Interest Rates on Deposits and Loans (Kosovo Banking System 2012-2015)

Sokol Berisha[1], **Fatos Haziri**[2]

Abstract: Kosovo's sluggish economic growth and financial market developments are two main reasons for conducting the analysis of banking system interest rates in Kosovo. It has been always considered that increase in the number of banks will in turn result in higher competitiveness; however this did not happened and the interest rates have only seen increase. As a result of this situation, poor access to loans continues to severely hamper the household and business economic activities in Kosovo. Despite rapid development of banking sector in Kosovo that was built since 2000 and which is considered as one of the most successful ones in Kosovo's economy, the impact of micro policies and governmental policies, including the high interest rates, have reflected in sluggishness of entrepreneurial initiatives. Irrespective of a considerable number of banks operating today in Kosovo (10 banks), this sector remains quite concentrated, since around 90% of total assets, more than 88% of deposits and around 80% of loans are concentrated in three largest banks with foreign capital.

Keywords: Interest rates; deposits; loans; investments; banking system in Kosovo

JEL classification: E4; E43; E44; E58

1. Introduction

The development trend of financial market has its repercussions in other socio-economic developments. The operation of financial market segments affects the country's global economic system and the reduction of interest rates in general. Increased quality management of deposits improves the confidence of customers towards banks and increases the credit potential, which in turn directly impacts the improvement of investments and reduction of unemployment rate. Increased investment initiatives also affect the growth of budget revenues and improve the tax system efficiency of the country. In this sense, consequences that may arise from the informality reduction must be accepted. These indicators are related to

[1] PhD, University St' Clement, Faculty of Economics, Department of International Business, Prilep, Adviser to CEO - Insurance Company "ELSIG" www.kselsig.com; Address: st. Tringë Smajli, nr. 3 Prishtinë, Kosovë, Republic of Macedonia, Tel.: + 377 44 193 310, Corresponding author: sokolberisha@yahoo.com.

[2] Lieutenant Colonel in Kosovo Police, Lecturer in FAMA College, Address: Kolegji Fama, Gjilane 60000, Tel.: +381 280 323029, E-mail: hazirifatos@gmail.com.

each other and have multiplying effect on numerous financial and economic outcomes.

2. Interest Rate Policies in Kosovo during 2012-2015

The Government, through its macro-policies, which are usually drafted and approved as short, medium and long term strategies, decides on directions, priorities and dynamics of economic development in general and the financial sector in particular. These frameworks of developmental dynamics reflect the entire economy and the lives of citizens of the country. Opportunities for the government authorities in Kosovo to influence macro-policies and development guidelines and banking business activities prior to 17 February 2008 have been limited due to specific and undefined status of Kosovo, and the lack of securities market. After 17 February 2008, upon Kosovo's declaration of independence and adoption of the Constitution when the status of CBAK (Central Banking Authority of Kosovo) got advanced to CBK (Central Bank of Kosovo) the preconditions were set for Kosovo to exercise its influence in guiding the development of banking guidelines through its government and CBK. To mitigate the effects of the economic crisis, developed countries undertook measures aimed at boosting demand, mainly by lowering the interest rates of central banks and expansionary fiscal policies. Reduction of the interest rates would have direct impacts in increasing the level of private investment, i.e. new jobs, increased consumption by consumers, which would in turn result in GDP growth and economic development of the country. If one might think that further increase of competition in the banking sector would help in reducing the high interest rates, which usually happens in countries with developed economies, where supply and demand are key determinants of overall prices and capital, it seems that this does not work for Kosovo because we have 8 commercial banks in total and the highest interest rates in the region.

In comparison with countries in the region, in Kosovo we still have poor loans offer and low intensity of loans; while on the other hand, banks' net earnings are among the highest in the region. These high profits of the banking sector are mainly based on interest rates on loans. Opening of new lending options/ funding will result in increased competition in the financial system of Kosovo, as a result of the lowering of interest rates. Low efficiency of the judiciary, cadastral registry and property rights are also problems that banks management have repeatedly highlighted as system shortcomings hampering banks to operate on lower interest rates.

3. The Impact of the High Interest Rates on Businesses and Economy of Kosovo

The running of the Kosovo's banking system mainly relies on financial resources of the country's economy, namely deposits collected from citizens within the country. In 2015 the overall deposits in Kosovo banking sector amounted to EUR 2.7 billion, marking the annual growth by 6.5 percent (3.6 percent during 2014). The main source of deposits in Kosovo banking system remains the household deposits, which in 2015 amounted to EUR 1.9 billion (72.7 percent of total deposits).

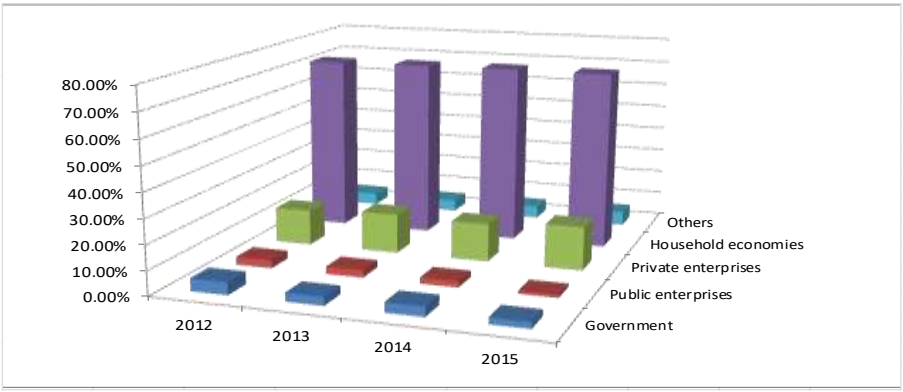

Figure 1. Structure of deposits by sector in percentage

Source: CBK Annual report 2015

From this graphic presentation we see that in the timeline 2012-2015 the structure of deposits is mainly dominated by household deposits (with 72.7%). This indicator does not show a good level in development of micro, small and medium enterprises, as well as the Kosovo business in general.

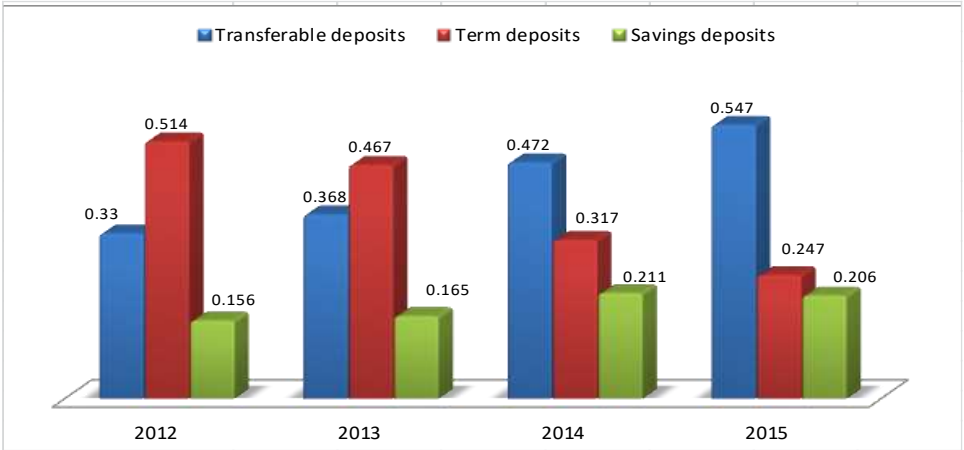

Figure 2. Structure of time deposits by maturity, in percentage

Source: CBK Annual report 2015

Another indicator is presented in this figure, such as the level of maturity of deposit structure, which clearly shows that the majority of deposits are in the category of maturity transferable deposits 54.70 percent.

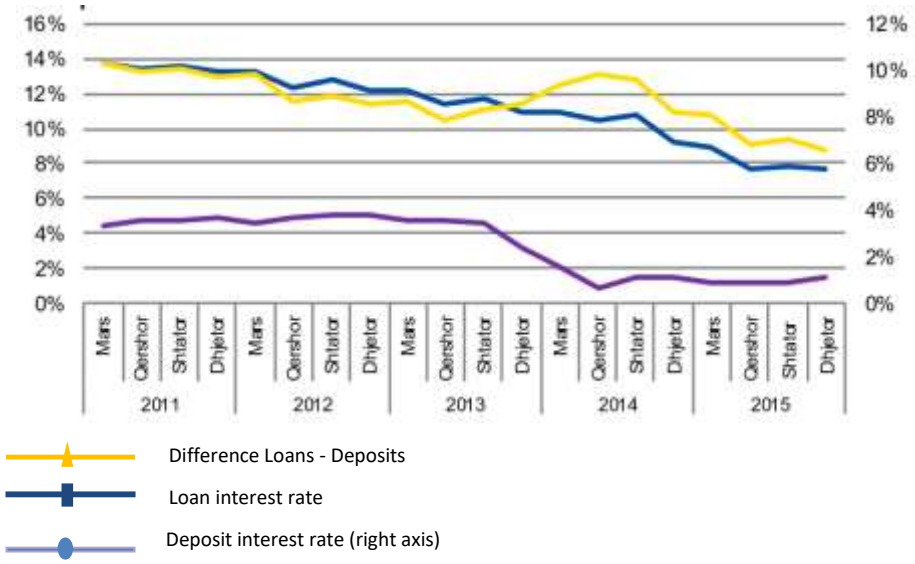

Figure 3. Average of interest rates, in percentage 2011 - 2015

Source: CBK Annual report (2015)

However, interest rates for loans in the banking system in Kosovo remain very high or amongst the highest in the region, thus imposing a discouraging and slow pace of development of medium, small and households business in Kosovo. The rate for

loans granted by commercial banks had an average of 14.3 percent in the first half of 2011, whereas the average interest rate on deposits was 3.4 percent. The difference between the interest rates for deposits and loans in the first half of 2011 had an average of 10.9 percentage points, which represents an annual increase of 0.2 percentage points.

Considering the fact that 72.7% of deposits are made by households, and the same citizens of Kosovo pay such high rates for their loans, up to 14.3%, then we are not dealing with the market economy rules or the self-regulating mechanism of supply and demand, but rather with a silent mechanism of monopoly.

The net profit of the banking system in Kosovo continues to remain positive, and during the first half of 2011, the net profit of the banking system in Kosovo was EUR 14.9 million in June 2011, which represents a decrease of 13 percent compared to June 2010. In June 2011, the indicator of capital adequacy ratio stood at 17.2 percent, which represents a higher level than the minimum required by the CBK[1].

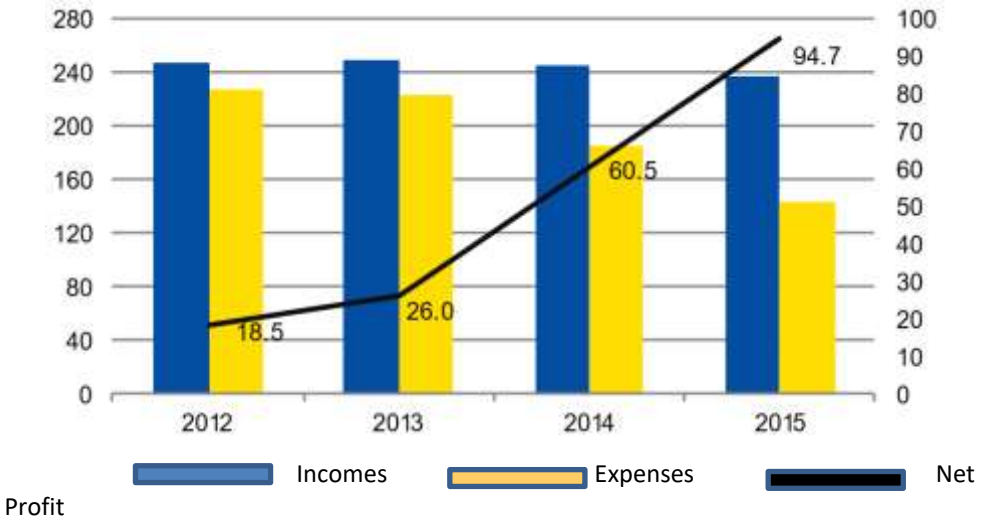

Figure 4. Financial performance of banking sector 2012-2015 (mil. EUR)

Source: CBK Annual report 2015

The net profit of the banking system in Kosovo year by year continues to be very higher compare to other sectors in Kosovo was EUR 94.7 million 31.12.2015 (60.5 million on 31.12.2014).

[1] Financial Stability Report No. II, December 2011 - CBK, Prishtinë.

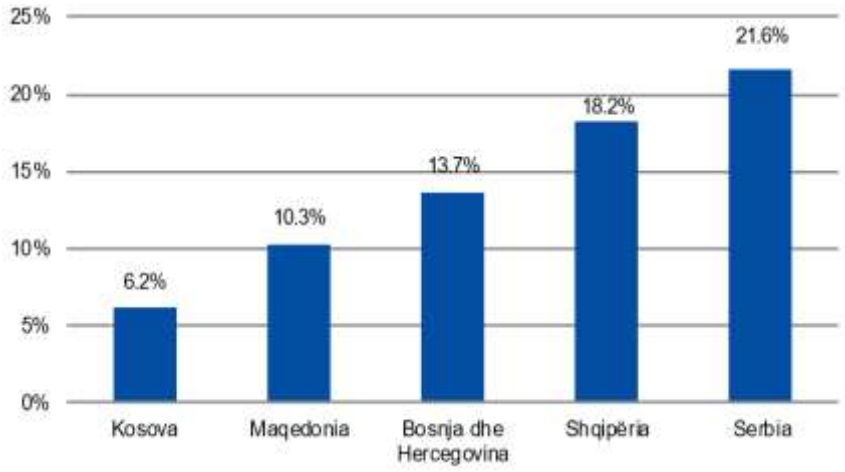

Figure 5. Rate of nonperformance Loans in Kosovo compare to region countries 2015

Source: Annual Report 2015 CBK (IMF -Central Bank of respective countries) 2015

The quote of non-performing loans still is too low in Kosovo compared to other countries on the region. However there still remains a high degree of coverage through banking fees.

The renowned world economist Irving in his book "The Theory of Interest"[1] states that interest is determined by impatience to spend income and the opportunity to invest it". According to Fisher, the real interest rate is the price that equates supply and demand of capital. Offer depends on the willingness of people to save, i.e. to postpone consumption. Demand depends on productive investment opportunities.

The interest rate is the instrument for balancing the volume of savings and capital supply with demand of financial resources. Balanced Interest or "natural" rate of interest is the one formed at the level of balance between supply and demand of capital. In the financial market interest is formed on the basis of the ratio between the supply and demand for loan[2]. Lack of securities developed market in Kosovo, has prevented the intervention in commercial banks through discount loans, thus increasing the credit potential and reducing interest rates.

The banking competition provides financial deregulation and liberalization. Deregulation in the financial sector and banking system affects the deregulation of interest system, as in every other sphere of trade that affects the definition of the price of goods and services[3].

[1] Prof. Dr. Gazmend Luboteni Financat e korporatave Prishtinë 2005. p. 183.
[2] Srboljub Jovic: Bankarstvo, Naucna knjiga, Beograd, 1990, p. 461.
[3] Dr. Slobodan Komazec, Dr. Aleksander Zivkovic, Dr. Zarko Ristic, Bankarstvo – Teorija, institucije, politika. Cigoja stampa 1995, Beograd, p. 391.

In March 2009 the Kosovo Competition Commission was established pursuant to Law No. 2004/36 on Competition. One of the investigated segments was the banking system. This investigation was related to allegations of collusion between banks in order to maintain this level of interest rates, and there were public statements made about it by the Competition Authority.

4. Interest Rates in Some Countries of the Region and the EU

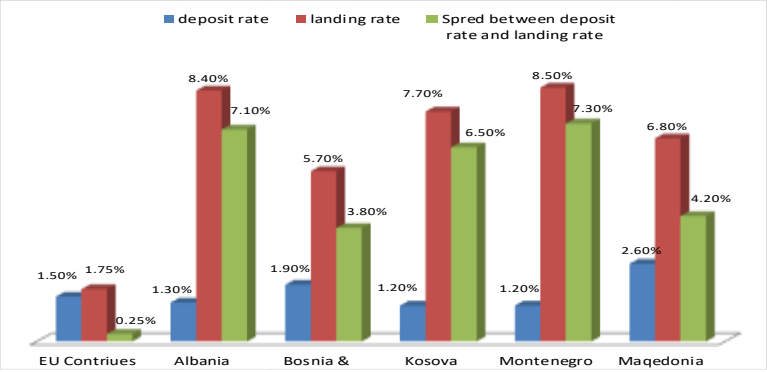

Figure 6. Interest rates on deposits and loans in some countries of the region and the EU

Source: Annual Report 2015 CBK

Having analyzed separately all countries in the region, we can see that the distribution between interest rates on loans and deposits in all countries compare to EU Countries is too higher.

5. Interest Rates on Deposits and Loans under Positive Laws in the Republic of Kosovo

Central Bank shall be a public legal subject having administrative, financial and managerial autonomy.[1] The primary objective of the Central Bank shall be to foster and to maintain a stable financial system, including a safe, sound and efficient payment system.

Additional Objective of the Central Bank, which shall be subordinated to the primary objective of the Central Bank, shall be to contribute to achieving and maintaining domestic price stability.[2] The Central Bank may provide facilities, including intra-day credit collateralized by negotiable Government securities, to

[1] Article 2, Law No. 03/L-209 , on Central Bank of the Republic of Kosovo.
[2] Article 7, Law No. 03/L-209 , on Central Bank of the Republic of Kosovo.

payment, clearing and securities settlement systems, and their participants, to ensure the safety, soundness and efficiency of such systems.[1]

The Central Bank shall not grant any direct or indirect credits to the Government or to any other public agency or State-owned entity, with the exception of intra-day credits to secure the smooth functioning of the payment system. Such intra-day credits shall be collateralized by negotiable Government securities and shall be fully repaid before the end of the same day.

The restrictions of paragraph 1 of this Article regarding the provision of direct or indirect credits to Government, shall not apply to publicly-owned banks, which shall be given the same treatment as privately-owned banks. The Central Bank may purchase negotiable Government securities provided that such purchases are only made in the secondary market.[2]

The Central Bank shall be exclusively responsible for the regulation, licensing, registration and supervision of banks and other financial institutions as further specified in the relevant laws. Such responsibility shall include the imposition of administrative penalties. The staff of the Central Bank, and other qualified persons appointed by the Executive Board, shall visit the offices of financial institutions to examine such accounts, books, documents and other records, to obtain such information and records from them, and to take such other action as the Central Bank shall deem necessary or advisable.

Financial institutions shall furnish the Central Bank with such information and records concerning their operations and financial condition as the Central Bank may require.

The Central Bank may disclose information and data obtained under paragraph 3 of this Article in whole or in part in aggregate form for classes of financial institutions determined in accordance with the nature of their business.[3]

Regarding depositors and cashiers, Central Bank shall accept deposits in any currency from the Government, or on behalf of it, or from any other public agency. As depository, the Central Bank shall receive and disburse funds and keep account thereof and provide other financial services related thereto.

The Central Bank shall pay to the limits of the deposited amounts against payment orders concerning such accounts. The Central Bank may pay interest on such deposits at up to market rates.12[4]

[1] Article 21, Law No. 03/L-209 , on Central Bank of the Republic of Kosovo.
[2] Article 33, Law No. 03/L-209, on Central Bank of the Republic of Kosovo.
[3] Article 23, Law No. 03/L-209, on Central Bank of the Republic of Kosovo.
[4] Article 31, Law No. 03/L-209, on Central Bank of the Republic of Kosovo.

While banking officials and the Central Bank, under the Law, shall not grant any credit or make any significant monetary or financial gift; engage in commerce, purchase the shares of any corporation, including the shares of any financial institution, or otherwise have an ownership interest in any financial, commercial, agricultural, industrial, or other undertaking; or acquire by purchase, lease, or otherwise any rights in or to real property, except as it shall consider necessary or expedient for the provision of premises for the conduct of its administration and operations or similar requirements incidental to the performance of its tasks.

Notwithstanding the previous provisions of this Article, the Central Bank may make adequately secured loans to, or have an ownership share or otherwise participate in, any organization that is engaged in activities that are required or useful for the proper discharge of the Central Bank's own tasks and responsibilities; acquire, in the course of satisfaction of debts due to it, any interests or rights referred to in this Article; provided, however, that all such interests or rights so acquired shall be disposed of at the earliest suitable opportunity; and establish staff retirement funds or similar arrangements for the benefit or protection of the staff, and manage such funds and arrangements.[1]

6. Conclusion and Implication of Findings

Reducing interest rates is a good precondition for the different development dynamics that Kosovo as a new state needs today, considering the highest unemployment and poverty rate in the region and the lowest income per capita:

- Due diligence of commercial banks management is needed for granting loans, because of the increasing trend of non-performing loans. However there still remains a high degree of coverage through banking fees;

- Reducing interest rates will not damage the business of commercial banks operating in the long run, because the banking system in Kosovo is consolidated and in the financial market it would further increase competition;

- The special challenge for Kosovo authorities and financial institutions remains to convey this message in various forms, and it shall affect banking business since Kosovo regarding the safety aspect does not differ from the countries in the region, and lower loan rates can be applied;

- The value of assets in the Pension Fund sector amounts to 1.535 million Euros invested in international markets at 99%, which means that even if these assets will be partially or completely returned to the financial market in Kosovo, the positive impact the development trend in the country will be very impressive and also

[1] Article 71, Law No. 03/L-209, on Central Bank of the Republic of Kosovo.

through this effect will have much faster economic development and overall prosperity;

- The amount of funds collected by the Privatization Agency of Kosovo from the sale of assets reached 486 million Euros in 2015 and about 600 million Euros in 2016, for which the law on PAK needs to be amended in order to withdraw these assets and to invest them in the country's financial market in order to create another very important impact on economic development either through the development fund or through any development bank that will manage these means in order to stimulate the economic development of the country;

- Improvement of efficiency of the judicial system, cadastral registry and clarities on property rights are also problems to which a quick solution need to be found, which in turn would enable banks to provide loans at lower interest rates.

All these recommendations are aimed to establish preconditions for a "sound" financial environment and, consequently, the good management with deposits and loans will directly affect the establishment of the basis for expedient economic development which is Kosovo's main objective. From this situation, with Kosovo's financial system having high level of profits generated by banks and the relatively low level of bad loans below the regional average, it can be concluded that there is sufficient room for interest rate cuts, at least up to the regional level, which will have a positive effect in investment level and business development.

References

*** Annual Report 2011–2016, Central Bank of the Republic of Kosovo. Prishtinë, June 2011.

*** Annual Report 2008-2010, Central Bank of the Republic of Kosovo. Prishtinë.

*** Central Bank of the Republic of Kosovo - December 2011, Financial Stability Report II, Prishtinë.

*** CBK, October 2009. Strategic Plan 2010-2015. Prishtinë.

Gazmend, Luboteni (2005). *Financat e korporatave*. Prishtinë, p. 183.

*** Slobodan, Komazec; Zivkovic, Aleksander & Zarko, Ristic (1995). Bankarstvo – Teorija, institucije, politika, Cigoja stampa Beograd, p. 391.

Srboljub, Jovic (1990). *Bankarstvo*. Naucna knjiga, Beograd, p. 461.

Law Nr. 03/L-209, on Central Bank of the Republic of Kosovo.

The Linkage between Emerging and Developed Markets: Implication for International Portfolio Diversification

Oladapo Fapetu[1], Olufemi Aluko[2]

Abstract: This study is a holistic attempt to examine the linkage between emerging and developed markets between January 2012 and June 2016 using iShares MSCI Emerging Markets ETF and iShares MSCI World ETF to measure emerging and developed markets respectively. Employing the Johansen, Engle-Granger, and Philip-Ouliaris, cointegration testing approaches, this study reveals that there is no cointegration between emerging and developed markets, thus indicating that international portfolio diversification is feasible for investors holding financial assets in both markets. This finding implies that investors can reduce risk by constructing a portfolio consisting of assets in both emerging and developed markets.

Keywords: Emerging markets; Developed markets; International portfolio diversification; Cointegration

JEL Classification: G11; G15

1. Introduction

Due to the liberalisation of capital accounts in virtually all countries, investors can hold a portfolio comprising domestic and foreign financial assets. Investors' liberty to strategically allocate wealth across domestic and foreign financial assets provides an opportunity to minimise portfolio risk through international portfolio diversification. International portfolio diversification allows investors to have a wider variety of foreign financial assets to include in their portfolio, so as to enhance their reward in relation to risk (Wong, Penm, Terrell & Lim, 2004). Bodie, Kane and Marcus (1999) contend that the risk of an internationally diversified portfolio can be reduced by more than half the risk of a domestically diversified portfolio in the US stock market. Investors have limited chance to reap the benefits of international portfolio diversification when stock markets move together.

[1] PhD, Department of Banking & Finance, Federal University of Agriculture, Nigeria, Adrress: Alabata Road, Abeokuta, Ogun State, Nigeria, Tel.: +2348062163511, Nigeria, E-mail: drfapetu@gmail.com.

[2] M.Sc., Department of Finance, University of Ilorin, Kwara State, Nigeria, Address: 1515, Unilorin Staff Quarters, Amodu Bello Way, Ilorin, Nigeria, Tel.: +2348037357830, Corresponding author: olufemiadewale6@gmail.com.

Emerging markets serve as preferable investment centres for international investors to achieve international portfolio diversification. Harvey (1995) claims that it is possible for international investors to maximise returns by investing in emerging markets because they offer higher returns and are segmented from the global market. In the early 2000s, emerging markets rewarded investors for the risk they assumed because of their low equity valuations compared to developed markets (Davis, Aliaga-Diaz, Cole & Shanahan, 2010).

Recent studies show that emerging markets are becoming integrated with developed markets (Singh & Kaur, 2015; Lingaraja, Selvam & Vasanth, 2015; Trivedi & Birău, 2013; Ali, Butt & Rehman, 2011; Kamaralzaman, Samad & Isa, 2011; Singh, 2010). When emerging and developed markets are integrated, it raises doubt on the possibility for an international investor to diversify. It also tends to permit the contagion effect of developed market crisis on emerging markets and vice versa. The 2007 US subprime mortgage crisis metamorphosed into a global financial crisis as a result of financial integration. Contagion effect has significant implication for international portfolio diversification. Recently, Mauldin (2016) reported that the International Monetary Fund (IMF) warned that major emerging markets, led by the China, are becoming more likely to spread fear to financial markets, leading to poor stock performance in the United States and other developed countries. This signifies that the performance of emerging markets tends to drive the performance of developed markets. Put differently, emerging markets crises may lead to developed markets crises.

It is against this backdrop that this study examines the linkage between emerging and developed markets with the aim of providing implication for international portfolio diversification. The rest of this study is structured as follows: Section 2 provides the literature review, Section 3 deals with the data and preliminary analyses, Section 4 presents the empirical findings and Section 5 gives the conclusion.

2. Literature Review

The linkage between emerging and developed markets has been given considerable empirical attention. Singh and Kaur (2015) found a unidirectional causality from the US stock market to the Indian and Chinese stock market during the US subprime crisis. Lingaraja et al. (2015) observed that the US stock market leads the stock market of India, Malaysia and Philippines while it does not lead the stock market of China, Indonesia, Korea, Taiwan and Thailand. Kapingura, Mishi and Khumalo (2014) examined the integration of the South African stock market to other African markets as well as developed markets. It showed that the market is fully integrated to the developed markets but not to other African markets.

Dania and Malhotra (2013) examined the interdependence of stock market returns of BRICS nations on the stock market returns of 3 developed countries (France, Germany and US) and found no evidence of interdependence. Trivedi and Birău (2013) showed co-movement, interdependence and inter-linkage between emerging and developed markets. Birău and Trivedi (2013) analysed the linkage between the Romanian stock market and the stock markets of France, Germany and Greece in the milieu of the global financial crisis. The study found that there is absence of causality between the Romanian stock market and the developed markets in the pre-global financial crisis. However, in the post-global financial crisis period, only the Greek stock market leads the Romanian market.

Gupta and Guidi (2012) investigated the integration of the Indian market to 3 Asian developed markets (Hong Kong, Japan and Singapore). The result showed that the Indian market is not integrated to the developed markets. Agyei-Ampomah (2011) found that African markets except South Africa are not integrated to the global market. It also found low correlation among African markets. Kamaralzaman et al. (2011) analysed the cointegration between the Malaysian market and 10 developed markets. It showed that the Malaysian stock market is cointegrated with the developed markets.

Ali et al. (2011) showed that the Pakistani stock market does not move together with stock markets of UK, US, Taiwan, Malaysia and Singapore but otherwise with the stock markets of India, China, Japan and Indonesia. Singh (2010) examined the link between the Chinese and Indian market and 4 developed markets (US, UK, Japan and Hong Kong). It was discovered that both markets are positively correlated with the developed markets and there is at least a unidirectional causal relationship between the developed markets and the Indian and Chinese market. Arouri and Jawadi (2009) revealed that the stock markets of Philippines and Mexico are nonlinearly integrated to the global market. Raj and Dhal (2008) showed that the Indian stock market is integrated with global and major regional markets.

Worthington and Higgs (2007) provided evidence of long run relationship as well as short and long run causality between 3 developed and 8 emerging Asian markets. Ibrahim (2005) did not find cointegration evidence between the Indonesian market and other Association of Southeast Asian Nations (ASEAN) markets as well as the US and Japan stock market prior to and after the 1997 Asian financial crisis. Wong et al. (2004) investigated the relationship between 3 developed markets (US, UK and Japan) and 8 emerging Asian markets. The study observed that some of the developed and emerging markets move together. It also found that the interdependence between most of the developed and emerging markets increased after the 1997 Asian financial crisis.

Syriopoulos (2004) discovered that international portfolio diversification benefits are limited for international investors in the Polish, Czech Republic, Hungarian, and Slovakian stock markets. Gilmore and McManus (2002) found that the US stock market is not linked to the emerging stock markets of Czech Republic, Hungary, and Poland. Cha and Oh (2000) revealed that the link between the stock markets of Hong Kong, Korea, Singapore, and Taiwan started to increase after the October 1987 stock market crash, and has substantially increased since the 1997 Asian financial crisis.

3. Data and Preliminary Analyses

The data consists of monthly closing index for iShares MSCI Emerging Markets ETF and iShares MSCI World ETF from January 2012 to June 2016. The data are measured in US dollar and were obtained from Yahoo Finance. Monthly data was used in order to overcome the problem of non-synchronous trading and the possible effects of autocorrelation in volatility which are common features inherent in market data obtained on daily and weekly basis (Alagidede, 2008; Ibrahim, 2005). The iShares MSCI Emerging Markets ETF and iShares MSCI World ETF were used to proxy for the emerging and developed markets respectively. The iShares MSCI Emerging Markets ETF is an index designed to capture the performance of equities in the global emerging markets while iShares MSCI World ETF is an index built to track the performance of equities of developed markets. The preliminary analyses consist of the descriptive statistics, heteroskedasticity test, unit root tests and a combined graphical plot of both indexes. Table 1 presents the descriptive statistics of the emerging and developed markets index.

Table 1. Descriptive Statistics

Statistic	EMERGING	DEVELOPED
Mean	39.58389	65.65778
Maximum	45.06000	75.10000
Minimum	30.32000	50.49000
Standard Deviation	3.794818	7.514342
Skewness	-0.855483	-0.636029
Kurtosis	2.762534	1.999374
Jarque-Bera	6.713544**	5.893613**
Observation	54	54

Source: Author's computation

Note: ** denotes rejection of hypothesis of normal distribution at 5% significance level.

The mean, maximum and minimum value of the developed markets index is higher than the emerging markets index. Also, the standard deviation of the developed markets index is higher than the emerging markets index, thus implying that price

is more volatile in developed markets than emerging markets. The skewness statistic of both indexes is negative and this implies that it is possible to obtain more negative values from the indexes than positive values. The Kurtosis coefficient of both indexes is less than 3 and this indicates they both have a platykurtic (thin-tailed and low-peaked) distribution. The Jarque-Bera statistic shows that the hypothesis of normal distribution is rejected for both indexes.

Table 2. Heteroskedasticity Test

Lag	EMERGING	DEVELOPED
1	73.32009*	123.3439*
2	37.93868*	64.42466*
3	28.81491*	39.78424*
4	20.61307*	28.84834*

Source: Author's computation

Notes: * indicates the rejection of the hypothesis of no ARCH component at 1% significance level. Heteroskedasticity test performed with the ARCH LM test and F-statistic reported for the test.

The ARCH LM test indicates that there are ARCH effects in both indexes, thus indicating the presence of volatility clustering in both markets. The F-statistic obtained for developed markets index at lag 1 to 4 is higher than that of the emerging markets index. This implies that the developed markets index is more volatile than the emerging markets index. This is consistent with the standard deviation statistic obtained in Table 1.

Table 3. Unit Root Test Results

Panel A: Unit Root Test without Structural Break						
	EMERGING			DEVELOPED		
	Level	First Difference	I(*d*)	Level	First Difference	I(*d*)
ADF	-2.316631[b]	-6.392912*[a]	I(1)	-1.879969[a]	-8.728190*[b]	I(1)
DF-GLS	-2.312472[b]	-6.392912*[b]	I(1)	-1.670890[b]	-8.063469*[b]	I(1)
PP	-2.316631[b]	6.934119*[a]	I(1)	-1.882336[a]	-9.634603*[b]	I(1)
Ng-Perron	-8.93723[b]	-25.4542*[b]	I(1)	-5.61806[b]	-25.5189*[a]	I(1)
Panel B: Perron Unit Root Test with Structural Break						
	Level		First Difference			
	Break Date	Coefficient	Break Date	Coefficient		I(*d*)
EMERGING	2015:05	-0.451704	2014:07	-1.012691*		I(1)
DEVELOPED	2015:06	-0.388086	2015:12	-1.248238*		I(1)

Source: Authors' computation

Notes: * denotes 1% critical value, [a] and [b] indicate test equation with constant only and constant and trend respectively and MZa statistic reported for the Ng-Perron test and the Perron unit root test with structural break was performed in an innovative outlier model. Also, critical value for the Perron unit root test with structural break was obtained from Table 1(e) in Perron (1997).

Table 3 shows that both indexes are non-stationary series with or without structural break. The emerging and developing markets index are integrated at first order.

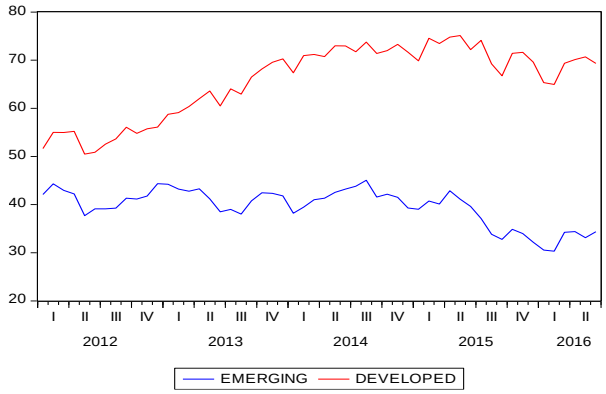

Figure 1. Combined Graph of Emerging and Developed Markets Index

The combined graph shows the indexes move in opposite direction. This implies that the index of emerging and developed markets are negatively correlated.

4. Empirical Findings

4.1. Cointegration Test

The cointegration test was performed using three alternative methods applicable when all series in a model are integrated at first order. These methods are Johansen, Engle-Granger and Phillips-Ouliaris cointegration test. The existence of cointegration between the markets indicates that there is possibility of causal linkage between the markets at least in one direction, which suggests evidence of financial integration. The opportunity to enjoy international portfolio diversification is limited when markets are integrated. The cointegration test has been widely used to determine whether markets are integrated (for example, Kamaralzaman et al., 2011; Ibrahim, 2005; Wong et al., 2004). Table 4 presents the cointegration test results.

Table 4. Cointegration Test Results

Panel A: Johansen Cointegration Test (Trace Test)				
Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 Critical Value	p-value
None	0.084463	7.154675	15.49471	0.5597
At most 1	0.048147	2.565941	3.841466	0.1092

Panel B: Engle-Granger Cointegration Test				
Dependent Variable	tau-statistic	p-value	z-statistic	p-value
EMERGING	-1.718046	0.6712	-6.424145	0.5976
DEVELOPED	-1.971579	0.5472	-5.159544	0.7074
Panel C: Phillips-Ouliaris Cointegration Test				
Dependent Variable	tau-statistic	p-value	z-statistic	p-value
EMERGING	-1.805030	0.6300	-7.051146	0.5443
DEVELOPED	-1.911954	0.5773	-4.411157	0.7708

Source: Authors' computation

It can be deduced from Table 4 that all the tests show that there is no cointegration between emerging and developed markets index. This implies that the emerging markets and developed markets do not move together over a long period.

4.2. Impulse Response Functions

A VAR-in-First Difference model was estimated since the series are I(1) but not cointegrated. It was specified with a lag length of 1 selected based on the Akaike information criterion (AIC), Final Prediction Error (FPE), sequential modified LR test and Hannan-Quinn information criterion (HQ). After estimating the VAR model, diagnostics tests were performed. The VAR residual serial correlation LM test confirms that there is no serial correlation in the model. The normality test based on the Cholesky (Lutkepohl) orthogonalization method accepts the hypothesis that the residuals are multivariate normal.

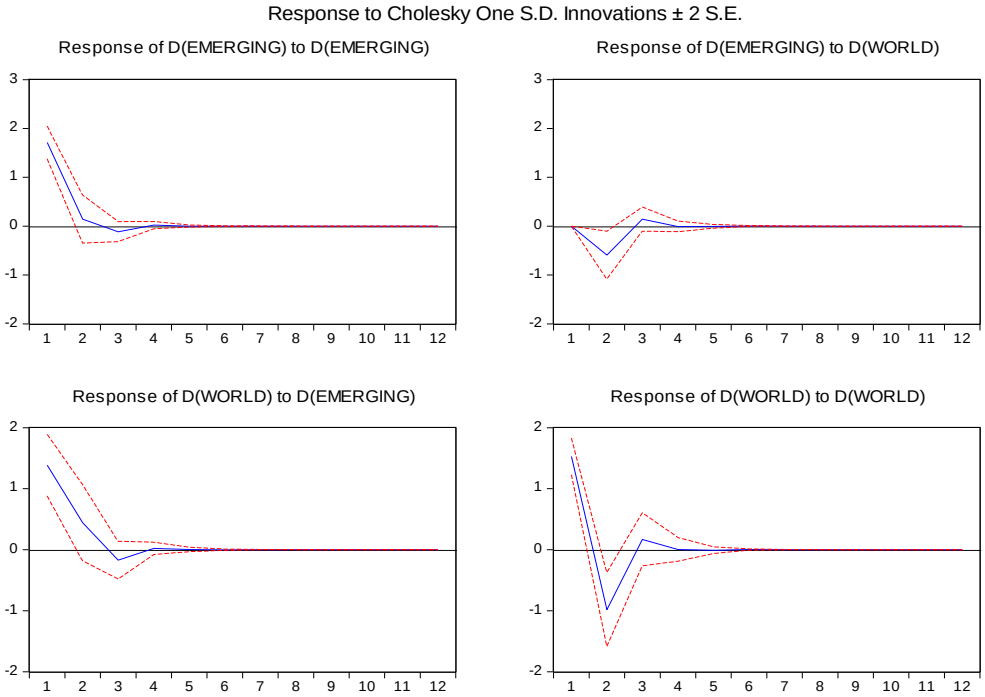

Figure 2. Impulse Responses of Emerging and Developed Markets

The impulse response function graphs show that emerging markets negatively respond to shocks (innovations) from developed markets in the 1st and 2nd month but react positively in the 3rd and 4th month over a12-month horizon. From the 5th month onward over a 12-month horizon, emerging markets do not respond to developed markets shocks. On the other hand, developed markets positively respond to emerging markets shocks in the 1st and 2nd month but negatively respond in the 3rd month. However, developed markets do not react to shocks from emerging markets as from the 4th month.

5. Conclusion

Investors are concerned about the linkage between markets when seeking to diversify their portfolio internationally as a portfolio risk reduction strategy. This study took a holistic view on the linkage between emerging and developed markets by using the iShares MSCI Emerging Markets ETF and iShares MSCI World ETF to proxy for emerging and developed markets respectively. Using three alternative cointegration testing approaches, it was evidenced that there is no cointegration between the markets, thus indicating that international portfolio diversification is feasible for investors with financial assets in both markets in the long run. This

suggests that investors can construct a portfolio consisting of assets in both emerging and developed markets as a strategic approach to reducing risk on their portfolio. This study also showed that the shock transmission mechanism between the emerging and developed markets gradually changes as period increases.

References

Agyei-Ampomah, S. (2011). Stock market integration in Africa. *Managerial Finance,* 37*(*3), pp. 242-256.

Alagidede, P. (2008). African stock market integration: Implications for portfolio diversification and international risk sharing. *Proceedings of the African Economic Conference*, pp. 25-54.

Ali, S.; Butt, B.Z. & Rehman, K. (2011). Comovement between emerging and developed stock markets: An investigation through cointegration analysis. *World Applied Sciences Journal,* 12*(*4), pp. 395-403.

Arouri, M.E. & Jawadi, F. (2009). Stock market integration in emerging countries: Further evidence from the Philippines and Mexico. In *2nd International Financial Research Forum*.

Birău, R. & Trivedi, J. (2013) Analyzing cointegration and international linkage between Bucharest Stock Exchange and European developed stock markets. *International Journal of Economics and Statistics,* 4*(*1), pp. 237-246.

Bodie, Z.; Kane, A. & Marcus, A.J. (1999). *Investments* (4th Edition). New York: McGraw-Hill.

Cha, B. & Oh, S. (2000). The relationship between developed equity markets and the Pacific Basin's emerging equity markets. *International Review of Economics & Finance,* 9*(*4), pp. 299-322.

Dania, A. & Malhotra, D.K. (2013). Return dynamics and global integration of BRICS stock market. *International Journal of Business and Emerging Markets,* 5*(*3), pp. 217-233.

Davis, J.H.; Aliaga-Diaz, R.; Cole, C.W. & Shanahan, J. (2010). *Investing in emerging markets: Evaluating the allure of rapid economic growth*. Valley Forge: Vanguard Investment Strategy Group.

Gilmore, C.G. & McManus, G.M. (2002). International portfolio diversification: US and Central European equity markets. *Emerging Markets Review,* 3*(*1), pp. 69-83.

Gupta, R. & Guidi, F. (2012). Cointegration relationship and time varying co-movements among Indian and Asian developed stock markets. *International Review of Financial Analysis,* 21, pp. 10-22.

Harvey, R.C. (1995). Predictable risk and returns in emerging markets. *The Review of Financial Studies,* 8*(*3), pp. 773-816.

Ibrahim, M.H. (2005). International linkages of stock prices: The case of Indonesia. *Management Research News*, 28*(*4), pp. 93-115.

Kamaralzaman, S.; Samad, M.F. & Isa, M. (2011). A cointegration analysis of Malaysian and developed markets. Paper presented at the *2011 International Conference on Economics and Business Information*, Bangkok.

Kapingura, F.M.; Mishi, S. & Khumalo, S. (2014). Integration of the African stock markets to the global markets: Case study of South Africa. *Mediterranean Journal of Social Sciences,* 5*(*2), pp. 619-628.

Lingaraja, K.; Selvam, M. & Vasanth, V. (2015). Long run dynamic linkages between emerging stock markets in Asia and a developed stock market (DJIA). *Research Journal of Applied Sciences*, 10*(*5), pp. 203-211.

Mauldin, W. (2016). IMF warns emerging market risk to U.S. stock markets. *The Wall Street Journal*, 5 April, Online. Retrieved: June 4, 2016, from: http://www.marketwatch.com/story/imf-warns-emerging-market-risk-to-US-stock -markets-2016-04-05.

Perron, P. (1997). Further evidence on breaking trend functions in macroeconomic variables. *Journal of Econometrics*, 80, pp. 355-385.

Raj, J. & Dhal, S. (2008). Integration of India's stock market with global and major regional markets. *Press & Communications CH 4002 Basel, Switzerland*, 202.

Singh, A. & Kaur, P. (2015). Stock market linkages: Evidence from the US, China and India during the subprime crisis. *Timisoara Journal of Economics and Business*, 8*(*1), pp. 137-162.

Singh, G.S.P. (2010). Chinese and Indian stock market linkages with developed stock markets. *Asian Journal of Finance & Accounting*, 2*(*2), pp. 21-39.

Syriopoulos, T. (2004). International portfolio diversification to Central European stock markets. *Applied Financial Economics*, 14(17), pp. 1253-1268.

Trivedi, J. & Birău, R. (2013). Co-movements between emerging and developed stock markets in terms of the global financial crisis. In the *1st WSEAS International Conference on Mathematics*, Statistics & Computer Engineering, Dubrovnik, Croatia.

Wong, W.; Penm, J.; Terrell, R.D. & Lim, K.Y.C. (2004). The relationship between stock markets of major developed countries and Asian emerging markets. *Journal of Applied Mathematics and Decision Sciences*, 8*(*4), pp. 201-218.

Worthington, A.C. & Higgs, H. (2007). *Evidence of financial integration in Asia: An empirical application of panel unit root test and multivariate cointegration and causality procedures*. Working Paper Series No. 07/09. Wollongong: School of Accounting & Finance, University of Wollongong.

Harmonization of Corporate Income Tax (CIT) in the EU - Achievements and Challenges

Fitore Morina[1], Bedri Peci[2]

Abstract: This paper provides a framework of the tax systems of CIT - Corporate Income Tax in the EU. This paper treats the concept of CIT according to the OECD, EU directives and Kosovo legislation. It aims to identify gaps in the current Kosovo legislaton and the tendency to increase the harmonization of the tax systems in EU, especially, in view of the direct taxes. The theory of international tax law counts some methods used in the case of the relocation of the source of income from countries with high tax rate in countries with the lower tax rate. However, determining the level of taxation in this area is the exclusive issue of Member States in harmony with the principle of subsidiarity. With the aim at securing sustainable economic development and growth in the EU, within the framework of their strategy some changes were proposed regarding the elimination of all legal and fiscal barriers that hinder the full integration of the national systems of member states into the common market. The CCCTB initiative is considered a major step towards aligning the EU tax systems. So, the purpose of this article is to demonstrate the level of harmonization of the tax systems in EU, using the comparativ, empirical, normativ and logical methods, to conclude the role of CIT in the tax systems.

Keywords: Taxable income; tax harmonization; direct taxes; tax systems

JEL Classification: P24

1. Concept of Corporate Income Tax (CIT)

Within the framework of tax systems of contemporary states, the Corporate Income Tax (CIT) is also an important financial instrument for financing public needs. CIT, enters the group of direct taxes, hereby taxable income are deducted, within and outside the jurisdiction of a state. Taxable income is the difference between gross income for a taxable period and allowable deductions (No.05/L-029). According to the OECD, CIT is defined as the tax that is collected in net profit of enterprises and is calculated as: gross income minus allowable deductions (OECD).

[1] Teaching Assistant, PhD Candidate, Department of Financial Law, Faculty of Law, University of Prishtina, Kosovo, Address: Agim Ramadani Str.p.n., 10000 Pristina, Kosovo, E-mail: fitore.morina1@uni-pr.edu.

[2] Associate Professor, PhD, Department of Financial Law, Faculty of Law, University of Prishtina, Kosovo, Address: Agim Ramadani Str.p.n., 10000 Pristina, Kosovo, Corresponding author: bedri.peci@uni-pr.edu.

A corporation can exercise its economic activity in many countries at the same time, thus getting the status of Multinational Corporation, geographically extended to some jurisdictions. Mainly these companies extend their activity in two dimensions: *the first dimension* is the one that is dependent on the possibility of strategic investments and *the second dimension*, is the expansion of the market beyond national borders (Raffaele, 2007, pp. 118-120). According to today's economic trends, Corporations are developing their day-to-day economic activity in locations, the so-called tax paradise (Raffaele, 2007, pp. 118-119) or in offshore centers, because they are affected by the tax rate applied to dividend income, interest and other payments. After many efforts to harmonize direct taxes a minimum harmonization of direct tax systems has been reached, and based on adopted directives the EU states have signed several agreements on abolition of double taxation. Hence, the search for adequate methods for taxable of their income is necessary because of the role that this tax form plays in national economies.

The theory of international tax law counts some methods used in the case of the relocation of the source of income from countries with high tax rate in countries with the lower tax rate, as follows (Raffaele, 2007, pp. 34-38):

- *Method of Profit Shifting Strategy* - This method is mainly used when the parent Company displaces a part of the income to the Company's same branch but in another country where the lower tax rate of CIT is applied;

- *Method of Transfer Pricing* - This method is applied in Kosovo and with transfer price means the price set by taxpayers when selling, buying or sharing resources with other persons. The transfer price is considered to be the adverse price to the market price (Brian & Michael, 2002). In Kosovo, the open market value is determined by the uncontrolled comparative price method which is considered as the preferred method of the OECD and can be used for the transfer of tangible, intangible assets and utilities. This method is used by companies that want to avoid the high rates of CIT in the country where they are doing their business. (Matei & Pîrvu, 2011) This method enables the transaction price to be determined with the companies belonging to the same group. Multinational companies use the transfer of price for all their transactions, whether for purchasing goods or services. An adequate example for illustrating this method is: Company X, avoids tax payment in state A. Buyers of Company Y, which is located in State B, determines the sale price of manufactured products, which undoubtedly affect the final profit outcome because the effects of the tax rate in State B are lower than in State A. In this way, companies that are interconnected (operating as multinational companies) will not pay CIT or will pay less. (Brian & Michael, 2002) This method is related to the arm's length method which requires that the goods and the service price that is transferred should be adjusted in that form reflecting the price determined

independently by the companies that have no connection between themselves (so they do not operate within the same group); (Raffaele, 2007)

- *Capital Method/Corporate Debt* – According to this method, entities operating in countries where lower tax rates are applied and give loans to companies operating in countries where high rates of CIT are applied, automatically switch income from the interest rate of loans to countries with lower tax rates and thus lowering the profit for the countries applying high rate of CIT. (Needham, 2013)

- *The Method of Payment of Intangible property (non-material)* - The use of this method is considered when it comes to intangible property, in cases where the owner of that right determines the price of intangible property. A price that more or less reflects the value of wealth. Multinational companies are often accused of avoiding paying taxes using the price for instance of the purchased brand (Brian & Michael, 2002):

-*The Method of Joint Stock Companies* - These companies extend their activity to some jurisdictions and benefit from states that offer lower CIT rates;

- *The Method of Hybrid Entity* - This method is present in those states where the so-called dual residence of companies is allowed operating their activity in two jurisdictions and in one state there is the headquarters and in the other state, for example, the management site.

As hybrid entities (Brian & Michael, 2002) mainly refer to limited corporations by guarantors or refer to legal agreements that in a jurisdiction are treated as a Corporation while in another jurisdiction as a partnership. (Brian & Michael, 2002)

- *The method of Corporate channels* - According to this method, companies use money channels offered by countries that apply the preferred taxable rates and through this channel invest in the economies of different countries, for example in 2010 in Russia as the top investor was Cyprus with 28% of total investments. (Needham, 2013)

2. The Structure of the CIT in the Tax System of Kosovo

Within the Kosovo tax system is also the Corporate Income Tax (CIT). Like any other tax form, also CIT serves to collect public revenues. In the structure of revenues according to types of taxes, during the year 2015, participation of CIT in total revenues was 31.2%.

Table 1. Revenues realized by CIT in the period 2013-2015

Type of tax	2013	2014	2015
CIT	65,924,379	65,818,313	74,639,926

Source: Work report-January-December-2015 – TAK

Kosovo's undefined political stand by 2008 certainly influenced on the design of the Kosovo Tax System. The economy develops, the informal sector shrinks, while the tax-evading sector expands, thus limiting potential collection. (Lopez, 2017, pp. 107-126) Legislation from the CIT field in Kosovo dates back to 2004, with the adoption of Regulation No. 2004/51 by the Special Representative of the Secretary-General who had the authority based on Resolution 1244 (1999) of the United Nations Security Council of 10 June 1999. Under this regulation, taxpayers were considered corporations, business enterprises operating with public and social property wealth, non-governmental organizations registered by UNMIK and permanent enterprises of non-resident persons (UNMIK/REG/2004/51). Pursuant to Article 3 of this Regulation as a tax entity for resident taxpayers is income taxes in Kosovo and abroad, while for non-residents are only income taxes in Kosovo. The biggest amendment in Kosovo's legislation occurred upon the declaration of independence (2008), whereby the Law on Corporate Income Tax was approved and the tax rate of CIT decreased from 20% to 10% (Nr. 05/L-029). Pursuant to Article 6, paragraph c, within the exempted income from CIT is also the dividend that is received by a resident taxpayer in Kosovo, a resident company that has paid Kosovo's taxable corporates' income. While with the Law of 2015 as an exempted income is: "paid or received dividend for a resident and non-resident person."

Also: "interest from financial instruments issued or guaranteed by the Kosovo Public Authority paid to resident and non-resident taxpayers" is foreseen under the 2009 Law and the 2015 Law as exempted income.

By this Regulation (UNMIK/REG/2005/51) as well as with the 2008 Laws, the allowed expenses are not mandatory described, while for deductions allowed for public interest activities as expenses up to the maximum of 5% of the taxable income calculated before deduction of expenses, whereas with the Law of 2015 allowable deductions are from 10% of the taxable income calculated before this contribution is deducted. Representation expenses with the Regulation and the Law of 2008 and 2009 were allowed up to 2% of gross income, while with the 2015 Law were limited to 1% of gross annual income. According to the Law of 2015 for the amount of up to 500 Euros treated as bad debt, the initiation of proceedings in the judicial bodies is not required, while the issue of initiating court proceedings was not regulated by the Regulation. With regards to the application of the devaluation of tangible property in both Regulation and the Law is divided into three categories but the difference stands at the allowed amount as a deduction for depreciation in the special tax period to the third category, according to the Law of

2009 and 2015 was applied to 10% while with the Regulation and the Law of 2008 was 15%. As an applicable method in the case of avoiding double taxation, the tax credit method continues to apply. According to the Regulation and the Law of 2008, Insurance Companies collected seven percent (7%) of gross premiums during the tax period, while under the Law of 2009 and 2015, 5% of gross premiums were deducted whereas non-governmental organizations by 10% on income from business activity as with the Law of 2008 and 2009, while according to the Regulation the Nongovernmental organizations have been deducted by 20%. Taxpayers with a gross annual income up to 50,000 are obliged to pay the tax every three months, the difference between the Regulation and the Laws of 2008 and 2009 of the applicable tax rate is based on the gross income received from services and professional activities, crafts, entertainment and similar have been increased by 5% according to the Law of 2012 and 2015 to 9%, while the gross income for quarterly rent by the Regulation was 16% while with the Law of 2008, 2009 and 2015 was 10%. In 2007, with the amendment of the Regulation supplemented by Article 1A regulating the meaning of a permanent unit or a fixed business site where the business activity of a non-resident person is carried out entirely, a meaning which is the same and according to the Law of 2009 and 2015 as permanent units, pursuant to Article 29 includes: each management place, branch, office, factory, workshop, mine and every oil or gas source, stone quarry or exploration site of natural resources. The direct effect of corporate income tax on wages can be identified in a bargaining framework using cross-company variation in tax liabilities, conditional on value added per employee (Arulampalam, Devereux & Maffini, 2012, pp. 1038-1054).

3. Legal Basis of CIT under the *acquis*

In the EU legislation, including its founding treaties, one can not find an exclusive provision in which direct taxes or taxable income are regulated. Legislation deriving from the CIT field is usually based on Article 115 TFEU, a provision authorizing EU institutions to adopt directives enabling the approximation of laws, regulations or other administrative provisions of the Member States which will help towards the functioning of the common market. Pursuant to Article 113 of the TFEU, Member States are authorized to negotiate the adoption of measures to obligatory harmonize legislation on indirect taxes and the necessary extension of harmonization in the field of competition to eliminate – avoid unfair competition implied among the Corporates. Pursuant to Article 110 of the TFEU, Member States are prohibited from direct or indirect imposing on the products of the other Member State of higher taxes than domestic products, thereby preventing unfair competition and promoting fair competition. Article 55 of the TFEU requires Member States to provide the same treatment to nationals of other Member States

in the case of participation in the capital of the firm or the company. This legal basis has been used by Member States to enter into bilateral agreements in the field of direct taxation rather than to achieve a higher level of harmonization of direct taxation in the EU. The EU Member States since foundation to date have expressed a skeptical attitude towards the harmonization of direct taxes, in particular the CIT, while retaining tax sovereignty and delegating limited prerogatives at the central level of EU (Nicodème, 2006). Tax rates and informality depends on the degree of tax enforcement and the level of credit market development in an economy (Mitra, pp. 117-127).

The political and economic arguments presented by the skeptics of the full harmonization of direct taxes are (Nicodème, 2006):

- Lack of democratic legitimacy in the context of representation of the people of member states in EU institutions represented by maximen: *"No taxation without representation"*;

- Redistribution of revenues proportionally within the Member States;

- Harmonization of direct taxes requires the achievement of stabilization policies through the budgetary frameworks of Member States and at the same time the common definition of public policies, whereby public expenses will also increase.

Direct taxes, in the tax structure of the EU Member States have a different participation in the total income collected from taxation. A higher participation of direct taxation has Denmark to 67.4%, followed by Ireland, Malta, England and Sweden, which collect between 40% - 50% of direct tax revenues. (EC, 2016)

4. Harmonization of CIT with EU Directives

Efforts to harmonize CIT date back to the Neumarkt Report of 1962. In 1990, the European Commission prepared a guideline with regard to CIT in the EU, under the heading Guidelines on Company Taxation, foreseeing measures to be undertaken at the Community level with regard to the development and full integration of the national economies of Member States into the common market. According to the plan prepared by the EC, the harmonization of the CIT system should be based on the principle of subsidiarity and the establishment of conditions for the free movement of persons, goods, services and the capital. The common market is required that on the basis of the proposed plan to be opened for companies that carry out transnational transactions and sign agreements on eliminating double taxation. According to the EC, the most appropriate solution to the establishment and harmonization of the CIT system is the establishment of triangular and multilateral relations between Member States. The measures to be implemented under the EC to increase cooperation between the corporations of

different countries and preserving financial interests of the Member States have been presented as a package of draft directives as follows: *Merger Directive ; The Parent Companies and Subsidiaries Directive; The Arbitration Procedure Convention*. Hereby Arbitration Procedure, disputes arising in the event of disagreements between related companies and in cases of double taxation will be resolved.

1. *The Merger Directive* is not exempted from CIT but the postponement of capital taxation (Dankó, 2011). Later the need to amend this Directive was raised with regard to the reorganization of companies of Member States which started combining or merging capitals at Community level.This new economic operation should be in harmony with the EU founding treaties, and therefore in this new economic order it appeared the need for approximation of member states legislation from the CIT field and the elimination of all obstacles preventing the establishment of multinational companies stretching across many countries. In order to fulfill the legal framework, in 2001 the Regulation on the Statute of European Companies (SE) was adopted, with the provisions of which it is possible to establish and manage companies within the EU and their equal treatment with local companies.

The Member States have an obligation to apply the provisions of SE Regulation in the national legislation. Under this regulation, a company can be established within the Community territory in the form of European Public Company with limited liability (Societas Europaea or SE), which has an essential capital of €12,000, divided into shares and is a legal person.

The registration office and the head office of the SE can be located in the same country, but according to Article 8.1 can also e.g.; such office to be transferred to another member state, a transfer which does not result in SE liquidation or establishment of a new legal entity. Legal procedural issues related to SE functioning, under Article 10, will be dealt with based on the laws of the member states, where the SE has its registration office. In 2003, the Regulation on the Statute for the European Cooperative Society (SCE) was adopted – Cooperatives were considered as the first group of legal entities differing from other economic agents. This type of cooperative organization is characterized by the organizational structure, control and distribution of net profit for the financial year.

2. The Directive on Parent Companies and Subsidiary Companies

This directive applies to cross-border profit distribution between parent and subsidiary companies of EU Member States (Raffaele, 2007, pp. 22-23). The status of a company is determined by the minimum capital that must be owned within a company in the other member state. The status of a parent company is attributed to a company of the member state that meets the conditions for being appointed The Company of the EU Member State that must, under the law of a member state, be

considered resident of that state for tax purposes and in the cases of agreements for double taxation elimination, as well as being subject to CIT in the respective member state, and is not likely to be a tax-exempt company, while the last condition relates to the minimum stock of 25% of the capital of the company located in the other member state. With the amendment of this Directive in 2011, in terms of regulating entity, remained the same with respect to the exempt from CIT of dividend and profit paid by subsidiary companies for parent companies and the elimination of double taxation on income of parent companies.

3. The Directive that applies to the issues of Interest and Payments of honorarium on deed in the companies operating in EU.

Under this Directive, it was established a common system of interest taxation and payment of honorariums on deed to the companies that are interrelated between them and operate in the EU member states, with a view to eliminating the double taxation from the interest of financial instruments and payment of honorariums to the member state, where they are generated.In the member state where the company, making the payment of interest and honorariums, is resident, is considered as the state of the source of such payments (Raffaele, pp. 27-30). Under this directive the permanent unit is considered as payable only if the payment is an expense within the tax deductions for the permanent unit established in the member state, the same shall not apply if the permanent unit is established in the third member state. In all other cases, the permanent unit is beneficiary of interest and honorarium payment when it is directly related to, when the income from those payments represent the permanent unit as subject to the tax in the Member state .In cases when two companies are affiliated with the parent company established in a third country, e.g. in Kosovo, this directive does not apply. The state of the source payments is not obliged to pay these forms of payment, e.g.: Payments that are treated as distribution of profit or settlement of debts under the laws of the state of the source of income etc. Today, the role of Companies that choose to operate on the basis of CCCTB will operate on the basis of the legal framework taxation throughout the EU area under the *one stop shop* principle.

The impact of CCCTB on doing business for companies operating their economic activity in EU is very high, ranging from the possibility of calculating their profits throughout the EU, based on a common legal framework and selecting the most appropriate place in terms of the needs of the business concerned by removing all the fiscal and legal barriers that existed within the national taxation systems.

There are three scenarios that identify the role of CCCTB in the EU common market economy 1. *Common Corporate Tax Base (optional CCTB):* meaning resident companies in the EU and the permanent EU entity have the option to choose that calculation of Tax base be made in compliance with common rules instead of opting for a separate corporate tax system. This model is known as

separate accounting. *2. A Compulsory Common Corporate Tax Base (compulsory CCTB):* that means all eligible companies resident in the EU and a permanent EU entity are required to calculate the tax base in accordance with common rules throughout the EU, therefore, the new common rules will replace corporation tax systems in member states. 3. *A optional Common Consolidated Corporate Tax Base (optional CCCTB)*: implying that the common rules established for calculating the tax base throughout the EU will be offered as an alternative to member states. Therefore, resident companies in the EU and permanent EU units have the possibility that companies that are their property outside the EU apply CCCTB rules. This model is known as all-in all-out.

5. Conclusion

Undoubtedly, *the CIT harmonization* in the EU space plays a significant role in the economic growth and sustainability of EU. Therefore, the recent innovations in terms of consolidated tax base under the CCCTB enables taxation of companies or group of companies on the basis of total income in all countries, besides that the most important implication is that economic losses in one country will be compensated by the gains realized in another country. The CCCTB strategy enters in the fiscal policy group that provides measures for eliminating fiscal barriers and simplifying legal procedures in order to facilitate the operation of companies in the common market. The EC in October 2016 reviewed the CCCTB in order to increase competition within the companies and proposed the implementation of innovations in two phases. In the first phase, it is proposed that the tax base should not be optional but be made mandatory for most multinational companies and in the second phase, conditions will be created that under the CCCTB will enable companies to enjoy the same benefits with regard to financial treatment (debt - bias in taxation), will encourage a solid financing structure and greater economic stability.

6. References

*** COM (2001). 582 final, Communication from the Commission to the Council, the European Parliament and the Economic And Social Committee Towards an Internal Market without tax obstacles A strategy for providing companies with a consolidated corporate tax base for their EU-wide activities . Brussels, 23.10.2001 pp. 15.

*** Communication Tax Policy in the European Union COM(2001)260. Company Taxation in the Internal Market.

*** Council Directive (90/435/EEC) of 23 July 1990 on the common system of taxation applicable in the case of parent companies and subsidiaries of different Member States, O.J. No. L. 225/6, 20.8.90.

*** COUNCIL DIRECTIVE 2003/49/EC of 3 June 2003 on a common system of taxation applicable to interest and royalty payments made between associated companies of different Member States ,O.J. L. 157/49, 26.6.2003.

***Council Directive 2004/76/EC of 29.4.2004 amending Directive 2003/49/EC as regards the possibility for certain Member States to apply transitional periods for the application of a common system of taxation applicable to interest and royalty payments made between associated companies of different Member States , O.J. L. 157/106, 30.4.2004.

*** Council Directive 2005/19/EC of 17 February 2005 amending Directive 90/434/EEC 1990 on the common system of taxation applicable to mergers, divisions, transfers of assets and exchanges of shares concerning companies of different Member States, O.J. L. 58/19, 4.3.2005.

*** Council Directive 2009/133/EC of 19 October 2009 on the common system of taxation applicable to mergers, divisions, partial divisions, transfers of assets and exchanges of shares concerning companies of different Member States and to the transfer of the registered office of an SE or SCE between Member States , O.J. L. 310/34, 25.11.2009.

*** Council Directive 2011/96/EU of 30 November 2011 on the common system of taxation applicable in the case of parent companies and subsidiaries of different Member States ,O.J. L. 345/8, 29.12.2011.

*** Council Regulation (EC) No 1435/2003 of 22 July 2003 on the Statute for a European Cooperative Society (SCE), O.J. L. 207/1, 18.8.2003.

*** Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE), O.J. L. 294/1, 10.11.2001.

Russo, R. (2007). *Fundamentals of International Tax Planning.* Amsterdam, IBFD, pp. 27 – 30.

*** European Commission, Taxation and Customs Union: *Taxation Trends in the European Union Data for the Eu Member States, Iceland and Norway*. 2016 Edition.

*** First annual report on the implementation of the code of conduct for business taxation and fiscal state aid. Progress report on the work concerning the taxation of income from savings and a common system of taxation for interest and royalty payments between associated companies - 1998. Communication from the Commission to the Council and the European Parliament. COM (98) 595 final, 25 November 1998, pp. 1-3.

*** Gazeta Zyrtare e Republikës së Kosovës /Nr.24 /18 Gusht 2015, Prishtinë, Ligji Nr. 05/L-029 Për Ttaimin në të Ardhurat e Korporatave.

*** Gazeta Zyrtare e Republikës së Kosovës/Nr. 24/18 Gusht 2015, Prishtinë, Ligji Nr. 05/L-029 Për Ttaimin në të Ardhurat e Korporatave, Neni 7.2.

*** Guidelines on Company Taxation. SEC (90) 601 final, 20 April 1990. EU Commission - SEC Document, pp. 5-8.

*** Ligji Nr. 03 L-113, 18 dhjetor 2008, Për Tatimin në të Ardhurat e Korporatave.

*** Ligji Nr. 04/L-103, Për Ndryshimin dhe Plotësimin e Ligjit për Tatimin në të Ardhurat e Korporatave Nr. 03/L-162, 3 maj 2012.

*** Proposal for a COUNCIL DIRECTIVE on a Common Consolidated Corporate Tax Base (CCCTB) SEC (2011) 315 final, Brussels, 3.10.2011 COM(2011) 121 final/2 2011/0058 (CNS).

*** Ruding, Onno (1992) Conclusions and Recommendations of the Committee of Independent Experts on Company Taxation commonly called the Ruding Report.

*** (1963). The ECC Reports on Tax Harmonization – The Report of The Fiscal and Financial Committee and The Reports of The Sub – Groups A, B and C. (the so— called Neumark-Report), IBFD, Amsterdam.

***UNMIK/REG/2004/51, Rregullore Nr. 2004/51 Mbi Tatimin në të Ardhurat e Korporatave 4 dhjetor 2004.

***UNMIK/REG/2005/51, 16 dhjetor 2005, Rregullore NR. 2005/51, Për Ndryshimin e Rregullores së.

***UNMIK-ut NR. 2004/51 Mbi Tatimin në të Ardhurat e Korporatave.

***UNMIK/REG/2007/22, 6 Gusht 2007, Rregullorja Nr. 2007/22 Ndryshimi i Rregullores së UNMIK-ut Nr. 2004/51 Mbi Tatimin në të Ardhurat e Korporatave.

Brian, J.A, Michael, J.Mc: *International Tax Primer*, Second Edition, Kluwer Law International, 2002, pp. 144-149.

Needham, Ch., *Corporate tax avoidance by multinational firms*. Library Briefing Library of the European Parliament, 23/09/2013, pp. 2-5.

Garcia, E.C.; Pabsdorf, N.M. & Ramirez, M.A. (2013). Fiscal Harmonization and Economic Integration in the European Union. *Inzinerine Ekonomika – Engineering Economics*, 24(1), pp. 44-51, pp. 47-48.

Nicodème, G. (2006). Corporate Tax Competition and Coordination in the European Union : What Do We Know? Where Do We Stand?. *European Commission and Solvay Business School* (ULB) July, pp. 5 – 7.

Matei, G. & Pîrvu, D. (2011). Transfer Pricing in the European Union. *Theoretical and Applied Economics*, volume XVIII, No. 4(557), pp. 99-110.

Retrieved from: https://ec.europa.eu/taxation_customs/business/company-tax/common-consolidated-corporate-tax-base-ccctb_en.

Devereux, P.M. & Fuest, C. (2009). *Corporate income tax coordination in the European Union*. Oxford University Centre for Business Taxation, October, fq. 5.

Dankó, Z. (2012). Corporate tax harmonization in the European Union, Crisis Aftermath: Economic policy changes in the EU and its Member States. *Conference Proceedings*, Szeged, University of Szeged, Vol. ISBN 9, pp. 7-6.

Mitra, Sh. (2017). To tax or not to tax? When does it matter for informality?. *Economic Modelling*, volume 64, August, pp. 117-127.

López, J.J. (2017). A quantitative theory of tax evasion. *Journal of Macroeconomics*, volume 53, September, pp. 107-12.

Arulampalam, W.; Devereux, P.M. & Maffini, G. (2012). The direct incidence of corporate income tax on wages. *European Economic Review*, volume 56, issue 6, August, pp. 1038-1054.

Does Capital Structure Impact on the Performance of South African Listed Firms?

Matthew Adeolu Abata[1], Stephen Oseko Migiro[2], Joseph Olorunfemi Akande[3], Raredzo Layton[4]

Abstract: Issues surrounding capital structure and performance have been widely debated in literature, yet there has been no conclusion as to how composition of firm's capital impact on it performance. Using data on 136 quoted companies on the JSE from January 2000 to December 2014, and with a GMM analysis we explore the impact of capital structure on firm performance metrics in South African. The study suggests that total debt to total equity and total debt to total assets are inversely related to both Tobin q and return on assets, while long-term debt to total assets was related positively to both Tobin q and return on assets. On the other hand, total debt to total equity and long-term debt to total assets were inversely related to return on equity, while total debt to total assets were positively related to return on equity. It is therefore recommended that firms need to define their financial objective – either to maximise ROA or ROE. However, an optimal debt/equity mix must be sought, if both financial objectives must be pursued.

Keywords: Capital structure; firm performance; Generalized Method of Moments; return on assets; and return on equity

JEL Classification: G34; M41

[1] PhD, Graduate School of Business and Leadership, College of Law and Management Studies, University of KwaZulu-Natal, South Africa, Address: 238 Mazisi Kunene Rd, Glenwood, Durban, 4041, South Africa, Tel.: +27717934076, E-mail: abatam@ukzn.ac.za.

[2] Professor, Graduate School of Business and Leadership, College of Law and Management Studies, University of KwaZulu-Natal, South Africa, Address: 238 Mazisi Kunene Rd, Glenwood, Durban, 4041, South Africa, Tel.: +27793047471, E-mail: Migiro@ukzn.ac.za.

[3] Faculty of Accounting and Informatics, Durban University of Technology, South Africa, Address: 41/43 M L Sultan Rd, Greyville, Durban 4001, South Africa, Tel.: +27611531847, Corresponding author: akandeo.joseph@gmail.com.

[4] Graduate School of Business and Leadership, College of Law and Management Studies, South Africa, Address: 238 Mazisi Kunene Rd, Glenwood, Durban, 4041, South Africa, E-mail: layton021@gmail.com.

1. Introduction

Capital structure is the mix of a firm's debt and equity which it uses to finance its operations (Abor, 2005). Using various proportions of debt and equity by managers is a ground-laying approach of firms to improving their financial performance (Gleason et al., 2000). Managers who are insightful in terms of identifying and deploying the right combination of debt and equity are normally recompensed in the market – because the right debt-equity mix minimises the firm's cost of financing, maximises net returns, and leads to improved competitive advantage in the marketplace. Capital structure and its interplay with a firm's value and performance, has been debated in financial management since the seminal work of Modigliani and Miller (1958, 1963). These authors posited that a firm's value is not determined by the security mix issued, but rather by its real assets – although their claim had unrealistic assumptions such as perfect capital markets, homogenous expectations of investors, a tax-free economy, and no transaction costs. However, Jensen and Meckling (1976) claimed that the amount of leverage in a firm's capital structure impacts the agency conflicts between managers and shareholders by restraining managers to act more in the interest of shareholders. Thus, this can affect a manager's behaviours and operating decisions, meaning that the amount of leverage in capital structure affects firm performance (Harris & Raviv, 1991; Graham & Harvey, 2001; Brav et al., 2005).

Much of the empirical work on the correlation between capital structure and firm financial performance has been devoted to developed countries, although it has yielded mixed results (Chathoth & Oslen, 2007; Margaritis & Psillaki, 2010). In the developing economies, however, there have been few studies (Abor, 2007; Ebid, 2009; Lin & Chang, 2011; Leonard & Mwasa, 2014; Abata & Migiro, 2016). Abor (2007) investigated the effect of capital structure on the performance of Small and Medium Enterprises (SMEs) in Ghana and South Africa. He used 200 South African firms, including 68 listed firms, and found that capital structure significantly influences SME performance, and particularly long-term debt and total debt ratios negatively affect SME performance. He found a significant negative association between return on assets and long-term debt, and total debt sales growth had a significant positive association with the gross profit margin for all metrics of debt. Fatoki, George and Mornay (2010) studied the impact of the usage of debt on the profitability of SMEs in the Buffalo City Municipality and found that the usage of debt has a significant negative impact on the profitability of SMEs. Ramje and Gwatidzo (2012) investigated the dynamics of capital structure decisions of South African listed firms and found that profitability and tax are negatively associated with leverage, while tangibility, growth, size and risk are positively related to leverage. Equally, capital structure decisions of South African listed firms followed both pecking order and trade-off theories. Fosu (2013) analysed capital structure, product market competition and

firm performance in South Africa – using panel-data techniques on 257 firms from 1998 to 2009, and found that leverage significantly improves firm performance. From the above studies, the impact of capital structure on firm performance remains unresolved, despite being focused on by many researchers over the years.

In South Africa, there has been little attention on the application of appropriate mix of debt and equity by corporate managers in firm financial decisions – and hence the authors' interest in empirically examining the relationship between debt-equity level and financial performance in quoted firms on the Johannesburg Stock Exchange from 2000 to 2014. This study therefore addresses the research question - Is there a significant relationship between capital structure and the performance of South African listed firms?.

The study findings are expected to caution firm management, investors, and entrepreneurs against excessive use of debt or equity financing – and that they should rather choose the best capital mix or portfolios in order to maximise their returns.

The next sections review the extant literature, present the research method used, the data analysis and interpretation, and finally the conclusion and recommendations.

2. Literature Review

This study reviews most of the famous capital structure theories, including Modigliani and Miller (1958, 1963), the Pecking order theory, the Tradeoff theory, the free cash flow theory, the Signaling theory, the Agency theory, and prior studies in capital structure association with firm performance. These theories are discussed below.

The Modigliani and Miller theory – also known as the irrelevance capital structure theory – suggested that managers and owners of firms are indifferent about their capital structure, because the value of the firm does not depend on its capital structure but on its total assets. In order for them to come up with these findings, they made certain assumptions which were considered unreasonable by successors doing the same research. They assumed a world without taxes, and perfect markets without any transaction costs. The criticisms of these assumptions forced Modigliani and Miller (1963) to revise their study and they introduced taxes into their model. The results showed that the value of a firm increases with more debt due to the tax shield, and this was also known as the relevance capital structure theory.

The Trade-off theory was a modification of Modigliani and Miller's models, and was meant to reflect financial distress and agency costs. Optimal capital structure is gained by balancing the tax-shield benefits provided by leverage against the costs of financial distress and agency – and so the costs and benefits of leverage are traded off against one another. This theory postulates that highly profitable firms have more debt repayment capacity with high taxable income to shield them – so that they will have a higher debt to equity ratio compared to low profit firms. The more profitable firms will use more debt due to lower bankruptcy probability and higher debt ratings, while on the contrary, the Pecking order theory implies that firms with higher profits will use less debt as they have more retained earnings to finance their operations and new projects (Kale, 2014; 2013). The **Pecking Order Theory** proposed by Myers and Majluf (1984), claims that optimal capital structure does not exist. They argued that to reduce the problem of asymmetric information between firm managers and investors, a financial pecking order – a hierarchy of financing that begins with retained earnings, followed by debt and finally by new equity issue – should take place. Drawing from these facts, Mykhailo Iavorskyi (2013) concluded that very profitable firms that generate sufficient cash flows will use less debt finance. With **Signalling theory**, as a result of the asymmetric information between management and shareholders, signals are vital for financing in a company, and high-quality firms will use more long-term debt and have higher leverage as a signal of future profitability (Ross, 1977). In order to separate the good profitable firms from the low-quality firms or "the lemons", the quality firms will go for high debts and thus attract scrutiny – while the low-quality firms cannot simulate because, with scrutiny, they will be discovered. Signaling theory argues that most financial decisions taken by firm senior management are designed to signal management's confidence to the stock market of the future profitability of the firm, and also its ability to meet future obligations. The action of adding more debt is a sign of higher future cash-flow expectations. The wrong signals may lead to a moral hazard, as managers are unlikely to bear the costs of the risks – but rather the cost of the risk will be borne by the shareholders and the adverse selection where banks/debt holders will have to charge high interest rates and insurance costs to cover potential losses. **Agency theory**: studies of this relationship include the works of Jensen and Meckling (1976) and Myers (1977). They suggested that agency costs are related to conflicts of interest between debt-holders and equity-holders. For instance, whenever a venture is financed through debt, the creditors will charge an interest rate that is believed to adequately compensate for the risk involved. Given that the creditor"s claim is fixed, their concern is about the extent to which firms invest in excessively risky projects. Ideological differences are the bane of another form of agency problem between shareholders and debt holders. While the former are by nature more risk takers looking for higher returns, the latter are risk averse and want assured returns, even at a lower level. For this reason, shareholders may prefer

taking on high-risk projects than debt holders. Whenever the projects succeed, the stockholders will take extra returns, but if there is failure, debt holders and shareholders will bear all the losses (Jensen & Meckling, 1976). For this reason, more indebted firms take lower-risk projects, and hence Myers (1977) stated that the differences between debt holders and shareholder aims could lead to under-investment – which might equally lead to poor corporate performance.

Various studies have empirically investigated the correlation between capital structure and corporate performance in different countries. Saedi and Mahmoodi (2011) investigated the interplay between capital structure and firm performance using a sample of 320 quoted firms on the Teheran Stock Exchange from 2002 and 2009. They found that firm performances measured by EPS and Tobin's Q, are significantly and directly related to capital structure, while an inverse relationship was found between capital structure and ROA – with no significant correlation between ROE and capital structure. Ebrati, Farzad, Reza and Ghoban (2013) studied the effect of capital structure on firm performance using multiple regression analysis to analyse the correlation between leverage level and firm performance. They found that firm performance measured by EPS and ROA, was inversely related to capital structure. Using share price as a proxy for value and numerous ratios for capital decisions, Chowdhury and Chowdhury (2010) examined the interplay between capital structure and firm value in Bangladesh. They found that by changing capital structure composition, a firm can increase its market value – showing that managers can utilise debt to form an optimal capital structure to maximise the wealth of shareholders (Chowdhury & Chowdhury, 2010). Exploring the impact of capital structure on firm performance and shareholder wealth in the Pakistani textile sector, Mujahid and Akhtar (2014) found a significantly direct correlation between a firm's financial performance and shareholder wealth. They used a regression analysis to analyse 6 years data from 2006 to 2011, by proxying ROE and ROA ratios as a firm performance measure and EPS ratio as a shareholder wealth measure to check affiliation between capital structure of the firms and their shareholders" wealth (Mujahid & Akhtar, 2014). Hasan, Bokhtiar, Ahsan, Mainul Rahaman, Afzalur Alam and Nurul (2014) studied the influence of capital structure on firm performance using a sample of 36 Bangladeshi firms for the period 2007 to 2012. Firm performance, as calculated by EPS, was found to be directly and significantly related to capital structure as measured by STDTA. In contrast, EPS was significantly inversely associated with LTDTA, while EPS had an insignificant relationship with TDTA. Gwatidzo, Ntuli and Mlilo (2015) studied capital structure determinants in South Africa using data on 239 listed firms for the period 1996 to 2010. They found a significantly direct association between asset tangibility and leverage, and a significantly positive correlation between firm size and long-term debt and total-debt ratios. Equally, a negative interplay was found between tax and leverage. Though these findings

were contrary to the Trade-off theory, they are consistent with the proposition of the Pecking order theory as developed by Myers and Majluf (Hasan et al., 2014).

Nirajini and Priya (2013), in their study on the impact of capital structure on the financial performance of Sri Lanka-listed trading firms, found a significant correlation between debt-asset ratio, debt-equity ratio and long-term debt and gross profit margin, net profit margin, ROCE, ROA and ROE, at levels 0.05 and 0.1. This led them to conclude that capital structure was directly associated with financial performance, and hence they recommended that the firm should appropriately combine debt and equity decisions to enhance business survival and optimise profit (Nirajini & Priya, 2013). El-Sayed (2009) explored the association between capital structure and the performance of listed firms in Egypt for the period 1997 to 2005, using regression analysis. He found that neither STD, LTD, nor TTD were significantly correlated with a firm's performance measured by ROE, and that in general terms capital structure choice has a weak to no significant impact on Egyptian listed firms" performance. Wang et. al. (2010) examined 60 listed Chinese real estate firms and found that low-growth and high-growth opportunity firms had a negative association with debt financing, while mid-growth opportunity firms have a direct interplay with operating performance.

Shah (2014) investigated the effect of capital structure on the performance of cement companies quoted on the Karachi Stock Exchange from 2009 to 2013. Using the Pearson correlation and multiple regression analysis, he found a significantly negative interplay between debt to assets and firm performance variables (GPM, NPM, ROA, and ROE). Equally, a positive association was found between debt to equity and firm performance variables (GPM and NPM) on the one hand, and a negative association between debt to equity and firm performance variables (ROA and ROE) on the other hand. Conclusively, capital structure variables were found to significantly impact on firm performance, and hence Shah (2014) recommended the application of an optimal mix of debt and equity and proper allocation and utilisation of resources in order to achieve an optimal productivity level.

Lastly, Akeem, Terer, Kiyanjui, Kayoed and Matthew (2014) explored the impact of capital structure on the performance of manufacturing companies in Nigeria from 2003 to 2012. Using a regression technique to analyse the effects of some key variables like ROA, ROE, total debt to total assets, and total debt to equity ratio on firm performance – a negative association was found between capital structure measures (total debt and debt to equity ratio) and firm performance. The researchers recommended the use of more equity to debt in the financing of business activities, provided the business value is enhanced by the use of debt capital.

It is therefore clear from the above-mentioned empirical analyses between capital structure and firm performance, that there are mixed results that have left literature in this area rather inconclusive.

3. Research Method

This study selected 136 firms from a population of 402 companies from different sectors listed on the JSE, as of 31 December 2014. The study excluded newly listed firms and those which had been suspended for more than three years during the period 2000 to 2014, since they would make the model inconsistent. The selection was predicated on the rationale of complete dataset availability. The purposive non-probability sampling technique was adopted, and data were sourced from the annual audited financial reports of the selected firms between 2000 and 2014.

3.1. Variables and Models Used for Data Analysis

Three dependent variables – the Tobin Q ratio which mixes market values with accounting values (Zeitun & Tian, 2007) and accounting-based measures of return on equity (ROE) and return on assets (ROA) – were used as the representatives of firm performance measures. ROE is defined as net profit after tax divided by total equity. ROA is calculated as net profit after tax divided by total assets. On the other hand, three independent variables – the debt/equity ratio (DE), long-term debt to total assets ratio (LTDTA) and total debt to total assets ratio (TDTA) – were used to represent capital structure. In addition, size of the firm (Size), which is determined by the logarithm of total assets, was also considered as a controlled variable.

Panel data analysis permits the unobserved heterogeneity for each observation in the sample to be removed as well as to alleviate multicollinearity among variables (Fauzi, Basyith & Idris, 2013). Several issues like multicollinearity and endogeneity problems, among others, are, according to Maddala and Lahiri (2009), responsible for the inconsistencies in OLS estimation. The empirical model of Dang (2005) in examining the performance of the two opposing theories of capital structure, trade-off and pecking order, were used with Anderson and Hsiao IV and Arellano and Bond generalized methods of moment (GMM) – which were argued to yield consistent estimates for dynamic panel data. Hence, we adopted the reduced form of the dynamic panel GMM model of Cameron and Trivedi (2010), as follows:

$$y_{it} = \omega_i + \rho_i y_{i,t-1} + x'_{it}\rho + \varepsilon_{it} \quad (1)$$

Where, $t = \tau + 1, \ldots, T$ and ε_{it} is assumed to be serially uncorrelated. From this we have our regression model written as:

$$y_{kit} = \omega_{kit} + \rho_{kit} y_{ki,t-1} + \varphi_{kit} tdte_{kit} + \vartheta_{kit} tdta_{kit} + \gamma_{kit} ltdta_{kit} + \varepsilon_{it} \quad (2)$$

Where y represents performance measures, ROA, ROE and Tobin"s Q respectively, k denotes the number of regressions, it represents firm i in time t, $tdte$ is total debt to total equity, $tdta$ is total debt to total assets and $ltdta$ represents long-term total debt to total assets. Analysis of the data takes the form of descriptive and inferential statistics – that is correlations and regressions.

4. Discussion of Results

The results in table 1 (below) show the relationship between the variables. The relationship between total assets, debt/assets and LTDTA is a positively weak relationship, and debt/equity to total assets exhibited a negative relationship. There is also a negative relationship between debt/assets and LTDTA, and return on equity and return on assets – except for the Tobin Q ratio which has a positive relationship. This means that when the debt/asset ratio increases, the ROE and ROA decrease at a very low level. However, the results show that when debt/equity increases, it is only ROA which goes down at a very low rate. However, return on equity and Tobin q show a very weak positive correlation.

Table 1. Correlation Results

	totalassets	size	debassets	debtequity	ltdta	roa	roe	qratio
totalassets	1							
size	0.5826	1						
debtassets	0.0055	-0.1112	1					
debtequity	-0.0056	-0.0044	0.0527	1				
ltdta	0.0919	-0.0397	0.722	0.0075	1			
roa	0.0456	0.149	-0.1539	-0.0292	-0.1358	1		
roe	0.0127	0.0739	-0.0207	0.0042	-0.0578	0.1122	1	
qratio	-0.0101	-0.0759	0.0205	0.001	0.0209	0.0106	-0.0075	1

Source: Authors' estimation (2017)

Running a dynamic analysis usually requires estimation of the static models for a more robust analysis of the result. Tables 1, 2 and 3 present the results of both the static and dynamic panel data estimation of the 136 JSE companies under consideration. Pre-estimation correlation analysis of the independent variables revealed a high correlation between long-term debt to total assets and total debt to total assets. This is normally expected since long-term total debt to total assets is a component of total debt to total assets. As GMM is a normality free approach, we were not concerned about the stability test neither did we do anything about the possibility of a serial correlation, as this will be expected at order 1.

Models 1 to 3 of Table 1 show the results of the pooled ordinary least square regression, which usually is the starting point of the analysis. The results of the first model show total debt to total equity to be negative and weakly statistically significant to tobinq at the 10% significance level, while total debt to total assets is positive and statistically significant and long-term debt to total assets is negative but statistically significant. More specifically, a percentage increase in total debt to total equity, total debt to total assets, and long-term debt to total assets will cause a 0.04% decrease, 23% increase, and a 230% decrease in tobinq respectively. With model 2, a percentage increase in total debt to total equity, total debt to total assets, and long-term debt to total assets, will cause a 0.012% increase, 8.6% decrease and 850.9% increase respectively in return on assets, as all the variables are statistically significant. With model 3, only long-term debt to total assets is positively related to return on equity, but none of the variables are statistically significant – to warrant any economic inference. Because of the inherent problems with OLS and especially with panel data analysis, we ran a fixed effects and random effects model.

Table 2. Pooled OLS

	model 1	model 2	model 3
VARIABLES	tobinq	roa	Roe
tdte	-0.000491*	0.0123***	-0.0135
	(0.00029)	(0.00469)	(0.0116)
tdta	0.230***	-8.614***	-0.674
	(0.0175)	(0.282)	(0.694)
ltdta	-23.79***	850.9***	19.91
	(2.032)	(32.84)	(80.83)
Constant	0.509**	63.36***	28.29***
	(0.23)	(3.714)	(9.141)
Observations	2,024	2,024	2,024
R-squared	0.08	0.316	0.002
Notes			
Standard errors in parentheses,		*** p<0.01, ** p<0.05, * p<0.1	

Authors' estimation (2016)

Given that the result of the Hausman test favours the fixed effects model, we explain its result as contained in models 1 to 3 in table 3, and only displayed the random effects model results in models 4 to 6 for evidence. Interpretation of the fixed effects follows the same pattern as in the pooled OLS. We found total debt to total equity to be weakly and negatively significant with Tobin, total debt to total assets to be positive, while long-term total debt to total assets is negative and

statistically significant with Tobin. Aside from the slight difference in magnitude, the results of the fixed effects model are consistent with those of pooled OLS in signs and pattern of significance for Tobin. We also found this to be same for return on assets, as the relationship between return on assets and the explanatory variables repeated the same pattern of significance and signs under the fixed effects model as in the pooled OLS. Surprisingly, the results of the fixed effects model show total debt to total equity to be statistically significant, but maintained the sign as in pooled OLS, while total debt to total assets and long-term debt to total assets both maintained their signs as well but not statistically significant as in the pooled OLS. Suffice to say, the result of the random effects model shared the same pattern of signs and significance with the pooled OLS and the fixed effects models. The seemingly consistent results between the pooled OLS, fixed effects and random effects models, only needed to be confirmed with more robust analysis to ascertain our estimates for a better and/or an improved policy decision. Hence, we finally proceeded to estimate a GMM model.

Table 3. Fixed and Random Effects models

VARIABLES	Model 1 tobinq	Model 2 roa	Model 3 roe	Model 4 tobinq	Model 5 roa	Model 6 roe
Tdte	-0.000481*	0.0133***	-0.0317***	-0.000486*	0.0130***	-0.0149
	(0.000281)	(0.00444)	(0.0119)	(0.000279)	(0.0045)	(0.0116)
Tdta	0.313***	-10.93***	-0.785	0.278***	-	-0.681
	(0.0191)	(0.303)	(0.813)	(0.0181)	(0.288)	(0.7)
ltdta	-32.81***	1,129***	58.04	-29.06***	986.6***	22.07
	(2.228)	(35.26)	(94.57)	(2.101)	(33.54)	(81.49)
Constant	0.0213	74.42***	27.71***	0.225	68.93***	28.29***
	(0.247)	(3.914)	(10.5)	(0.319)	(4.733)	(9.4)
Observation	2,024	2,024	2,024	2,024	2,024	2,024
R-squared	0.127	0.413	0.005			
Number of	136	136	136	136	136	136

*Notes: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Source: Authors' estimation (2017)

For robust, efficient and consistent estimates, we ran a two-step dynamic system GMM with orthogonal deviation to cater for missing values and the survivorship bias of our unbalanced panel. Table 4 (below) shows the results of the GMM estimation for the 3 models – tobinq, return on assets, and return on equity. A quick look at the GMM results shows the lag of tobinq to be positive but not significant, the lag of return on assets to be positive and significant, and the lag of return on equity to be negative and significant. While the lag of tobinq has no economic implication because it is not statistically significant, the implications for return on assets and return on equity are that past return on assets and return on

equity respectively has the effect of increasing the present return on assets/reducing the present return on equity. In other words, the return on assets/equity in the past has a significant impact on the outcomes of their present value and future values. Model 1 shows total debt to total equity to be negative but statistically insignificant to tobinq. This insignificant relationship may perhaps be expected, as the results of pooled OLS, fixed effects and random effects showed their relationship to be weak and only significant at the 10% level of significance. However, the signs are found to be consistent with the previous results – even though it might have no economic values for policy making. Furthermore, total debt to total assets is negative and statistically significant, indicating that a percentage change in total debt to total assets will result in a 0.05% decrease in tobinq. Long-term total debt to total assets is also statistically significant but positively related to tobinq – in which case a percentage increase in long-term total debt to total assets will imply a 5.3% increase in tobinq. We noted inconsistencies in the signs in relation to the pooled OLS, the fixed, and the random effects models. While those were positive in the case of total debt to total assets and negative for long-term debt to total assets, they are the opposite for GMM results – that is negative for total debt to total assets and positive for long-term debt to total assets respectively.

Table 4. GMM Result

	model 1	model 2	model 3
VARIABLES	tobinq	roa	Roe
L.tobinq	0.108		
	(0.132)		
tdte	-5.18E-06	-0.00350***	-0.0411***
	(5.22E-05)	(0.000872)	(0.00754)
tdta	-0.0548***	-0.655**	6.082**
	(0.0208)	(0.266)	(2.374)
ltdta	5.308***	53.75**	-642.7***
	(2.016)	(26.69)	(249.3)
L.roa		0.297***	
		(0.105)	
L.roe			-0.0314***
			(0.00965)
Constant	1.817***	12.41***	-10.52
	(0.233)	(1.977)	(11.96)
Observations	1,875	1,875	1,875
R-squared			
Number of id	136	136	136
Notes			
Standard errors in parentheses,		*** p<0.01, ** p<0.05, * p<0.1	

Author's estimation (2017)

On the second model of the GMM results, return on assets indicates that all the explanatory variables are statistically significant to elicit economic implications. A percentage increase in total debt to total equity will cause a decrease of 0.0035% in return on assets. Likewise, a percentage increase in total debt to total assets, results in a 0.655% decrease in return on assets. Only long-term debt to total assets is positively related to return on assets, with the ability to cause a 53.75% increase in return on assets when it increases by 1%. These results are consistent with the three previous models in sign and statistical significance – with the exception of total debt to total equity that now has a negative sign relative to the positive signs in the other models, so representing a fundamental departure. Lastly, for return on equity in model 3, all the explanatory variables are again strongly statistically significant. Recall that none of these variables is statistically significant to return on equity in the three preceding models, except for total debt to total equity for the fixed effects model. Similarly, only total debt to total equity retained the same sign of the other models, while the signs of total debt to total assets and long-term total debt to total assets are in the opposite of the other three models. For clarity, total debt to total equity is negatively related to return on equity and can cause up to a 0.0411% decrease in it, with a 1% increase, total debt to total assets is positively related to return on equity with a significant impact of about 6.082%, and long-term debt to total assets is negatively related to return on assets with a 642.7% impact.

Having done the interpretations above, our discussions are centred on the results of the GMM being the most robust and efficient of the estimates. Generally, financial and/or capital structure theories and empirical works expect firm use of leverage to impact their financial performance (Harris & Raviv, 1991; Graham & Harvey, 2001; Brav et al., 2005). However, the nature of the impact has been unclear and there have been mixed results. Specifically, in answering our question–there are significant relationships between capital structure and firm performance in South African-listed firms. In hindsight, we found total debt to total equity to be negative, total debt to total assets to be negative, and long-term debt to total assets to be positively related to Tobin"s Q and return on assets. Tobin"s Q as a performance measure, measures performance of firms" physical assets in relation to their market value. While total debt to total equity is negative, total debt to total assets is positive, and long-term total debt to total assets is negatively related to return on equity. Overall, the results give a ratio of 2 to 1 for the capital structure measures used in relation to the performance measures used to favour an inverse relationship between capital structure and the performance of listed firms in South Africa. Although further insight may be required in terms of analysing the proxies individually in South Africa, we found evidence to support Abohr (2007), who established a negative relationship between return on assets and long-term total debt to total assets, perhaps because of differences in samples

and methods used, as they concentrated on SMEs using correlation analysis. However, our result is consistent with Fatoki, George and Mornay (2010), who found a negative relationship between profitability and capital structure among municipal SMEs in South Africa. Again, we found evidence to support the results of Ramje and Gwatidzo (2012), that there was a negative relationship between profitability and capital structure among listed firms in South Africa.

Beyond South African studies, our study aligns with literature that has found that capital structure does not improve the performance of firms.[1] The implication is that listed firms in South Africa have to be meticulous in their choice of the structure of their capital. As leverage is a formidable part of capital formation, the South African government and relevant regulatory bodies may want to investigate why its use has a significant positive relationship with performance in some countries[2], and look at what could be done differently to encourage the use of debt. Perhaps interest rates set by the reserve bank could be considered, among other things.

To provide credence for our analysis, the overall goodness of fit of the regression given the Wald statistics shows that our results are acceptable and that explanatory variables can explain the dependent variables. Although we have some concerns with our AR1 which ordinarily assumes the presence of autocorrelation at order 1, in our case this is not so. This is not expected to invalidate our results, as, according to Mileva (2007), AR2 is most important and of interest in the test and rejects H_O at order two – thus implying the absence of serial correlation in our sample. The contribution of Hansen J statistics is acknowledged here, as all our instruments do not suffer from mis-specification (see Table 5, below).

Table 5. Post Estimation Test

	model	model	model 3	
	tobinq	roa	roe	
Wald	0.020	0.000	0.000	
AR1	0.314	0.071	0.193	
AR2	0.601	0.163	0.247	
Hanse	0.455	0.324	0.903	

Author's estimation (2016)

[1] See (inter alia, Ebrati et al., 2013; Saedi & Mahmoodi, 2011; Bokhtiar et al., 2014).
[2] See (Mujahid & Akhtar, 2014; Nirajini & Priya, 2013).

5. Conclusion and Recommendations

The study explored the association and impact between capital structure and firm performance, and assessed if optimal capital structure exists. The study showed that there is a negative relationship between total debt to total equity, total debt to total assets and tobin q and return on assets – meaning that when the level of debt increases, the return on assets decreases. This claim concurs with Fatoki et al. (2010) and Ramje and Gwatidzo (2012). Therefore, it is important to mention that it is not worthwhile to borrow more funds to finance the assets, since this would result in less return on those assets. This might be due to high interest rates charged on assets – which is more than the income generated by those assets. However, these findings are very interesting, as they refute Modigliani and Miller's main theory in the history of capital structure – which proposes that firm value increases with more debt. Moreover, the study presents different views on whether the results are significant or not, with debt/equity showing they are insignificant, but with LTDTA and debt/assets showing a significant relationship which tallies with the assertion of Abor (2007).

Furthermore, the above results might differ from those of Modigliani and Miller, due to the differences in the study timeframes, or it might be due to different study areas – with our study dwelling particularly on JSE firms. Moreover, the high interest rates charged in emerging economies like South Africa make borrowing more expensive, and the lack of proper bond market in the financial markets worsens the situation. This therefore explains why many firms are failing due to financial distress – as reported by the Ministry of Small Enterprises and Community Development (SABC News, November 2015).

Mixed results were found regarding ROE and the independent variables mentioned above. While total debt to total equity and long-term debt to total assets negatively relate to ROE, total debt to total assets positively relates. The results show mixed outcomes, with debt/equity and debt assets showing an insignificant positive relationship. This is in line with the Tradeoff theory, which argues that firms with high debt/equity generate more profits. LTDTA shows a negative relationship, which also points to the same explanation above – that an increase in debt negatively impacts on firm value. This concurs with the findings of Iavorskyi (2013), who concluded that very profitable firms use low debt levels.

From the above analysis, the researchers found that only total debt to total equity had a consistently negative relationship with tobin q, ROA and ROE – while the two other independent variables gave different results. Given this interesting observation, it is therefore possible to conclude that firms should try to strike a balance between their debt and equity levels, so as to maintain a capital structure that will support an optimal performance. It was also feasible to refute the Pecking order theory, which proposes that optimal capital structure does not exist, and

supports the available literature on finance, which highlights the need for firms to find an optimal capital structure.

It is therefore recommended that firms and financial managers clearly define their financial objectives, if their main aim is to maximise a return on assets or return on equity. If the aim is to maximise ROA, then they need to reduce their debt levels, since it would negatively affect their objectives, and if the aim is to maximise profits then they need to keep their debt levels higher than equity. Where the aim is to pursue both objectives – they need to find the optimal level between debt and equity. South African quoted firms should strive to strike a balance between their debt and equity financing levels, so that their optimal performance can be enhanced.

5. References

Abata, M.A. & Migiro, S.O. (2016). Capital structure and firm performance in Nigerian-listed companies. *Journal of Economics and Behavioral Studies*, 8(3), pp. 54-74.

Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *The Journal of Risk Finance*, 6(5), pp. 438-445.

Abor, J. (2007). Debt policy and performance of SMEs: Evidence from Ghanaian and South African firms. *The Journal of Risk Finance*, 8(4), pp. 364-379.

Brav, A.; Graham, J.R.; Harvey, C.R. & Michaely, R. (2005). Payout policy in the 21st Century. *Journal of Financial Economics*, 77(3), pp. 483-527.

Cameron, A.C. & Trivedi, P.K. (2009). *Microeconometrics using Stata*. Vol. 5. Stata Press College Station, TX.

Chathoth, P.K. & Olsen, M.D. (2007). The effect of environment risk, corporate strategy, and capital structure on firm performance: An empirical investigation of restaurant firms. *International Journal of Hospitality Management*, 26(3), pp. 502-516.

Chowdhury, A. & Chowdhury, S.P. (2010). Impact of capital structure on a firm's value: Evidence from Bangladesh. *Business and Economic Horizons*, 3, pp. 111-122.

Damodaran, A. (2010). *Applied corporate finance*. John Wiley & Sons.

Dang, V.A. (2005). *Testing the trade-off theory and pecking order theories: Some UK evidence.* Leeds: Leeds University Business School.

Ebrati, R.; Farzad, E.; Reza, S. & Ghorban, S. (2013). The impact of capital structure on firm performance: Evidence from Tehran Stock Exchange. *Australian Journal of Basic & Applied Sciences*, 7, pp. 1-8.

El Sayed, I.E. (2009). The impact of capital structure choice on firm performance: Empirical evidence from Egypt. *The Journal of Risk Finance*, 10, pp. 477-487.

Fatoki, O.O.; George, H. & Mornay, R. (2010). An investigation into the impact of the usage of debt on the profitability on SMEs in the Buffalo city municipality, South Africa. *African Journal of Business Management*, 4(4), pp. 373-381.

Fauzi, F.; Basyith, A. & Idris, M. (2013). Determinants of capital structure: An empirical study of New Zealand listed firms. *Asian Journal of Finance and Accounting*, 5(2), doi:10.5296/ajfa.v5i2.3740.

Fosu, S. (2013). Capital structure, product market completion and firm performance: Evidence from South Africa. *The Quarterly Review of Economics and Finance*, 53(2), pp. 140-151.

Gleason, K.C.; Mathur, L.K. & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *Journal of Business Research*, 50.2, pp. 185-191.

Graham, J.R. & Harvey, C.R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2), pp. 187-243.

Gwatidzo, T.; Ntuli, M. & Mlilo, M. (2016). Capital structure determinants in South Africa: A quantile regression approach. *Journal of Economic and Financial Sciences*, 9(1), pp. 275-290.

Harris, M. & Raviv, A. (1990). Capital structure and the informational role of debt. *Journal of Finance*, 45, pp. 321-349.

Jensen, M.C. (1986). Agency cost of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76.2, pp. 323-329.

Jensen, M.C. (1988). Takeovers: Their causes and consequences. *The Journal of Economic Perspectives*, 2.1, pp. 21-48.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), pp. 305–360. http://dx.doi.org/10.1016/0304-405X(76)90026-X.

Kale, A.A. (2014). *The impact of financial leverage on firm performance: The case of non financial firms in Kenya.* University of Nairobi.

Kinsman, M. & Newman, J. (1998). Debt tied to lower firm performance: Finding calls for review of rise in debt use. *Graziadio Business Review*, 1(3).

Levin, A.; Lin, C.F. & Chu, C.S.J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), pp. 1-24.

Maddala, G.S. & Lahiri, K. (2009). *Introduction to econometrics*. 4th Ed. West Sussex, England: John Wiley & Son Ltd.

Maina, L. & Ishmail, M. (2014). Capital structure and financial performance in Kenya: Evidence from firms listed at the Nairobi Securities Exchange. *International Journal of Social Sciences and Entrepreneurship*, 1(11), pp. 209-223.

Manawaduge, A.; Zoysa, A.D.; Chowdhury, K. & Chandarakumara, A. (2011). Capital structure and firm performance in emerging economies: An empirical analysis of Sri Lankan firms. *Corporate Ownership & Control*, 8(4), pp. 253-263.

Margaritis, D. & Psillaki, M. (2007). Capital structure and firm efficiency. *Journal of Business Finance & Accounting*, 34.9-10, pp. 1447-1469.

Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. *Journal of Banking & Finance*, 34(3), pp. 621–632. http://dx.doi.org/10.1016/j.jbankfin.2009.08.023

Mileva, E. (2007). *Using Arellano – bond dynamic panel GMM estimators in Stata; tutorial with examples using Stata 9.0 (xtabond and xtabond2*). Economics Department, Fordham University.

Modigliani, F. & Miller, M.H. (1958). The cost of capital, corporation finance, and the theory of investment. *American Economic Review*, 48(3), pp. 261-297.

Modigliani, F. & Miller, M.H. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53(3), pp. 443-453.

Mohamad, N.E.A.B. & Abdullah, F.N.B.A. (2012). Reviewing relationship between capital structure and firm's performance in Malaysia. *International Journal of Advances in Management and Economics*, 1(4), pp. 151-156.

Mujahid, M. & Akhtar, K. (2014). Impact of capital structure on firm's financial performance and shareholder"s wealth: Textile sector of Pakistan. *International Journal of Learning and Development,* 4, pp. 27-33.

Myers, S.C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), pp. 147-175.

Myers, S.C. & Majluf, N.S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), pp. 187-221. http://dx.doi.org/10.1016/0304-405X(84)90023-0.

Iavorskyi, M. (2013). The impact of capital structure on firm performance: Evidence from Ukraine. *Doctoral dissertation*. Kyiv School of Economics.

Nirajini, A. & Priya, K. (2013). Impact of capital structure on financial performance of the listed trading companies in Sri Lanka. *International Journal of Scientific Research Publications*, 3, pp. 1-9.

Ramje, A. & Gwatidzo, T. (2012). Dynamics in capital structure determinants in South Africa. *Meditari Accountancy Research*, 20(1), pp. 52-67.

Ross, S.A. (1977). The determination of financial structure: The incentive signalling approach. *The Bell Journal of Economics*, 8(1), pp. 23-40.

Saeedi, A. & Mahmoodi, I. (2011). Capital structure and firm performance: Evidence from Iranian companies. *International Research Journal of Finance and Economics*, 70, pp. 20–29.

Salim, M. & Yadev, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Social and Behavioral Sciences*, 65, pp. 156-166.

Mohammad, H.; Shah, B. & Islam, Z. (2014). The impact of capital structure on firm performance: Evidence from Pakistan. *Journal of Industrial Distribution & Business*, 5(2), pp. 13-20.

Zeitun, R. & Tian, G.G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australian Accounting, Business and Finance Journal*, 1(4), pp. 40-60.

Capital Structure Decision and Firm Performance: Evidence from Non-Financial Firms in Nigeria

Richard Oreoluwa Akingunola[1], Luqman Samuel Olawale[2], Joshua Damilare Olaniyan[3]

Abstract: This paper investigates the effect of capital structure decisions on firm performance using a sample of 22listed Non-financial firms on the Nigerian Stock Exchange for a period of five years (2011 – 2015). The study examined the impact of STDTA, LTDTA, and TDTE (being the explanatory variables) on ROA and ROE, which represents the dependent variable while controlling for size, tangibility and Growth. The panel dataset were analysed using pooled, fixed effect and random effect models while Hausman's test were used to select the appropriate model. On the ROA model (panel A), the ratio of short term debt to total asset (STDTA) and total debt to total equity (TD/TE) have significant negative effect on performance. The ROE model (panel B) revealed that short-term debt to total asset (STDTA) and long-term debt to total asset (LTDTA) have significant positive effect on ROE while total debt to total equity (TD/TE) has significant negative effect. Firm size has significant positive effect in both models (ROA and ROE). This implies that, the inclusion of debt (both short term and long term) in the capital structure of a firm positively affect the equity shareholders in terms of firm performance while debt holder might be affected negatively.

Keywords: capital structure; financial performance; returns on equity; earnings per share; agency theory

JEL Classification: D22

1. Introduction

The quest for firms to expand their activities, maximise their shareholders' wealth and compete effectively in the industry where they operate cannot be over-emphasised. It is an undeniable fact that the going concern and the performance of a firm hinge on some important factors such as: qualified management board, pragmatic strategies, availability of finance, among others. Therefore, for firms to

[1] PhD, Department of Accounting and Banking & Finance, Olabisi Onabanjo University, Nigeria, Address: Ago-Iwoye, Nigeria, Tel: +2348034717721, E-mail: richakingunola@gmail.com.
[2] Department of Accounting and Banking & Finance, Olabisi Onabanjo University, Nigeria, Address: Ago-Iwoye, Nigeria, Tel: +2347062953745, Corresponding author: olawaleluqmansamuel@gmail.com.
[3] Department of Accounting and Banking & Finance, Olabisi Onabanjo University, Nigeria, Address: Ago-Iwoye, Nigeria, Tel: +2348063547062, E-mail: joshuadolaniyan@yahoo.com.

achieve their goals and objectives, taking into cognisance their limited resources, they necessarily need to strategize on how to finance their activities.

Basically, the sources of finance available to an entity include: equity, debt, and earnings. Equity refers to the fund invested into a firm by its shareholders, while debt is the fund sourced from other capital providers, which crystallised at a specified date. Earnings on the other hand, refer to the profit generated by a company in its business activities. However, since earnings may not always be sufficient for an organisation to run its activities due to tax and dividend dependability on it, hence, the major sources of fund available to a firm is equity and debt.

The maxim "quid pro quo" meaning something for something operates in the world of finance. Every provider of capital be it shareholders, bondholders or debenture holders are only willing to sacrifice their fund with the expectation of receiving either dividend or interest in return. Therefore, in taking financing decisions, decision makers need to establish the available sources of finance, the interest of the providers of such funds, its cost and benefits, the impact of those finance option on its overall activities, and most importantly the appropriate mix of all obtainable funds.

Capital structure simply refers to the proportion of debt and equity in the financial framework of a firm. Therefore, since capital structure is the mixture of equity and debt, a firm may be all equity (ungeared/unlevered); or a mix of equity and debt (geared/levered). Empirical evidences assert that firms will select the mix of debt and equity that maximises the value of the firm (Modigliani & Miller, 1958). When an organisation intends to expand its investments, the need to raise funds is inevitable, which may alter its capital structure.

An appropriate capital structure is a critical decision for any business organisation. The decision is important not only because of the need to maximise returns to various organisational stakeholders, but also because of the impact of such decision has on the survival of the business. Despite its theoretical appeal, researchers in corporate finance are yet to agree on the optimal level of capital structure; as well as the relationship between leverage and firm performance (Mykhailo, 2013). While some studies established a negative impact, others maintain that a positive impact exists. Due to the contradictory opinion of finance economists on the subject matter, this study is set to explore the impact of capital structure decision of managers on firms' performance, ala return on both capital and asset utilized.

The rest of the paper is organised as follows: section two contains theoretical and literature review, the next section discusses the methodology. The fourth section accounts for data analysis while section five concludes the paper.

2. Theoretical and Literature Review

Since the publication of the Modigliani and Miller's (1958) work titled "irrelevance theory of capital structure", the theory of corporate capital structure has been a study of interest to finance economists. Over the years, different theories of capital structure have been propounded which diverge from the assumption of perfect capital markets under which the "irrelevance model" is working. However, the commonest among these theories include; static trade-off theory, pecking order theory, and market timing theory. There is also a concern that agency cost affects the capital structure of a company.

2.1. Static Trade off Theory

Static trade-off theory asserts that there is a trade-off between the benefits of taking on more debt and the costs of higher indebtedness. The benefits of taking on debt (rather than equity) are mainly in the tax relief while the marginal costs of extra debt relate to the greater risks from financial distress. The theory therefore postulate that companies should have an optimal level of gearing and that the optimal gearing level for a company is reached at a point where the marginal benefits of taking on additional debt capital equals the marginal costs of taking on the extra debt. However, this theory have been criticised by several other theories on the basis that firms does not have an optimal gearing level.

2.2. Pecking Order Theory

Myers (1984) originated the theory. It attempts to criticise the static trade off theory, which hypothesise that firms have an optimal gearing level. Its progenitor opines that firms showed preference in choosing their sources of finance. The pecking order theory says the most preferred source of finance for firms is retained earnings follow by debt capital and lastly equity capital. The rationale behind this order is that, using retained earnings to finance investment is convenient and cheaper than any other sources of finance. However if retained earnings is unavailable or inadequate, debt capital will be used because of its relative tax advantage. The less preferred source of finance in the pecking order theory is equity capital this is because of the high cost involved in raising the capital.

2.3. Market Timing Theory

The market timing theory states that choice of financing method can be determine by the opportunities in the capital market and that these opportunities occurs as a result of asymmetry of information. Consequently, it is opined that management of companies should know when the future prospects for the company are better than investors are expecting, and when the prospects for the future are worse than investor expectation. Based on this privilege information, the theory suggests that management will therefore recognise occasions when the company's shares are

currently under-valued or over-valued. Hence, companies leverage on such information to issue new shares when they consider the share price to be over-valued and will consider share repurchases when they consider the share price to be under-valued. Taking advantage of opportunities in the market to issue new shares or buy back existing shares affects the gearing level. In sum, the theory posits that companies do not have a target optimal gearing level and that market opportunity and market timing determine their financing decisions often.

2.4. Theory of Agency Cost

This theory is originated by Jensen and Meckling (1976). The theory states that various interest groups, comprising of the company's shareholders, providers of debt capital and the management, affect the capital structure of a firm. According to this theory, each interest group has it preference and objectives; therefore, in choosing a method of finance, a balance must be strike in compensating the interest of the shareholders, debt providers and management. In conclusion, the agency cost theory only buttress the submission of the static trade off theory by submitting that "optimal" capital structure for a company is obtained by trading off not just the marginal benefits and marginal costs of extra debt but also by trading off the "agency costs" of additional debt and/or the "agency costs" of additional equity. In practice, such cost eventually diminish the net benefits or return available for distribution to business owners, thus, its barometer is set in terms of wealth of owners. The study therefore tests the veracity of Static trade off versus Agency Cost theories using Nigerian data.

2.5. Empirical Review

Based on the foregoing theories, several authors across the globe have made attempt to ascertain the impact of capital structure on firms' performance.

In Kenya, Lucy (2014) investigates the relationship between capital structure and performance of non-financial companies. The study employed an explanatory non-experimental research design using a sample of 42 non-financial companies in Nairobi Securities and Exchange for the period of 2006-2012. The study revealed that financial leverage had a statistically significant negative association with performance. The study recommended that managers of listed non-financial companies should reduce the reliance on long-term debt as a source of finance. Similarly in Nigeria, Osuji and Odita (2012) examines the impact of capital structure on financial performance of Nigerian firms using a sample of thirty non-financial firms listed on the Nigerian Stock Exchange during the seven (7) year period, from 2004 to 2014. Panel data for the selected firms were compiled and analysed using the ordinary least squares as a method of estimation. The result of their study showed that a firm's capital structure has a significantly negative impact on the firm's financial performance. Lawal *et al.* (2014) in their study of the effect of capital structure on firm's performance among sampled firms in the Nigerian

manufacturing industry, observed that capital structure variables are negatively related to firms performance they however recommend that firms should use more of equity than debt in financing their operation.

Mustafa and Osama (2013) also provide evidence from Jordon in their investigation of the impact of capital structure and corporate performance on 76 Jordanian firms for the period 2001-2006 using the multiple regression model represented by Ordinary Least Square (OLS) found that capital structure associated negatively and statistically with firm's performance. Their study also revealed that the impact of gearing on the performance of highly geared and lowly geared firms is insignificant. In addition to the foregoing, divers authors, Bokhtiar et al. (2014), Varun (2014), Onaolapo and Kajola (2010), Ebaid (2009), Shan and Khan (2007), Zeitan and Tian (2007), Haung and Song (2006), Deesomsak et al. (2004) and Gleason et al. (2000) have all concluded that capital structure statistically and negatively impact firm's performance, using the different methodologies and country data.

Conversely in Pakistan, Mubeen and Kalsoom (2014) in their investigation of the impact of capital structure on financial performance and shareholders' wealth sampling 155 firms in the Pakistan Textile Sector concluded that capital structure positively impact firms financial performance and shareholders' wealth. Similarly, in Sri Lanka, Nirajini and Priya (2013) also investigate the impact of capital structure on financial performance. The study employed correlation and multiple regression analysis. Their findings revealed that there is a positive relationship between capital structure and financial performance and that capital structure significantly affects performance. Other authors have also concluded that capital structure has a mixed effect on firms performance. (Zeitan & Tian, 2007)

Berger and Bonaccorsi (2006), in their study of the impact of capital structure on firm's performance concluded that neither higher leverage nor lower equity capital ratio are connected with higher profit efficiency for all range of data. Also, Phillips and Sipahioglu (2004) in their study of the impact of capital structure on firm's performance using the UK lodging firms as sample concluded that there is no significant link between capital structure and firm's performance.

3. Methodology

The nature of this research demands the use of quantitative research design including ex-post facto. The population of this study encompasses all non-financial firms listed on the Nigerian Stock Exchange (NSE) market, a sample of 22 quoted companies were purposively selected for this study. Data were extracted from audited annual reports and accounts of listed firms on the Nigerian Stock Exchange, which spanned between 2011 and 2015. Evaluation concentrated on

post global financial crisis period in which data was available. In order to capture the impact of capital structure on firm performance, we specify a model conforming to the agency theory; as previously specified by Berger and di Patti (2006) as well as Margaritis and Psillaki. (2007, 2010) It was based on the assumption that managers have zero shareholding in the firm. Otherwise, managers will have no incentives to take a low value projects, as they maximize their own wealth. Besides, we assume that managers want to avoid firm liquidation and prefer not to pay dividends to shareholders. The literature suggests many ways of measuring performance of the firm. Hammes and Chen (2004) used ROA as a measure of firm performance, since the basic accounting ratios are claimed to be improper indicators of firm performance.

Concomitantly, Ward and Price (2006), adopted return on equity as an appropriate measure of performance, since it reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. For the most part, the higher a company's return on equity compared to its industry, the better.

Hence, we specified the following Models;

$ROAit = \alpha_0 + \alpha_{1it}STD/TA + \alpha_{2it}LTD/TA + \alpha_{3it}D/E + \alpha_{4it}TANG + \alpha_{5it}GROWTH + \alpha_{6it}SIZE + \mu_{it}$ … 3.1 $ROEit = \alpha_0 + \alpha_{1it}STD/TA + \alpha_{2it}LTD/TA + \alpha_{3it}D/E + \alpha_{4it}TANG + \alpha_{5it}GROWTH + \alpha_{6it}SIZE + \mu_{it}$ … 3.2 α_0 is the constant, and α_1, α_2, α_3, α_4, α_5, α_6 are regression coefficients, while μ_{it} is the error term

Descriptive Variables:

Variables	Descriptive	Sign
Dependent Variable		
Financial Performance	Market Value of Equity	
	Net Asset Per Share	
Independent Variables		
Short term debt	The ratio of short term debt to total asset.	_
Long term debt	The ratio of long term debt to total asset.	_
Debt Equity	The ratio of debt to equity.	
Control Variables:		
Asset Tangibility	The ratio of non-current asset to total asset.	+
Growth	% change in the log of total asset	+
Size	Natural logarithms of total asset.	+

4. Analysis and Discussion of Result

Table 4.1. Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std Dev.	Skewness	Kurtosis	Obs
ROA	0.03	0.04	0.26	-1.20	0.19	-4.24	26.10	110
ROE	0.11	0.11	9.05	-9.81	1.36	-1.14	44.12	110
STDTA	0.43	0.38	2.74	0.10	0.29	4.69	35.66	110
LTDTA	0.19	0.15	0.58	0.01	0.13	1.05	3.59	110
D/E	1.99	1.34	19.46	-45.67	5.70	-4.68	47.30	110
TANG	0.57	0.59	0.98	0.05	0.21	-0.31	2.78	110
SIZE	7.56	7.56	9.05	6.36	0.69	0.27	2.20	110
GROWTH	-1.44	0.07	0.94	-11.91	111.25	-9.02	87.09	110

Source: Author's Computation

Table 4.1 above showed the variables used in the study. Analysis indicated the average ROA is 0.03, the minimum is -1.20, while the maximum is 0.26. The standard deviation is 0.19. Relatively, ROE shows a mean value of 0.11, the minimum is -9.81; maximum is 9.05 while the standard deviation is 1.36. Both ROA and ROE showed negative skewness while the variables are leptokurtic in nature. The negative minimum value is attributable to a firm with a loss in a period. This low performance can be traced to such factors as inadequacy of electricity, high interest rate and depreciation in exchange rate. The ratio of the STDTA shows a mean value of 0.43 while Long Term Debt to Total Assets (LTDTA) has a mean value of 0.19. Both STDTA and LTDTA indicated positive skewness and the variables are leptokurtic, that is, they are highly peaked. The ratio of debt/equity has the mean value of 1.99, implying that the proportion of debts in the sampled firm is high; this is supported with the kurtosis value of 47.30; a leptokurtic variable. The ratio of tangible assets to total assets has the mean value of 0.57 while the maximum is 0.98 and the minimum is 0.05, the variable is negatively skewed and has a low kurtosis, which implied a platykurtic variable with a low standard deviation. On the average, firms' size has an average value of 7.56 with a minimum and maximum of 9.05 and 6.36 respectively. The size of the firms is positively skewed with a low kurtosis value of 2.20, which implied a platykurtic variable. Finally, the mean value of the firm's growth is -1.44 with a minimum and maximum value of -11.91 and 0.94 respectively. The skewness of the firm's growth is -9.02 which implied negative skewness while the kurtosis stood at 87.09 depicting a leptokurtic variable.

Table 4.2. Correlation Matrix

	ROA	ROE	STDTA	LTDTA	D_E	TANG	SIZE	GROWTH
ROA	1.00							
ROE	0.39	1.00						
STDTA	-0.73	0.00	1.00					
LTDTA	0.10	0.06	-0.22	1.00				
DE	0.02	-0.66	-0.07	0.34	1.00			
TANG	0.00	0.08	-0.21	0.30	-0.14	1.00		
SIZE	0.35	0.01	-0.13	0.30	0.33	0.07	1.00	
GROWTH	0.02	0.01	0.07	0.10	0.03	-0.08	0.11	1.00

Source: Author's Computation

Table 4.2 shows the correlation matrix of the variables. LTDTA, DE, TANG, SIZE, and GROWTH are positively correlated with ROA; while STDTA is negatively correlated with ROA.DE has a negative correlation with ROE, while other variables showed a positive correlation.

4.3. Regression Analysis

In Panel A (the predictor is ROA), Hausman's test discriminate between the fixed and random effect models as presented in Table 4.3 below.

Table 4.3. Panel A - Hausman Test

Hausman Test – Panel A				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		9.523113	6	0.1462
Variable	Fixed	Random	Var(Diff.)	Prob.
STDTA	-0.39	-0.41	0.00	0.48
LTDTA	0.00	-0.02	0.01	0.76
D_E	-0.01	-0.01	0.00	0.06
TANG	0.01	-0.08	0.00	0.19
SIZE	0.08	0.09	0.01	0.84
GROWTH	0.00	0.00	0.00	0.30

The Hausman's chi-square statistics of 9.52 is not significant at 5%. Hence, it appears there is no correlation between the error term and one or more independent variables. Therefore, the random effect model is capable of generating more consistent estimate as against the fixed effect model. Thus, our discussion is based on the random effect model as presented in models 5 and 6 in Table 4.4.

Table 4.4. Panel A: Dependent Variable is ROA

	Pooled Model		Fixed Effect Model		Random effect Model	
	1	2	3	4	5	6
C	0.25* (0.03)	-0.34* (0.13)	0.23* (0.03)	-0.38 (0.62)	0.23* (0.03)	-0.43 (0.21)
STDTA	-0.47* 0.04	-0.48* (0.04)	-0.41* (0.04)	-0.39 (0.05)	-0.43* (0.04)	-0.41 (0.04)
LTDTA	-0.10 (0.11)	-0.11 (0.10)	-0.01 (0.14)	0.00 (0.15)	-0.01 (0.11)	-0.02 (0.12)
D/E	-0.00 (0.00)	-0.00** (0.00)	-0.01* (0.00)	-0.01 (0.00)	-0.01* (0.00)	-0.01* (0.00)
TANG		-0.16* (0.06)		0.01 (0.10)		-0.08 (0.07)
SIZE		0.09* (0.02)		0.08 (0.08)		0.09* (0.03)
GROWTH		0.00 (0.00)		-0.00 (0.00)		0.00 (0.00)
R Squared	0.52	0.65	0.85	0.85	0.56	0.60
Adj. R Squared	0.51	0.63	0.81	0.81	0.54	0.58
S.E Regression	0.13	0.11	0.08	0.08	0.09	0.08
F Statistics	39.17	31.91	20.73	18.02	45.24	26.40
Prob. Value	0.00	0.00	0.00	0.00	0.00	0.00
Observation	110	110	110	110	110	110

*N.B: figures in parentheses are standard errors. *significant at 1%, **significant at 5%,*

Table 4.4 above showed the pooled regression result in models 1 and 2. In model 1 above, STDTA has a significant negative effect on ROA while LTDTA and DE have insignificant negative relationship. This is consistent with the result of Bokhtiar et al. (2014) and Osuji & Odita (2012) which also reported that STDTA has a negative effect on ROA. Model 2 control for tangibility, size and growth. STDTA, D/E and Tangibility have negative significant effect on ROA, while Size has positive significant effect on ROA this is also evidence in Lucy (2014) and Mustafa (2013). Conversely, LTDTA has insignificant negative effect on ROA while Growth has insignificant positive effect on ROA

The fixed effect is depicted in models 3 and 4 in Table 4.4 above. In model 3, STDTA and D/E have negative significant effect on ROA, while LTDTA has negative insignificant effect on ROA. Model 4 control for tangibility, size and

growth. STDTA, D/E, growth have negative insignificant effect on ROA, while LTDTA, Tangibility and Size have a positive insignificant effect on ROA. This is consistent with prior studies.[1]

The random effect is captured by model 5 and 6 in Table 4.4 above. Model 5 revealed that STDTA and D/E have negative significant effect on ROA, while LTDTA has negative insignificant effect on ROA. However, the controlled model represented by model 6 reveals that D/E has a negative significant effect on ROA while size has a positive significant effect on ROA.

Table 4.5. Hausman Test – Panel B

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		46.034520	6	0.0000
Variable	Fixed	Random	Var(Diff.)	Prob.
STDTA	1.25	0.08	0.13	0.00
LTDTA	4.87	3.49	1.49	0.26
D_E	-0.26	-0.21	0.00	0.00
TANG	0.24	-1.01	0.74	0.15
SIZE	1.31	0.43	0.56	0.24
GROWTH	0.00	0.00	0.00	0.80

In Panel B (the predictor is ROE) Hausman's test discriminates between the fixed and random effect models as presented in Table 4.5. The Hausman's chi-square statistics of 46.03 is significant at 5%. Hence, it appears there is correlation between the error term and one or more independent variables. Therefore, the fixed effect model is considered capable of generating more consistent estimate as against the fixed effect model. Thus, our discussion is based on the fixed effect model as presented in Table 4.5 and captured by models 3 and 4.

[1] See (Bokhtair, 2014; Osuji & Odita 2012).

Table 4.6. Panel B- Dependent Variable- ROE

	Pooled		Fixed Effect Model		Random Effect Model	
	1	2	3	4	5	6
C	-0.20 (0.23)	-2.82* (1.05)	-0.68** (0.32)	-10.91*** (5.92)	-0.20 (0.19)	-2.82* (0.91)
STDTA	0.12 (0.32)	0.08 (0.31)	0.99** (0.41)	1.25* (0.45)	0.12 (0.26)	0.08 (0.27)
LTDTA	3.30* (0.76)	3.49* (0.79)	4.64* (1.32)	4.87* (1.40)	3.30* (0.63)	3.49* (0.68)
D/E	-0.18* (0.02)	-0.21* (0.02)	-0.27* (0.02)	-0.26* (0.02)	-0.18* (0.01)	-0.21 (0.02)
TANG		-1.01** (0.46)		0.24 (0.94)		-1.01** (0.39)
SIZE		0.43* (0.14)		1.31** (0.76)		0.43** (0.12)
GROWTH		-0.00 (0.01)		-0.00 0.01		-0.00 (0.01)
R Squared	0.52	0.58	0.74	0.75	0.52	0.58
Adj. R Squared	0.51	0.55	0.66	0.67	0.51	0.55
S.E Regression	0.95	0.91	0.79	0.78	0.95	0.91
F Statistics	96.65	23.42	52.48	9.08	38.27	23.43
Prob. Value	0.00	0.00	0.00	0.00	0.00	0.00

*N.B: figures in parentheses are standard errors. *significant at 1%, **significant at 5%, ***significant at 10%*

Table 4.6 above showed the pooled regression result in models 1 and 2. In model 1 above, LTDTA has a significant positive effect on ROE while DE has significant negative relationship. This is consistent with the result of (Osuji & Odita, 2012) which also reported that LTDTA has a positive effect on ROE. Model 2 control for tangibility, size and growth. LTDTA and Size have positive significant effect on ROE at 5% significant level, while Debt to Equity and Tangibility has negative significant effect on ROE this is consistent with Mustafa (2013). However, the growth ratio reveals a negative insignificant effect on ROE.

The fixed effect analysis is depicted in models 3 and 4 above. Model 3 indicated that STDTA and LTDTA have positive significant effect on ROE, while D/E has negative significant effect on ROE. This is in part consistent with the result of (Osuji & Odita, 2012). Model 4 control for tangibility, size and growth. STDTA, LTDTA and Size have positive significant effect on ROE (Osuji & Odita, 2012;

Lawal et al., 2014), while D/E has a negative significant effect on ROE. However tangibility and growth shows a positive and negative insignificant effect respectively.

The random effect result is captured in model 5 and 6. In model 5 LTDTA have positive significant effect on ROE (Osuji & Odita, 2012), while D/E have a negative significant effect on ROE. The effect of STDTA is positive but insignificant. However, the controlled model represented by model 6 reveals that LTDTA and size have positive significant effect on ROE (Osuji, 2012; Lucy, 2014; Mustafa, 2013) while Tang has a negative significant effect on ROE (Mustafa, 2013). D/E and Growth shows a negative but insignificant effect on ROE. Lastly, the effect of STDTA is positive but insignificant.

5. Conclusion

Capital structure remains one of the most contentious issues in finance literature. This is however a resultant effect of the divergent conclusions of various theoretical and empirical submissions on the subject matter.

This paper examines the impact of capital structure decision on financial performance using a sample of twenty-two non- financial firms in Nigeria between 2011 and 2015. The study seeks to fill the gap in the existing literatures by combining both equity-based and naira-based performance variables to ascertain how impactful leverage is on firms' performance. In addition, the study also evaluates the validity of agency theory in the Nigeria context.

The result indicates that performance measured by ROE is moderately positively influenced by leverage, while ROA interaction with leverage indicates negative relationship. This implies that, the inclusion of debt (both short term and long term) in the capital structure of a firm positively affect the equity shareholders in terms of firm performance while debt holder might be affected negatively. The results indicate that owners as principal benefit marginally from leverage while management's (agent's) measure of performance with respect to owners (principal) capital correlates substantially with leverage. Implicitly, capital structure of firms impact financial performance (measures of agents) than the real wealth of owners using Nigerian data. These findings lend credence to the agency theory, but contrast the conclusion of Varun (2014) who studied the Indian firms and concludes that leverage has negative impact on firms' performance, however, it is consistent with Mubeen and Kalsoom (2014) which indicated capital structure to positively impact both firm performance and shareholders wealth using Pakistan data.

The results of this empirical study suggest that some of the insights from modern capital structure theories are applicable to Nigeria in that certain firm-specific

factors that are relevant for explaining capital structure and corporate performance in the developed economy are also relevant in Nigeria. The inefficiency of the Nigerian Capital Market may have indirectly influence the outcome of this study. This is because the capital structure theory envisaged corporate bond (long term debt) to be substantially utilized than money market based short term debt because the former is assumed to be cheaper than the latter, thus, more benefits to accrue to owners from its usage. The Nigerian Capital market needs reforms that will ensure reduction in its inefficiency and high volatility, as well as improved transparency. Thus, ensuring that performing firms are able to raised needed funds at moderate "agency" cost.

6. References

Berger, A.N. & Bonaccorsi, di Patti (2006). Capital structure and firm performance: A New Approach to Testing Agency theory and Application to the Banking Industry. *Journal of Banking and Finance,* 30, pp. 1065 – 1102.

Bokhtiar, H.; Mainul, A.F.; Afzalur, R. & Nurul, A. (2014). Influence of capital structure on firm performance: evidence from Bangladesh. *International Journal of Business and Management,* 9(5), pp. 1883 – 3850.

Deesomsak, R.; Paudyal, K. & Pescetto, G. (2004). The Determinants of Capital Structure: Evidence from the Asia Pacific Region. *Journal of Multinational Financial Management*, 14, pp. 387 – 405.

Ebaid, I.E. (2009). The Impact of Capital-Stucture Choice on Firm Performance: Empirical Evidence from Egypt. *The Journal of Risk Finance*, 10(5), pp. 477-487.

Gleason, K.C.; Mathur, L.K. & Mathur, I. (2000). The interrelationship between culture, capital structure and performance: evidence from European retailers. *Journal of Business Research,* 50, pp. 185 – 191.

Huang, G. & Song, F.M. (2006). The Determinants of Capital Structure: Evidence from China. *China Economic Review*, 17, pp. 14 -36.

Jalim, M. &Yadar, R. (2012). Capital structure and firm performance: evidence from Malaysian Listed Companies. *Procedia – Social and Behavioural Sciences,* 65, pp. 156 - 166

Jensen, M. & Meckling, W. (1976). Theory of the firm: managerial behaviour, agency costs and capital structure. *Journal of Financial Economics,* 3, pp. 11 – 25.

Lawal, B.A.; Edwin, T.K.; Monica, W.K. & Adisa, M.K. (2014). Effects of capital structure on firm's performance: empirical study of manufacturing companies in Nigeria. *Journal of Finance and Investment Analysis,* 3(4), pp. 2241 – 0998.

Lucy, W.M. (2014). Relationship between capital structure and performance of non-financial companies listed in the Nairobi Securities Exchange, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics,* 1(1), pp. 2331 – 3162.

Modigliani, F. & Miller, M. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review,* 48, pp. 261 – 297.

Mubeen, M. & Kalsoom, A. (2014). Impact of capital structure on firms' financial performance and shareholders wealth: Textile Sector of Pakistan. *International Journal of Learning and Development,* 4(12), pp. 2164 – 4063.

Mustafa, M.S. & Osama, S.H. (2013). Capital Structure and corporate performance empirical study on the public Jordanian shareholding firms listed in the Amman Stock Market. *European Scientific Journal*, 8(22), pp. 1857 – 7881.

Mykhailo, I. (2013). *The Impact of capital structure on firm performance: evidence from Ukraine*. A thesis submitted to Kyiv School of Economist.

Nirajini, A. & Priya, K.B. (2013). Impact of capital structure on financial performance of the listed trading companies in Sri Lanka. *International Journal of Scientific and Research Publications,* 3(5), pp. 2250 – 3153.

Onaolapo, A.A & Kajola, S.O (2010). Capital structure and Firms' performance: The Nigerian experience. *European Journal of Economics, Finance and Administrative Sciences*, 25, pp. 72-74.

Osuji, C.C. & Odita, A. (2012). Impact of capital structure on the financial performance of Nigerian firms. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 1(12).

Phillips, P.A. & Sipahioghu, M.A. (2004). Performance implication of capital structure as evidence from quoted UK organisations with hotel interests. *The Service Industries Journal*, 24(5), pp. 31 – 51.

Shan, A. & Khan, S. (2007). Determinants of Capital Structure*: Evidence from Pakistani Panel Data International Review of Business Research Papers*, 3(4), pp. 265-282.

Varun, D. (2014). Agency theory, capital structure and firm performance: some Indian evidences". *Managerial Finance,* 40(12), pp. 1190 – 1206.

Zeitan, R. &Tian, G.G. (2007). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting, Business & Finance Journal*, 1(4), pp. 40 – 61.