate financing and investment decisions when firm have information that investors do not have", *Journal of Financial Economics,* vol. 13, pp. 187-221.
25. Naveed, A., Zulfqar, A. & Ishfaq, A. (2010), "Determinants of capital structure: A case of life insurance sector of Pakistan", *European Journal of Economics, Finance and Administrative Sciences,* vol. 24, pp. 7-12.
26. Onaolapo, A. & Kajola, S. (2010), "Capital structure and firm performance: Evidence from Nigeria", *European Journal of Economics and Finance,* vol. 25, pp. 70-82.
27. Rafiq, M., Iqbal, A. & Atiq, M. (2008), "The determinants of capital structure of the chemical industry in Pakistan", *The Lahore Journal of Economics,* vol. 13, pp. 139-58.
28. Rajan, R. & Zingales, L. (1995), "What do we know about capital structure? Some evidence from international data", *Journal of Finance,* vol. 50, pp. 1421-60.
29. Titman, S. & Wessels, R. (1988), "The determinants of capital structure choice", *Journal of Finance,* vol. 43, pp. 1- 19.
30. Yesegat, W A. (2009): "Value added tax in Ethiopia: A study of operating costs and Compliance", PhD thesis, University of New South Wales, Australia.

© 2013 Global Journals Inc. (US)

Appendix 1 : Hausman and Redundant fixed effect tests

/	LTD Model	DEBT Model
Results of Hausman Test (Ho: an appropriate model is random effect model)		
Chi-sq	15.383	30.708
	(0.0437) **	(0.0000) ***
Results of Redundant Fixed Effect Test (Ho: There is no fixed effect)		
Cross-section/period chi-sq	64.718	46.466
	(0.0000) ***	(0.0000) ***

, * significant at 5% and 1% level, respectively.

(Source: Eviews output)

Appendix 2 : Fixed effect model result

Variable	LTD model	DEBT model
Constant	-0.509321	-0.100380
	(0.5456)	*(0.8967)*
LQ	0.026680	0.020468
	*(0.0159) ** *	*(0.3459)*
BR	0.036130	0.081820
	(0.1941)	*(0.0017) *** *
GR	-0.040257	-0.066524
	*(0.0126) ** *	*(0.0393) ** *
TA	0.028891	-0.038400
	(0.8614)	*(0.8050)*
SZ	0.048901	0.022682
	(0.5632)	*(0.8953)*
PR	-0.086345	0.192904
	*(0.0336) ** *	*(0.0367) ** *
AG	0.205432	0.612086
	*(0.0245) ** *	*(0.0066) *** *
Adj R^2	0.683645	0.751532
F-Statistics	8.5869	11.8372
Prob(F-statistics)	(0.00000)***	(0.00000)***

*, **, *** indicate significance at the level 10%, 5% and 1%, respecti-respectively; Figures in brackets are p-values.

(Source: Eviews output)

Global Journal of Management and Business Research (C) Volume XIII Issue IV Version I Year 2013

© 2013 Global Journals Inc. (US)

Global Journals Inc. (US) Guidelines Handbook 2013

www.GlobalJournals.org

FELLOW OF INTERNATIONAL CONGRESS OF MANAGEMENT AND BUSINESS RESEARCH (FICMBR)

- 'FARSB' title will be awarded to the person after approval of Editor-in-Chief and Editorial Board. The title 'FARSB" can be added to name in the following manner. eg. **Dr. John E. Hall, Ph.D., FARSB or William Walldroff Ph. D., M.S., FARSB**
- Being FARSB is a respectful honor. It authenticates your research activities. After becoming FARSB, you can use 'FARSB' title as you use your degree in suffix of your name. This will definitely will enhance and add up your name. You can use it on your Career Counseling Materials/CV/Resume/Visiting Card/Name Plate etc.
- 60% Discount will be provided to FARSB members for publishing research papers in Global Journals Inc., if our Editorial Board and Peer Reviewers accept the paper. For the life time, if you are author/co-author of any paper bill sent to you will automatically be discounted one by 60%
- FARSB will be given a renowned, secure, free professional email address with 100 GB of space eg.johnhall@globaljournals.org. You will be facilitated with Webmail, SpamAssassin, Email Forwarders, Auto-Responders, Email Delivery Route tracing, etc.
- FARSB member is eligible to become paid peer reviewer at Global Journals Inc. to earn up to 15% of realized author charges taken from author of respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account or to your PayPal account.
- Eg. If we had taken 420 USD from author, we can send 63 USD to your account.
- FARSB member can apply for free approval, grading and certification of some of their Educational and Institutional Degrees from Global Journals Inc. (US) and Open Association of Research,Society U.S.A.
- After you are FARSB. You can send us scanned copy of all of your documents. We will verify, grade and certify them within a month. It will be based on your academic records, quality of research papers published by you, and 50 more criteria. This is beneficial for your job interviews as recruiting organization need not just rely on you for authenticity and your unknown qualities, you would have authentic ranks of all of your documents. Our scale is unique worldwide.
- FARSB member can proceed to get benefits of free research podcasting in Global Research Radio with their research documents, slides and online movies.
- After your publication anywhere in the world, you can upload you research paper with your recorded voice or you can use our professional RJs to record your paper their voice. We can also stream your conference videos and display your slides online.
- FARSB will be eligible for free application of Standardization of their Researches by Open Scientific Standards. Standardization is next step and level after publishing in a journal. A team of research and professional will work with you to take your research to its next level, which is worldwide open standardization.

- FARSB is eligible to earn from their researches: While publishing his paper with Global Journals Inc. (US), FARSB can decide whether he/she would like to publish his/her research in closed manner. When readers will buy that individual research paper for reading, 80% of its earning by Global Journals Inc. (US) will be transferred to FARSB member's bank account after certain threshold balance. There is no time limit for collection. FARSB member can decide its price and we can help in decision.

MEMBER OF ASSOCIATION OF RESEARCH SOCIETY IN BUSINESS (MARSB)

- 'MARSB' title will be awarded to the person after approval of Editor-in-Chief and Editorial Board. The title 'MARSB" can be added to name in the following manner. eg. Dr. John E. Hall, Ph.D., MARSB or William Walldroff Ph. D., M.S., MARSB
- Being MARSB is a respectful honor. It authenticates your research activities. After becoming MARSB, you can use 'MARSB' title as you use your degree in suffix of your name. This will definitely will enhance and add up your name. You can use it on your Career Counseling Materials/CV/Resume/Visiting Card/Name Plate etc.
- 40% Discount will be provided to MARSB members for publishing research papers in Global Journals Inc., if our Editorial Board and Peer Reviewers accept the paper. For the life time, if you are author/co-author of any paper bill sent to you will automatically be discounted one by 60%
- MARSB will be given a renowned, secure, free professional email address with 30 GB of space eg.johnhall@globaljournals.org. You will be facilitated with Webmail, SpamAssassin, Email Forwarders, Auto-Responders, Email Delivery Route tracing, etc.
- MARSB member is eligible to become paid peer reviewer at Global Journals Inc. to earn up to 10% of realized author charges taken from author of respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account or to your PayPal account.
- MARSB member can apply for free approval, grading and certification of some of their Educational and Institutional Degrees from Global Journals Inc. (US) and Open Association of Research,Society U.S.A.
- MARSB is eligible to earn from their researches: While publishing his paper with Global Journals Inc. (US), MARSB can decide whether he/she would like to publish his/her research in closed manner. When readers will buy that individual research paper for reading, 40% of its earning by Global Journals Inc. (US) will be transferred to MARSB member's bank account after certain threshold balance. There is no time limit for collection. MARSB member can decide its price and we can help in decision.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

ANNUAL MEMBER

- Annual Member will be authorized to receive e-Journal GJMBR for one year (subscription for one year).
- The member will be allotted free 1 GB Web-space along with subDomain to contribute and participate in our activities.
- A professional email address will be allotted free 500 MB email space.

PAPER PUBLICATION

- The members can publish paper once. The paper will be sent to two-peer reviewer. The paper will be published after the acceptance of peer reviewers and Editorial Board.

Process of submission of Research Paper

The Area or field of specialization may or may not be of any category as mentioned in 'Scope of Journal' menu of the GlobalJournals.org website. There are 37 Research Journal categorized with Six parental Journals GJCST, GJMR, GJRE, GJMBR, GJSFR, GJHSS. For Authors should prefer the mentioned categories. There are three widely used systems UDC, DDC and LCC. The details are available as 'Knowledge Abstract' at Home page. The major advantage of this coding is that, the research work will be exposed to and shared with all over the world as we are being abstracted and indexed worldwide.

The paper should be in proper format. The format can be downloaded from first page of 'Author Guideline' Menu. The Author is expected to follow the general rules as mentioned in this menu. The paper should be written in MS-Word Format (*.DOC,*.DOCX).

The Author can submit the paper either online or offline. The authors should prefer online submission.Online Submission: There are three ways to submit your paper:

(A) (I) First, register yourself using top right corner of Home page then Login. If you are already registered, then login using your username and password.

(II) Choose corresponding Journal.

(III) Click 'Submit Manuscript'. Fill required information and Upload the paper.

(B) If you are using Internet Explorer, then Direct Submission through Homepage is also available.

(C) If these two are not convenient, and then email the paper directly to dean@globaljournals.org.

Offline Submission: Author can send the typed form of paper by Post. However, online submission should be preferred.

Preferred Author Guidelines

MANUSCRIPT STYLE INSTRUCTION **<u>(Must be strictly followed)</u>**

Page Size: 8.27" X 11'"

- Left Margin: 0.65
- Right Margin: 0.65
- Top Margin: 0.75
- Bottom Margin: 0.75
- Font type of all text should be Swis 721 Lt BT.
- Paper Title should be of Font Size 24 with one Column section.
- Author Name in Font Size of 11 with one column as of Title.
- Abstract Font size of 9 Bold, "Abstract" word in Italic Bold.
- Main Text: Font size 10 with justified two columns section
- Two Column with Equal Column with of 3.38 and Gaping of .2
- First Character must be three lines Drop capped.
- Paragraph before Spacing of 1 pt and After of 0 pt.
- Line Spacing of 1 pt
- Large Images must be in One Column
- Numbering of First Main Headings (Heading 1) must be in Roman Letters, Capital Letter, and Font Size of 10.
- Numbering of Second Main Headings (Heading 2) must be in Alphabets, Italic, and Font Size of 10.

You can use your own standard format also.
Author Guidelines:

1. General,

2. Ethical Guidelines,

3. Submission of Manuscripts,

4. Manuscript's Category,

5. Structure and Format of Manuscript,

6. After Acceptance.

1. GENERAL

Before submitting your research paper, one is advised to go through the details as mentioned in following heads. It will be beneficial, while peer reviewer justify your paper for publication.

Scope

The Global Journals Inc. (US) welcome the submission of original paper, review paper, survey article relevant to the all the streams of Philosophy and knowledge. The Global Journals Inc. (US) is parental platform for Global Journal of Computer Science and Technology, Researches in Engineering, Medical Research, Science Frontier Research, Human Social Science, Management, and Business organization. The choice of specific field can be done otherwise as following in Abstracting and Indexing Page on this Website. As the all Global

Journals Inc. (US) are being abstracted and indexed (in process) by most of the reputed organizations. Topics of only narrow interest will not be accepted unless they have wider potential or consequences.

2. ETHICAL GUIDELINES

Authors should follow the ethical guidelines as mentioned below for publication of research paper and research activities.

Papers are accepted on strict understanding that the material in whole or in part has not been, nor is being, considered for publication elsewhere. If the paper once accepted by Global Journals Inc. (US) and Editorial Board, will become the copyright of the Global Journals Inc. (US).

Authorship: The authors and coauthors should have active contribution to conception design, analysis and interpretation of findings. They should critically review the contents and drafting of the paper. All should approve the final version of the paper before submission

The Global Journals Inc. (US) follows the definition of authorship set up by the Global Academy of Research and Development. According to the Global Academy of R&D authorship, criteria must be based on:

1) Substantial contributions to conception and acquisition of data, analysis and interpretation of the 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.

All authors should have been credited according to their appropriate contribution in research activity and preparing paper. Contributors who do not match the criteria as authors may be mentioned under Acknowledgement.

Acknowledgements: Contributors to the research other than authors credited should be mentioned under acknowledgement. The specifications of the source of funding for the research if appropriate can be included. Suppliers of resources may be mentioned along with address.

Appeal of Decision: The Editorial Board's decision on publication of the paper is final and cannot be appealed elsewhere.

Permissions: It is the author's responsibility to have prior permission if all or parts of earlier published illustrations are used in this paper.

Please mention proper reference and appropriate acknowledgements wherever expected.

If all or parts of previously published illustrations are used, permission must be taken from the copyright holder concerned. It is the author's responsibility to take these in writing.

Approval for reproduction/modification of any information (including figures and tables) published elsewhere must be obtained by the authors/copyright holders before submission of the manuscript. Contributors (Authors) are responsible for any copyright fee involved.

3. SUBMISSION OF MANUSCRIPTS

Manuscripts should be uploaded via this online submission page. The online submission is most efficient method for submission of papers, as it enables rapid distribution of manuscripts and consequently speeds up the review procedure. It also enables authors to know the status of their own manuscripts by emailing us. Complete instructions for submitting a paper is available below.

Manuscript submission is a systematic procedure and little preparation is required beyond having all parts of your manuscript in a given format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for login and manuscript details as Field of Paper and then to upload your manuscript file(s) according to the instructions.

To avoid postal delays, all transaction is preferred by e-mail. A finished manuscript submission is confirmed by e-mail immediately and your paper enters the editorial process with no postal delays. When a conclusion is made about the publication of your paper by our Editorial Board, revisions can be submitted online with the same procedure, with an occasion to view and respond to all comments.

Complete support for both authors and co-author is provided.

4. MANUSCRIPT'S CATEGORY

Based on potential and nature, the manuscript can be categorized under the following heads:

Original research paper: Such papers are reports of high-level significant original research work.

Review papers: These are concise, significant but helpful and decisive topics for young researchers.

Research articles: These are handled with small investigation and applications

Research letters: The letters are small and concise comments on previously published matters.

5.STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also.Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

Papers: These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

(a)Title should be relevant and commensurate with the theme of the paper.

(b) A brief Summary, "Abstract" (less than 150 words) containing the major results and conclusions.

(c) Up to ten keywords, that precisely identifies the paper's subject, purpose, and focus.

(d) An Introduction, giving necessary background excluding subheadings; objectives must be clearly declared.

(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, unless non-standard.

(f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;

(g) Discussion should cover the implications and consequences, not just recapitulating the results; conclusions should be summarizing.

(h) Brief Acknowledgements.

(i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.

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

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

Format

Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.

Standard Usage, Abbreviations, and Units: Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than 1.4 × 10-3 m3, or 4 mm somewhat than 4 × 10-3 m. Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

Title: The title page must carry an instructive 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) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.

Abstract, used in Original Papers and Reviews:

Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

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

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art.A few tips for deciding as strategically as possible about keyword search:

- One should start brainstorming lists of possible keywords before even begin 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 research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

Acknowledgements: Please make these as concise as possible.

References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.

The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

Tables, Figures and Figure Legends

Tables: Tables should be few in number, 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. Vertical lines should not be used.

Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.

Preparation of Electronic Figures for Publication

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. 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: It is the rule of the Global Journals Inc. (US) for authors 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.

Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.

6. AFTER ACCEPTANCE

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

6.1 Proof Corrections

The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

www.adobe.com/products/acrobat/readstep2.html. This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

Proofs must be returned to the dean at dean@globaljournals.org within three days of receipt.

As changes to proofs are costly, we inquire that you only correct typesetting errors. All illustrations are retained by the publisher. Please note that the authors are responsible for all statements made in their work, including changes made by the copy editor.

6.2 Early View of Global Journals Inc. (US) (Publication Prior to Print)

The Global Journals Inc. (US) are enclosed by our publishing's Early View service. Early View articles are complete full-text articles sent in advance of their publication. Early View articles are absolute and final. They have been completely reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after sending them. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so Early View articles cannot be cited in the conventional way.

6.3 Author Services

Online production tracking is available for your article through Author Services. Author Services enables authors to track their article - once it has been accepted - through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The authors will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript.

6.4 Author Material Archive Policy

Please note that if not specifically requested, publisher will dispose off hardcopy & electronic information submitted, after the two months of publication. If you require the return of any information submitted, please inform the Editorial Board or dean as soon as possible.

6.5 Offprint and Extra Copies

A PDF offprint of the online-published article will be provided free of charge to the related author, and may be distributed according to the Publisher's terms and conditions. Additional paper offprint may be ordered by emailing us at: editor@globaljournals.org .

You must strictly follow above Author Guidelines before submitting your paper or else we will not at all be responsible for any corrections in future in any of the way.

Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

1. Choosing the topic: In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

2. Evaluators are human: First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

3. Think Like Evaluators: If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

4. 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.

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

6. Use of computer is recommended: As you are doing research in the field of Computer Science, then this point is quite obvious.

7. Use right software: Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

8. Use the Internet for help: An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

9. Use and get big pictures: Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

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

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

12. Make all efforts: Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. 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 to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

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

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

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

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After 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 to 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 in 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 criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of 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 the 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 evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

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

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing 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 approach 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. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than 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 maintain the initial two items to no more than one ruling each.

- Reason of the study - 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 quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness 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 to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled 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 with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose 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 sound written Procedures segment allows a capable scientist to replacement 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 for the least amount of information that would permit another capable scientist to spare 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 object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text 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:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not 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 - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in 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 a 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. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise 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 in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to 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 part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a 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 implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly 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 with prospect, and let it drop at that.

- Make a decision if each premise is supported, 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 the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One 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 available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

Administration Rules Listed Before Submitting Your Research Paper to Global Journals Inc. (US)

Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):

Segment Draft and Final Research Paper: You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.

Criterion for Grading a Research Paper (Compilation)
by Global Journals Inc. (US)

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 Inc. (US).

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 Above 200 words	No specific data with ambiguous information 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

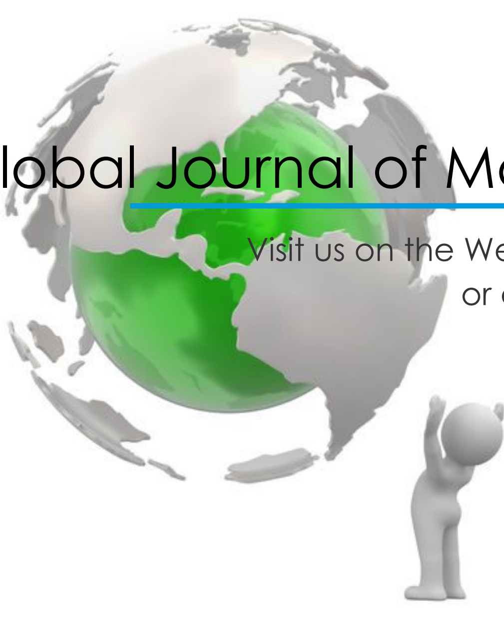
INDEX

T

U

Z

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

© Global Journals