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The Application of Accounting Methodology of Radar Charts to Analyze the Sector of Sawmilling and Planning of Wood of Austria.

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Abstract

The accounting methodology of radar charts (AMRCh) explains the behavior of companies through average periods of maturation of management activity on short term. These variables represented on each one of axes of radar chart allow measure the activity of companies, applying the cosine and sine theorems of plane geometry. The analysis of activity is for each one of areas represented on a radar chart through by non-slanted indicators. This study shows that frontier effect carry out companies to adopt a sectorial management to maintain their activity. This manuscript presents the basic theory of AMRCh, firstly. Secondly, the study analyzes the management of industrial sector, which carries the research to the evaluation of the location of companies by the frontier effect. The manuscript concludes that a company adopts a management strategy according to trade conditions of industrial sector.

Keyboard. New methodology. Management behavior. Frontier effect. Location companies. Economic sociology.

INTRODUCTION

This study of the behavior of Manufacture of veneer sheets and wood based panels on Austria done by applying the accounting methodology of radar chart (AMRCh) explains the management results of sector companies on period from 2005 to 2013 as the main aim. In this financial crisis period, companies needs take changes to carry out their decisions to maintain a continued activity.

The tendency to obtain new indicators to justify the making decisions on both public and private sector, knows as New Management Public (Brusca, Montesinos, 2014. Kattel at al, 2014. Kuipers, et al, 2014) and the report of management of listed companies (IOSCO, 2003. IASB, 2010, SEC, 2010. CNMV, 2013) respectively, is a need to explain to stakeholder the situation of their investment or relation with sector public. At same time, the tools to measure the Strength, Weakness, Opportunity and Threat (SWOT) ever are present to evaluate the making decisions and to be applied on a singular sector or situations (Erliza et al, 2014. Prewitt & Weil, 2014. Van Durme et al. 2014). Nevertheless, the subjective criteria to make indicators, the maintaining of validity of variables applied on indicators along of period and the justification of the applying of indicators based on the past literature obliges to review the explicative capacity of indicators of management.

The AMRCh methodology evaluates the behavior of company by criteria generated from general theories of cosine and sine of plan geometry. These geometric theories can be maintained ever and the economic and financial interpretation too. When a researcher see a radar chart not only is seeing a geometrical figure, the researcher is seeing too a management

decision and these decisions should be measured and evaluated as well, to explain to the stakeholders the result of management.

The manuscript is divided into several units to explain changes of management on wood sector on Austria. The first unit of manuscript presents the principles of AMRCh. The second unit explains the transvers behavior of companies considering the situation of companies on periods selected. It explains the effect of financial crisis and shows how the sector does not have a same behavior. These differences led the research on companies management toward analyze the location of companies, and it explains why the frontier effect can change the management of companies. Nevertheless, the conditions of sector transactions have too an effect on changes of management, and this factor is an open issue for futures research lines. This issue can be discussed in other manuscripts, because the current aim of this manuscript is prove the explained capacity of AMRCh.

The conclusions are building along of manuscript and pursuit the explaining of behavior of sector companies through AMRCh. The AMRCh have flexibility to be applied according to needs of researchers, but this manuscript continues the research begun for Perez in others works previous to this, to prove and improve the application of a new methodology. The characteristics of its indicators and multidirectional effects of the decision making are factors which do of this methodology an alternative to measure the activity of companies.

The Accounting Methodology of radar chat (AMRCh)
The AMRCh consists on evaluation of company management from the angular coefficients of a radar chart. These angular coefficients are obtained by application of theorems of cosine and sine and their economic and financial interpretation is possible because averages period of maturation are on each axis of radar chart. The general expression (1), which is on an axis or radar chart, is as below.

$$pi * ri = t(365) \qquad (1)$$

i= c (collect), p (payment), s (sales)

The valuation of an axis on this methodology does not need any transformation, and the upper and lower limits of each axis are 365 and 1, respectively. It is need take on account those values of each axis have to be averages obtained from information of annual accounts, thus there will be a relation between the radar chart and the financial situation of company.
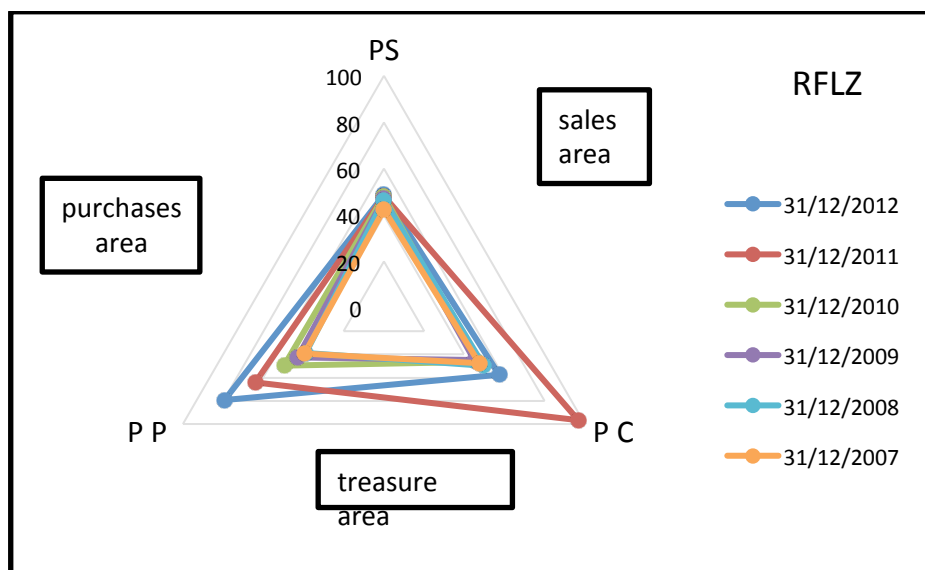
Graphic 1: radar chart of an Austrian company

The graphic 1 are radar charts of a company of this study for each year. The behavior of company change along of period. These changes are measured by distances between axes of radar chart, from each average period of maturation, and they are obtained for application of cosine theorem, according to expression 2.

$$PD_k^2 = p_i^2 + p_j^2 - 2\cos 120 * p_i * p_j \quad (2)$$

i≠j; i=j= 1 (sales), 2 (treasure); 3 (purchases)

The criteria applied to know the financial significance of perimetral distance on a year is monetary and named financial slack. A financial slack is a perturbation of perimetral distances (PDs) without repetition. When DP3 is more than DP1 the perimetral distance is positive and, on the contrary, when DP3•is less than that the distance DP1 is called negative. The kind of financial slacks obtained are 6 and their ranking are on table 1, applying a monetary criterion. When the perimetral distance of treasure (DP2) is greater of them, there is trust of financial market if the Financial Slacks are positive, and company can take external financing. On the contrary, when Financial Slacks are negative, the company gives credit to financial market to continue its activity.

Table 1 The Financial Slacks.

Positive Financial Slacks (DP3>DP1)		Negative Financial Slacks (DP3<DP1)	
(A)	DP2>DP3>DP1	(D)	DP1>DP3>DP2
(B)	DP3>DP2>DP1	(E)	DP1>DP2>DP3
(C)	DP3>DP1>DP2	(F)	DP2>DP1>DP3
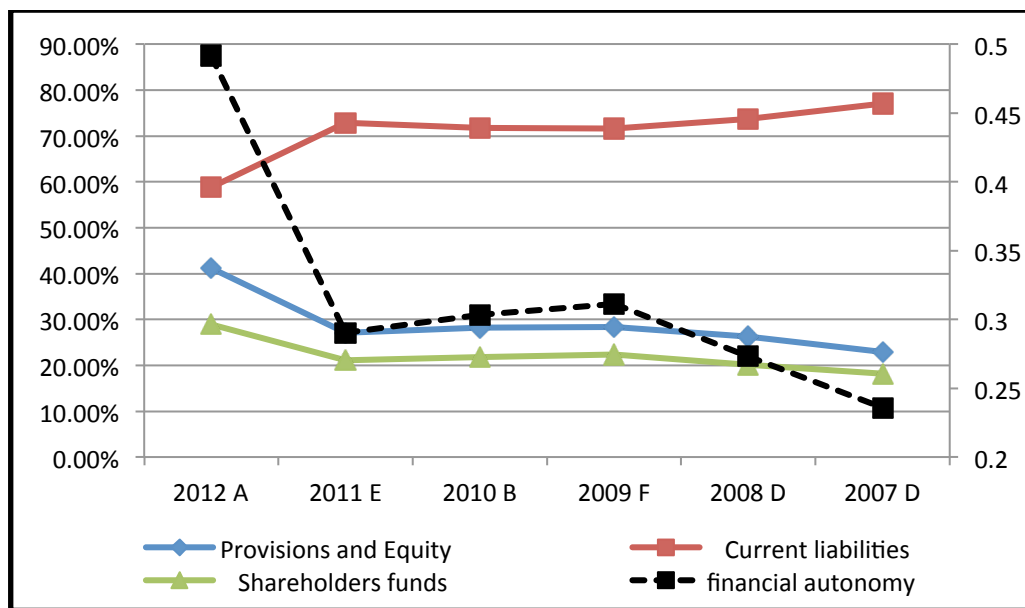
Graphic 2. The evolution of financial structure of company

The criteria applied to measure the activity of company according kind of financial slacks can be contrast with de evolution of liability accounts of balance sheet on graphic 2. When financial slacks are negative, the ratio of financial autonomy increases, as years from 2007 to 2011 because company gives credit to market, increasing its Equity. The change of financial slack on 2012 supposes the financial market has trust of the company. On this year, the company changes the financial structure and the current liability is settled by increasing the Equity and Provisions.

To measure financial effect by this methodology, the application of sine theorem allows measure the orienteering or Perimetral Distances. So that, each financial slack will have its

own criteria for measure the financial situation of company on sort term by its respective angular coefficients. The expression 3 is the sine theorem for each area in AMRCh.

$$\frac{PDk}{sine\ 120} = \frac{pi}{sine\ \alpha k} = \frac{pj}{sine\ \beta k} \quad (3)$$

I≠j; i=j= s (sales), c (collect), p (payment)

K=1 (sales area), 2 (treasure area), 3 (purchases area)

The comparing of perimetral distance on each financial slack two by two can allow the condition to measure the activity of company. This comparison generates several kinds of financial conditions, necessary and sufficiency conditions. The sufficiency conditions are on table 2 y 3 respect the financial slacks B and E of table 1, respectively.

Table 2 Conditions of Financial Sufficiency (FS) and Liquidity Result (LR) for financial slack B and E

CS/LR	EVALUATION OF AREAS TO FIANCIAL SLACK (B)	EVALUATION OF AREAS TO FINANCIAL SLACK (E)
	AREA 1	AREA 1
SC1	$\alpha 2 / \beta 3 > 1$	$\beta 3 / \alpha 2 > 1$
LR1	$1 > \beta 2/\alpha 3 > CV/V^*(1+VAT)$	$\beta 2/\alpha 3 < CV/V^*(1+VAT) < 1$
	AREA 2	AREA 2
SC2	$\beta 1/\alpha 3 > 1$	$\alpha 3 / \beta 1 > 1$
LR2	$1 > \alpha 1/\beta 3 > C^*(1+VAT)/V^*(1+VAT)$	$\alpha 1/\beta 3 < C^*(1+VAT)/V^*(1+VAT) < 1$
	AREA 3	AREA 3
SC3	$\alpha 1/\beta 2 > 1$	$\beta 2 / \alpha 1 > 1$
LR3	$1 > \beta 1/\alpha 2 > C^*(1+VAT)/CV$	$\beta 1/\alpha 2 < C^*(1+VAT)/CV < 1$

The sufficiency conditions (SCi) of table 2 measure the capacity of activity on an area to get a financial position according to benefit the interest of company, and the conditions of liquidity result (LRi) measures the relation between a financial position and the result of management on an area. When this relation it is fulfilled, the company knows that this area have not necessities of an external financing of it, and it allows saying that it is an optimal position on this area in AMRCh methodology.

The indexes of angular coefficients on an area are different to the indexes of area on table 2. This situation proves the character multidirectional of making decisions. So that, a change on average period of payment has its effect on financial situation of sales area, because this movement changes perimetral distances 2 and 3, at same time both, and also their angular coefficients. That to say, the capacity to collect the client credit before to the sale of goods is measured from average period of payment by perimetral distance PD2 and PD3, and through two kinds of financial significance, SC1 and LR1. It allows knowing what the nature of management risk is.

The singular analysis of management of radar chart on graphic 1 is made by indicators of angular coefficients and their behaviors are on graphic 3 and 4. It allows seeing a change of tendency of financial autonomy on 2009 year on graphic 3. So that, from 2007 to 2009, its tendency is according to the indicator of financial sufficiency of sales area (RSF1). Its change on 2010 goes on with tendency of purchases indicator (RSF3). This change of tendency is according to the financial slack of company situated next to north frontier or Austria, as it will be analyzed later on other unit.
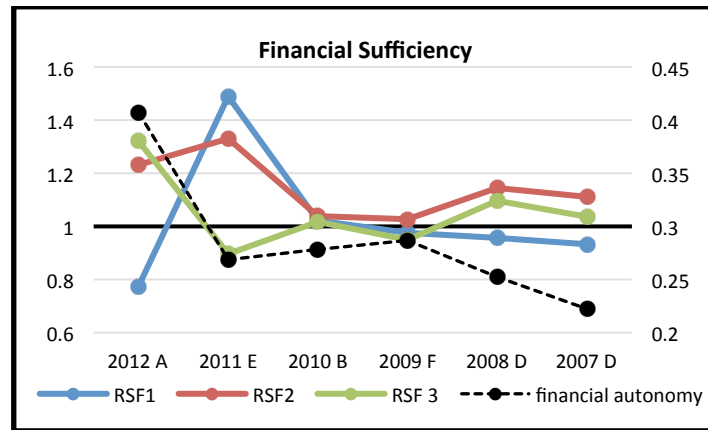
Graphic 3. Ratios of financial sufficiency.
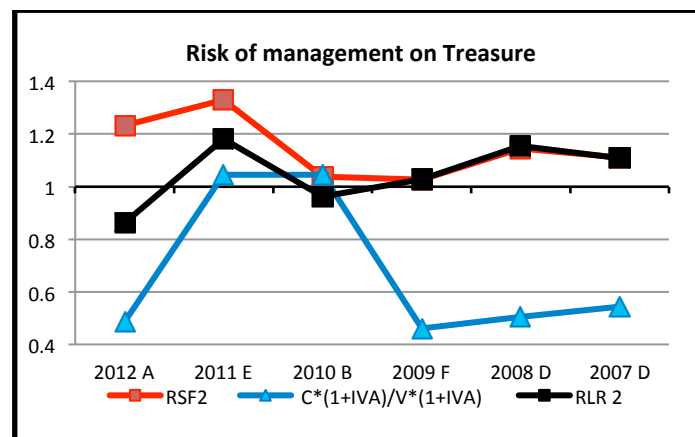
Graphic 4. Evolution of indicators of treasure area

The effect of the change commented on above paragraph is explained on through graphic four. The financial position of this Austrian company is delicate on 2009 and 2010 years. The evolution of indicator of financial sufficiency on treasury (RSF2) decreasing on 2009 year, and the ratio of liquidity result (RLR2) have the same tendency to the decreasing also, but never it still meeting the conditions of liquidity result of table 2 according its financial slack. This condition on treasure area must be fulfill on each one of kind of financial slacks.

Table 3. The angular coefficients and conditions of liquidity result.

YEARS	2012	2011	2010	2009	2008	2007
AREA 1	N0	YES	YES	N0	N0	N0
RSF1	0,775	1,488	1,021	0,975	0,958	0,933
CV/V*(1+IVA)	0,704	1,414	0,691	0,680	0,695	0,709
RLR 1	1,114	1,450	0,978	0,977	1,035	1,062
AREA 2	YES	YES	N0	YES	YES	YES
RSF2	1,232	1,330	1,039	1,027	1,144	1,111
C*(1+IVA)/V*(1+IVA)	0,489	1,044	1,044	0,461	0,506	0,545
RLR 2	0,864	1,181	0,962	1,029	1,154	1,108
AREA 3	YES	N0	YES	N0	YES	YES
RSF 3	1,321	0,896	1,018	0,949	1,096	1,036
C*(1+IVA)/CV	0,694	0,738	0,752	0,678	0,729	0,768
RLR 3	0,775	0,817	0,983	1,053	1,115	1,043

The evolution of risk of management is measured by criteria of condition of liquidity results. This condition ceases on year 2010, according the kind of positive financial slack and the

company improves its position on the year 2012. On years 2010 and 2011, the results of management have several problem because the purchases is higher than sales, and so this position is financing by other areas. Thereby, the area of sales on two years fulfills the conditions of RLR1, and the financial external supports this financial position according to the movement of financial autonomy on graphic 3. The decision adopted on year 2010 is relevant to continued management of company and the evolution of indicators are on table 3.

GENERAL ANALYSIS

Transverse analysis.

To evaluate the annual evolution of Austrian sector of sawmilling and planning of wood in the AMRCh methodology is on graphic 5, and the table 4 has times on which companies present a kind of financial slack each year. The graphic 5 shows the evolution of average of ratio of financial autonomy (AVFA) for all sector companies and for kind of financial slack. Its increase between years 2005 and 2007 have relation with the increases and decrease of negative (AVFANFS) and positive (AVAFPFS) financial slacks, respectively. Those two kinds of tendencies proves the trust of financial market on wood sector. Nevertheless, on year 2008 there is an inconsistency between behavior of AVFA and the variation of FSi, because a decreasing of FSP have an opposite movement on AVFANFS. It needs remember that ratio AVFA measure the relation between the Equity (numerator) and Liabilities (denominator), so its increasing have to be accord with an increasing of negative financial slack and, consequently, this indicator will decrease when the positive financial slack have an increase. So that, there are not any relations among AVFA values and the variations of Financial Slacks from 2008 up to the end of period.

Graphic 5.Evolution of financial slack and ratio of financial autonomy.
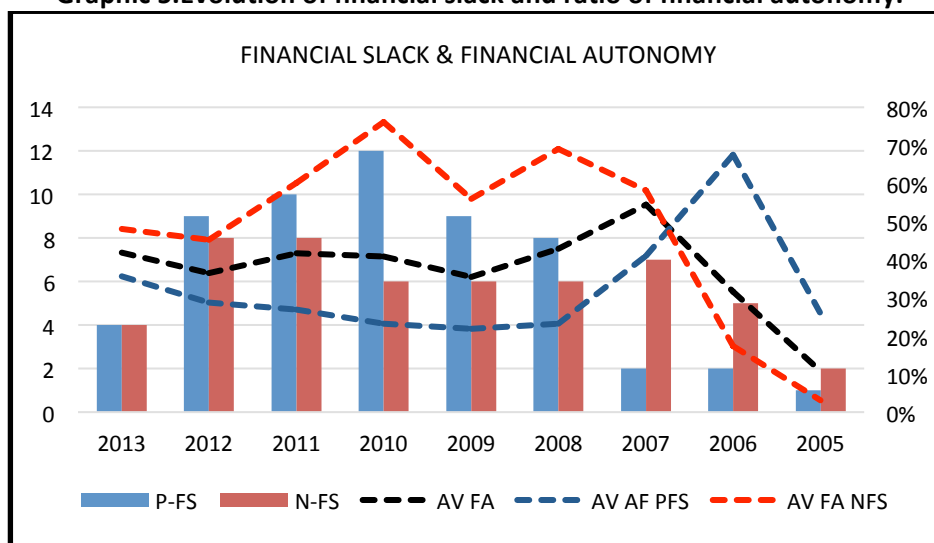
Table 4. Numbers of kinds of financial slacks.

0	2013	2012	2011	2010	2009	2008	2007	2006	2005	SUMAS
A	0	1	0	0	0	0	0	0	0	1
B	1	5	6	8	6	3	0	0	0	29
C	3	3	4	4	3	5	2	2	1	27
D	0	0	0	0	0	2	2	2	0	6
E	0	0	1	0	0	0	0	0	0	1
F	4	8	7	6	6	4	5	3	2	45
TOTAL	8	17	18	18	15	14	9	7	3	109

P-FS	4	9	10	12	9	8	2	2	1	57
N-FS	4	8	8	6	6	6	7	5	2	52
TOTAL	8	17	18	18	15	14	9	7	3	**109**

The table 4 present the kinds of financial slacks of period and the test of Chi2 (0.4994157) indicate that the null hypothesis do not fulfilled at a level of significance of the 0.05 and there are relations among years and the financial slacks. In this relation take weigh the kinds of financial slack B, C and F.

A transversal analysis is indicating there is an increasing of companies on year 2008. This hard variation require an explication, which is not in this manuscript and it is a future line of research. However, this increase is shared between two kinds of financial slacks, and it will be studied on next paragraph. Nevertheless, the increasing of B and F financial slack show what has been the strategy of penetration on this sector. The C kind is present in wood sector from beginning. The B financial slack give more liquidity to suppliers. The F financial slack is present from beginning also and give more deferment to settle debts to clients. However, the equitable difference between positive and negative financial slacks allows suspect there is an issue for explain it, the effect frontier, which will explain in other unit of this manuscript.

Transverse Analysis for management areas.
The penetration strategies named on above paragraph needs an explanation of its effect by study of conditions of financial sufficiency and liquidity result. The table 6 take an account the time of the conditions of financial sufficiency are fulfill for management area and financial slack (FSi) and this result are on the last column. They show as the treasure area (AREA 2) have a high level of accomplishment of radial conditions at same time. Moreover, the purchases areas (AREA 3) fulfils the conditions of financial sufficiency and liquidity result higher than the sales area (AREA 1). That to say, the management results are more adjust on purchases area than sales area.

Those results indicate that the financial condition on sector allow continued the activity of company and clients portfolio condition the continued management of the activity, because the financial slack F has a hard weigh on the kind of sector management, according to results of table 4 and 5. On this last table, how it has been said in this paragraph, the AREA 2 presents the highest level of accomplishment to angular conditions, but among financial slacks on this area, the F kind have a high level of them in treasure area another time. This uses justify the study of frontier effect on Austrian wood sector.

A transversal analysis of results of table 5 justify the previous conclusion obtained from table 4. On bottom of table 5 there is a comparison of result between two tables. The times of conditions of sufficiency and liquidity (S&L) are fulfilled are compare the total of kind of financial slacks from table 4. The result shows how there is a mistake on 2009 year when the value of this compilations changes and achieves a value lower than one. That to say, there are less accomplishment of angular conditions than financial slack or caseload of companies not get the financial position on short time to be adjusted to their management results. Consequently, the financial crisis is present on 2009 year and go on to the end of period, according it has been analyzed above.

Table 6. The radial conditions for management area and financial slack

	FSi	2013	2012	2011	2010	2009	2008	2007	2006	2005	SUM	FS
AREA 1	C	0	1	1	2	0	2	1	1	0	**8**	**P**
AREA 1	F	0	1	1	1	1	1	1	0	0	**6**	**N**
Sales area		0	2	2	3	1	3	2	1	0	**14**	
AREA 2	A	0	1	0	0	0	0	0	0	0	**1**	**P**
AREA 2	C	1	0	0	1	2	4	3	2	0	**13**	**P**
AREA 2	D	0	0	0	0	0	1	1	1	0	**3**	**N**
AREA 2	F	4	8	7	6	5	4	5	3	1	**43**	**N**
Treasure area		5	9	7	7	7	5	8	6	1	**60**	
AREA 3	A	0	1	0	0	0	0	0	0	0	**1**	**P**
AREA 3	B	1	2	2	3	3	0	0	0	0	**11**	**P**
AREA 3	C	1	1	0	2	1	3	1	1	0	**10**	**P**
AREA 3	D	0	0	0	0	0	1	1	1	0	**3**	**N**
Purchases area		2	4	2	5	4	4	2	2	0	**25**	
		7	**15**	**11**	**15**	**12**	**16**	**13**	**9**	**1**	**99**	

	2013	2012	2011	2010	2009	2008	2007	2006	2005	SUM
S & L (a)	7	15	11	15	12	16	13	9	1	99
TOTAL (b)	8	17	18	18	15	14	9	7	3	109
(a) ÷ (b)	0,875	0,882	0,611	0,833	0,8	1,143	1,444	1,286	0,333	

Analysis by companies by frontier effect.

The analysis of wood sector is divided on two sides, companies situated on north and south of Austria. Their approach to frontiers countries with different Gross Domestic Product has effects on management strategies of companies. The result of observations on this study is on table 7, where the name of companies is under acronyms and all of they are the database on this manuscript. The annual financial statements has been obtained from database Orbis, but the analysis is only to companies on table 7 because not all of 25 selected company firstly have a valid accounting information for to be evaluated.

The companies with a positive financial slack and next to northern frontier have positive financial slacks and the company localized below this criterion with other kind of financial slack change its strategy. These examples are on table 7 marked with an F and it is the AEGE company. The companies situated on southern frontier have negative financial slacks and their changes from positive to negative financial slacks can be seed on USTR and SAEG companies at the end of period. Moreover, there are exceptions on this criterion and they are marked on table 7 with an asterisk symbol. But despite this, the main difference is the required liquidity on negative financial slacks, when companies are situated on southern frontier and this issue is more sensitive on company situate on the northern of Austria at the end of period, because the C and F financial slack are more present than other kind of financial slack. These differences have their consequences on the study of angular conditions.

Table 7: Austrian companies		years									Financial slack								
ACRONYM	REGION	2013	2012	2011	2010	2009	2008	2007	2006	2005	C.	L.	A	B	C	D	E	F	
A EN	BRAND	B	B	B	B	B	C	0	C	0	(cz)	N	0	5	2	0	0	0	7
HOLZ	RANDEGG (NOE)	0	B	B	B	B	B	0	0	0	(cz)	N	0	5	0	0	0	0	5
AEGE	STEYRERMUEHL	C	F	C	C	0	C	C	F	F	(de)	N	0	0	5	0	0	3	8 (F)
ELNH	FRANKENMARKT	F	C	B	B	B	C	C	0	0	(de)	N	0	3	3	0	0	1	7
BAU	IMST	C	C	B	B	B	0	0	0	0	(ch)	N	0	3	2	0	0	0	5
ETTE	VILS	0	B	B	B	B	B	0	0	0	(ch)	N	0	5	0	0	0	0	5
ERW	GOLDEGG IM PONGAU	C	C	C	C	C	C	0	0	0	(de)	N	0	0	6	0	0	0	6
ACHE	HERMAGOR	0	B	C	B	0	0	0	0	0	(it)	S	0	2	1	0	0	0	3 (*)
HP E	FRAUENTAL	0	0	C	C	C	C	0	0	0	(sk)	N	0	0	4	0	0	0	4
NDER	FUEGEN	F	F	F	F	F	D	D	0	0	(de)	N	0	0	0	2	0	5	7 (*)
EIFE	IMST	0	F	F	F	F	F	F	F	0	(ch)	N	0	0	0	0	0	7	7 (*)
OLZ	LEOBEN	F	F	F	F	F	F	F	0	0	(si)	S	0	0	0	0	0	7	7
HANN	ZELTWEG	0	F	F	F	0	0	0	0	0	(si)	S	0	0	0	0	0	3	3
N OF	WOLFSBERG (KTN.)	0	F	F	F	F	F	F	D	F	(si)	S	0	0	0	1	0	7	8
USTR	ADMONT	F	F	F	C	C	C	F	F	0	(si)	S	0	0	3	0	0	5	8 (F)
RFLZ	ZELL AM MOOS	0	A	E	B	F	D	D	D	0	(de)	N	1	1	0	3	1	1	7 (F)(*)
SAEG	EPPENSTEIN	0	F	F	F	F	F	F	C	C	(si)	S	0	0	2	0	0	6	8 (F)
													0	24	28	6	1	45	105

Colum C: Country more next to company. The acronym to country is according to IANA domain. Colum L: Location of Company in Austria.
Characters: (F) Company with frontier effect; (*) Exception to general criteria.

The financial sufficiency on graphics 8 and 9 has a different behavior, as it was to suppose. When companies are on northern frontier, the behaviors of purchases and treasure areas are same. Nevertheless, the financial sufficiency on portfolio client is higher than of purchases, and it supposes their clients are on countries with a high Gross Domestic Product. When companies are on south frontier, next to countries with a low Gross Domestic Product, the behavior of purchases and sales area are same, and the treasure maintain the same level along of period. This uses made the conditions of financial management are relevant on continuity activity to south companies.

| Graphic 8. Northern companies | Graphic 9.Southern companies |
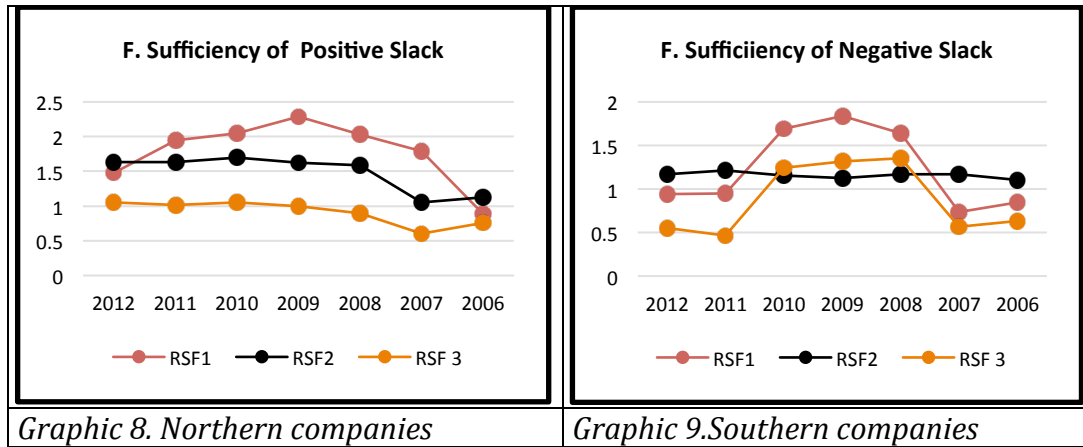
The quality of financial sufficiency can be evaluated by the conditions of the liquidity result. The evolution of management activity to north frontier companies of table 7 is represented on graphic 10 and the valuation of angular indicators are on table 8. Moreover, the graphic 11 represent the evolution of south companies and their valuation of management through angular indicator is on table 9. Nevertheless, the criteria of kind of financial slack applied for this each kind of company have been B and C for north companies and F for south companies.

Table 8. Conditions of Financial Sufficiency (FS) and Liquidity Result (LR) for financial slack C and F.

CS/LR	EVALUACIÓ DE LAS AREAS TO FINANCIAL SLACK (C)	EVALUACIÓ DE LAS AREAS TO FINANCIAL SLACK (F)
	AREA 1	AREA 1
SC1	$\alpha2 / \beta3 > 1$	$\beta3 / \alpha2 > 1$
LR1	$1 > \beta2/\alpha3 > CV/V^*(1+IVA)$ (YES)	$\beta2/\alpha3 < CV/V^*(1+IVA)$ (no)
	AREA 2	AREA 2
SC2	$\beta1/\alpha3 > 1$	$\alpha3 / \beta1 > 1$
LR2	$1 > \alpha1/\beta3 > C^*(1+IVA)/V^*(1+IVA)$ (YES)	$\alpha1/\beta3 < C^*(1+IVA)/V^*(1+IVA)$ (no)
	AREA 3	AREA 3
SC3	$\beta2 / \alpha1 > 1$	$\alpha1/ \beta2 > 1$
LR3	$\beta1/\alpha2 < C^*(1+IVA)/CV < 1$ (no)	$\beta1/\alpha2 > C^*(1+IVA)/CV$ (YES)

The conditions of liquidity result are fulfill on 2005, 2006 and 2007 years on treasure area, and from 2008 to 2010 years these conditions do not fulfill on all areas. Thus, the financial autonomy decrease because companies need external financial to maintain a strategic management. On 2011, 2012 and 2013 years the management situation increases, because companies gets liquidity result on purchases areas at same time that this area get too liquidity result. On year 2013, these two conditions are fulfill on area of treasure, and it indicate the companies get financial sufficiency from its result on this area. The situation on 2013 is same that on 2005 and 2006 years, the external conditions of financial market get maintain the management activity companies, because there are not any relations between the management result and the financial sufficiency on treasure area. The financial situation of companies on 2013 year improve because the ratio of financial sufficiency increases and all management areas get financial sufficiency, this is the difference respect to 2005 and 2006 years.
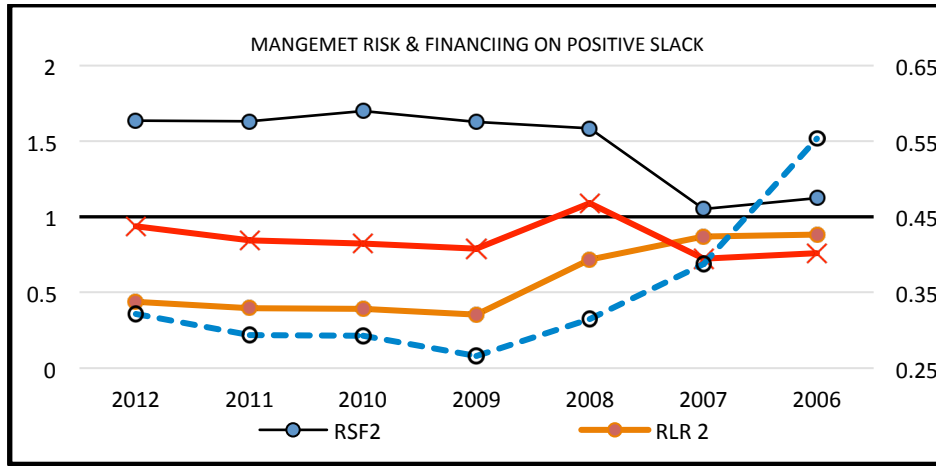
Graphic 10. The evaluation of treasure area on north companies

Table 8. The average of angular indicators of treasure area on north companies

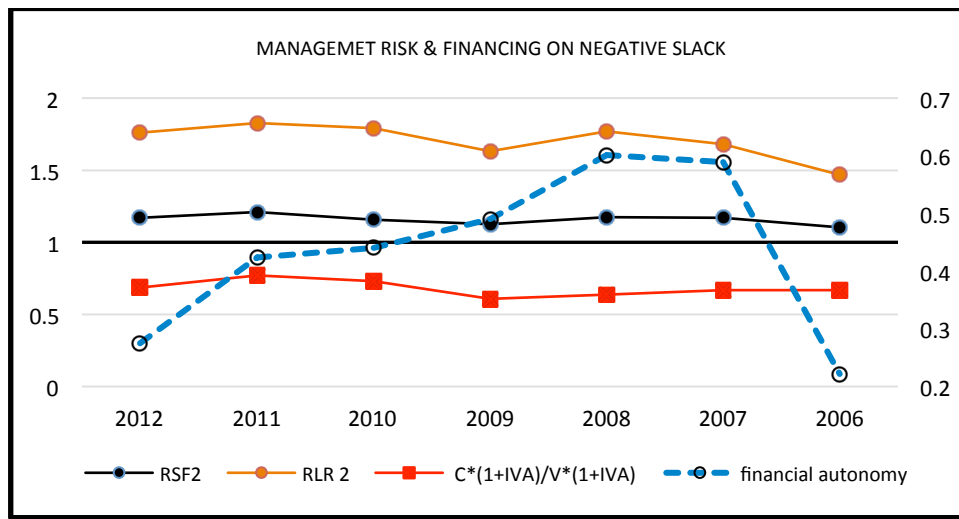|	2013*	2012*	2011	2010	2009	2008	2007	2006	2005
AREA1	0	0	0	0	0	0	1	0	0
RSF1	1,563	1,474	1,951	2,044	2,291	2,031	1,789	0,888	0,365
CV/V*(1+IVA)	0,878	0,922	0,804	0,792	0,943	0,921	0,407	0,456	0,214
RLR 1	0,506	0,417	0,401	0,380	0,373	0,586	0,659	0,679	0,891
AREA 2	1	0	0	0	0	0	1	1	1
RSF2	1,408	1,635	1,632	1,701	1,626	1,584	1,052	1,123	1,230
C*(1+IVA)/V*(1+IVA)	0,905	0,938	0,846	0,825	0,790	1,090	0,723	0,761	0,821
RLR 2	1,189	0,436	0,395	0,391	0,353	0,715	0,871	0,884	3,985
AREA 3	0	1	1	0	1	0	0	0	0
RSF 3	1,041	1,050	1,014	1,049	1,001	0,897	0,604	0,758	0,280
C*(1+IVA)/CV	0,923	1,063	0,987	1,067	0,821	1,129	0,723	2,389	3,830
RLR 3	1,828	1,033	1,013	1,033	0,976	1,412	1,318	1,312	4,747
financial autonomy	0,338	0,321	0,293	0,293	0,266	0,315	0,388	0,554	0,233

(*) these years are evaluated through C Kind of financial slack.

The evolution of south companies have a different behavior, and their evaluations will made by F financial slack. This kind of financial slack is the main on south companies, and both their behavior and their assessment are found in Graphic 11 and Table 9. They never achieve an optimal management on period of study, from years 2005 to 2013, because management areas do not get financial sufficiency and liquidity result. Moreover, the three indicators on treasure area have the same behavior along of period, and the variation of management result is according to variation of liquidity result on treasure area (RLR2). That is to say, the management result adjusts to financial position on area of treasure and the alternatives of decisions are limited. On others words, the company need external financial to maintain their activity in these conditions of liquidity result, and this explain the behavior of financial autonomy.

The financial autonomy increases on years 2007 and 2008, but its decreasing is constant on next years since year 2009. It justifies the high level of management risk on treasure and purchases areas, it due to that the RLR2 indicator is higher than one and an external financing to them supports the financial sufficiency on these areas. By the contrary, the sales area has the best behavior of them, how it was studied on graphic number 9, because this one ever fulfills the conditions of liquidity result and also the ratio of financial sufficiency (RSF1) is next to one on year 2001 and 2012. Nevertheless, the management result improves on year 2012 as well as the liquidity result on all areas, so that the financial autonomy increases on year 2013 because the level of trust on shareholders increases too. It is need remember that F kind of

financial slack has the large perimetral distance on treasure areas (PD2) and it represents the big distance to settle the commitment of debtors. Under these conditions of management, companies manage their activities giving credit to clients and the increase of financial autonomy proves the trust of shareholders on the continued activity of their companies.

Graphic 11. The evaluation of treasure area on south companies

Table 9. The average of angular indicators of treasure area on south companies

FINANCIAL SALCK F	2013	2012	2011	2010	2009	2008	2007	2006	2005
AREA 1	0	0	0	1	1	1	0	0	1
RSF1	0,481	0,941	0,946	1,690	1,837	1,637	0,732	0,849	1,697
CV/V*(1+IVA)	0,710	0,723	0,751	0,623	0,565	0,565	0,537	0,569	0,704
RLR 1	0,769	0,855	0,877	0,800	0,775	0,822	0,851	0,816	0,725
AREA 2	0	0	0	0	0	0	0	0	0
RSF2	1,096	1,170	1,211	1,156	1,125	1,173	1,169	1,104	1,130
C*(1+IVA)/V*(1+IVA)	0,633	0,687	0,770	0,731	0,608	0,639	0,667	0,670	0,781
RLR 2	1,422	1,762	1,828	1,791	1,631	1,768	1,682	1,468	1,014
AREA 3	0	0	0	0	0	0	0	0	0
RSF 3	0,425	0,550	0,465	1,245	1,317	1,353	0,564	0,630	0,586
C*(1+IVA)/CV	0,890	0,962	1,216	1,367	1,602	1,830	2,281	2,093	0,931
RLR 3	1,934	2,181	2,226	2,302	2,171	2,279	2,176	1,923	1,390
financial autonomy	0,554	0,319	0,451	0,468	0,523	0,630	0,614	0,258	0,160

To contrast the obtained result by the AMRCh methodology with information from financial statements, the evolution of elasticity of treasure respect the variation of financial autonomy is on graphic 12 explain the differences on two kind of companies.
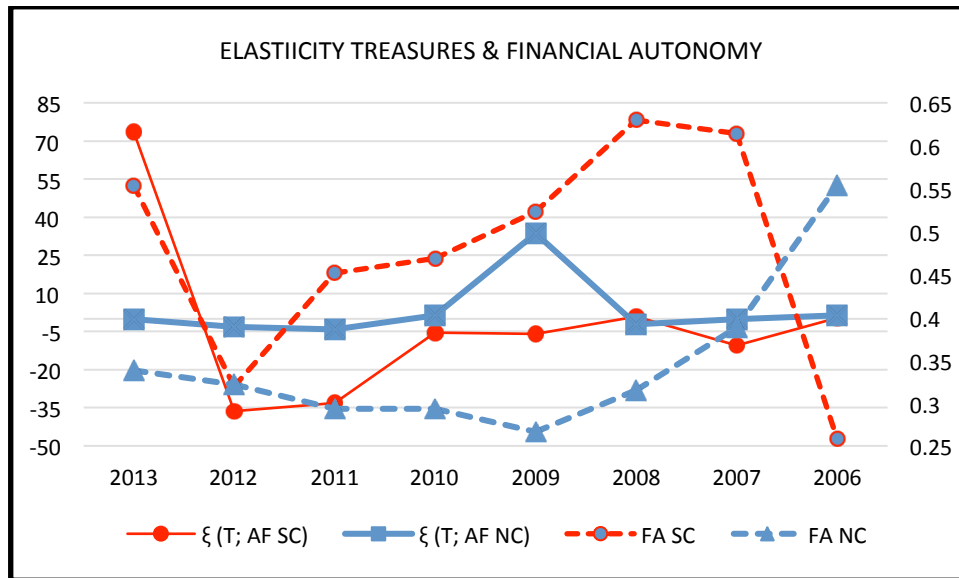
Graphic 12. The evaluation of treasure companies

Table 10. Valuation of the north and south companies.

negative financial slacks	2013	2012	2011	2010	2009	2008	2007	2006
financial autonomy	0,554	0,319	0,451	0,468	0,523	0,630	0,614	0,258
ξ (T; AF SC)	73,58	-36,3	-33,2	-5,45	-5,87	0,96	-10,49	0,33
positive financal slacks								
financial autonomy	0,338	0,321	0,293	0,293	0,266	0,315	0,388	0,554
ξ (T; AF NC)	-0,152	-3,107	-4,168	1,327	33,52	-2,18	-0,105	1,442

The elasticity of treasure and financial autonomy justifies the evolution of treasury respect to the behavior of financial structure of liability. The behaviors of north and south companies' elasticity are different. They have dashed line on Graphic 12 and their values are on secondary y-axis and on table 10. Since 2009 the south companies only have financial sufficiency on treasure area and their annual elasticities have too a hard movement. Therefore, the north elasticity has values higher than one on years 2007 and 2008, when company has not financial sufficiency on all areas. This relation justify the application of AMRCh methodology because it can explain better the management of company. The angular indicators are normalized, independent and objective and the quality of financial position takes as reference a gap between the ratio of liquidity result and the result of management on each area. Finally, this methodology can explain the multidirectional effects of making decisions.

CONCLUSION

This manuscript has begun analyzing Austrian companies by accounting methodology of radar chart. The first analysis carry out us to differ two kind of management, and it has detected a frontier effect. The classification of companies in clusters makes analysis more consistent whether traditional techniques are applied or not, but the new methodology lets to do a singular analysis to each management area which cannot be done otherwise. All management wishes to know the effect of your decisions and this methodology increases his or her perceptions because it shows the multidirectional effects of making decision on each areas represented on a radar chart. Moreover, the new methodology increases the analytic capacity of methodology traditional and justify the selection of variables to explain the behavior of companies, because the radial indicator are normalized, objective and independent and the AMRCh can be applied ever. That is to say, for an analyst is relevant the kind of variables to must apply on a study and he or she knows that selected variables for an analysis maybe they not will be applied along of period of study. Well this methodology can guide the research but

it cannot replace your knowledge about the best technique of analysis to be applied in a study. Finally, this study only seeks to explain the explanatory power of the AMRCh to improve our decisions whether in times of crisis or not. The new line of research well be the prospective and retrospective power of radial variables.

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The Effect of Dividend Policy on the Market Value of Firms in the Financial Services Sector in Nigeria

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Abstract

The main thrust of this study is to find out the relationship between dividend policy and market value of firms in the financial services sector of the Nigerian economy. The study used panel data constructed from the financial statements of firms listed on the NSE for a period of 10 years, from 2002-2011. These financial statements were obtained from the NSE Fact Book. The Ordinary Least Square (OLS) statistical technique was used for the data analysis. From the results of the study, cash dividend, stock dividend and investment policy have a negative but not significant relationship with the market value of firms in the financial services sector of Nigeria, while earnings was found to have a positive and insignificant relationship with market value (though significant at 10% level of significance). Generally, the result is in tandem with the dividend irrelevant hypothesis, that dividend policy has no effect on market value of firms. Based on these results, some recommendations were made prominent amongst which was that companies operating in the financial services sector of Nigeria should not see dividend policy as a strategy towards increasing their market value and therefore, the dividend irrelevant hypothesis should not be jettisoned.

Key words: dividend policy, cash dividend, stock dividend, earnings, retained earnings, market value

INTRODUCTION

There have been a lot of controversies as to the right dividend policy that will impact positively on the market value or share price of a firm. There are two schools of thought in this regard (1) the dividend irrelevant school of thought and (2) the dividend relevant school of thought. Therefore, according to Okpara (2010), corporate dividend policy has been a thing of concern to firms at large. They are faced with the dilemma of declaring dividends and making provision for retained earnings so as to make room for more investments and invariably increase the market value of the firm. Dividend policy decision is concerned about how much earnings could be paid as dividend by the firm and how much could be retained.

According to Miller & Modigliani (1961), payment of dividend increases the share price of a company and this has the counter effect of reducing the capital gain of the same company, thereby making dividend payment ineffective. Likewise Brennan (1970) and Litzenberger & Ramaswamy (1982), in their Tax-Effect-Hypothesis, are of the view that if there is no tax for capital gains, or if the capital gains tax is less than the cash dividend tax, investors prefer

companies that do not distribute cash dividends and retain profits in the form of undistributed profits. The dividend irrelevant hypothesis of Miller & Modigliani (1961) and Brennan (1970) was further supported by Black & Scholes (1974) when they submitted that each investor has his/her own implicit calculations regarding preference between high cash dividend benefits or their retention according to the circumstances he/she is experiencing such as the tax category into which he/she falls.

There is however other dividend theories in literature opposing the dividend relevance theory presented above. For example, Baker & Powell (1999) proposes that capital gains are more risky than cash dividends and investors prefer companies that distribute cash dividends to companies that hold profits to convert them into capital gains. That is a bird in hand is better than a sparrow on a tree. The signaling effect theory by Denis, Denis & Sarin (1994) supports Baker & Powell's (1999) theory when they opine that the increase in the dividends rate is an effective means of delivering information to investors that the firm is viable. The Agency costs theory of dividend policy by researchers like Rozeff (1982) also supports this position when it presents that shareholders can reduce the agency costs by encouraging debt financing through high dividend payment and invariably increasing the market value of the firm. The point is that, the results are mixed which makes the issue inconclusive.

Interestingly, most previous studies have dealt with the dividends policy concept but most of them have dealt with one type of dividend (the cash dividend) (Miller & Modigliani, 1961; Partington, 1985) and do not make a clear distinction between the dividend policy concept and dividend types (cash and shares) (Salih, 2010). Since there are many types of dividend policy (cash and share) with different effect on company market value, the firm management can use one or more of them at the same time; while trying to enhance a company's market value. In this study, both types of dividend (cash and stock) were covered. This therefore generates the question: what is the relationship between dividend (cash and stock) policy and market value of firms in developing countries?

According to Salih (2010), in studying the relationship between the market value of a firm and dividend policy (i.e. shareholders' preference – dividend) one cannot do it in isolation of the managers (agents) preference, which is retention of earnings (investment policy). Also, in a study on the development of corporate financial markets in developed countries, Baskin (1988) found that, the higher the net profit from current investment of the firm, the higher will be the share price. This cannot be said to be the case in developing countries (e.g. Nigeria). Which, therefore, means that any approach to dividend policy intended to be operative under real world conditions should consider the investment policy of the firm and difference in net profit from the company's current investment and retained earnings in ascertaining its market value, since the difference (dividend) has been assumed to impact the market value of the firm; the questions then are: what is the relationship between investment policy of a firm and its market value and what is also the relationship between the net profit from the firm's current investment and market value of the firm?

Added to the above motivation for this study, the methodologies of some of the previous studies which discussed the effect of dividend policy on market value (Adefila, Oladipo & Adeoti, 2004; Fodio, 2009) covered only about 6% of firms listed on the stock exchange, which poses questions about their sample impartiality. Covering only 6% of firms listed on a stock exchange in a study, makes the sample size too small and therefore their results could not be reliable. The important point here is that the sample size used in their study is not representative of the population of study. Therefore, this study sets out to find out the

relationship between the dividend policy and the market value of companies in the industrial sector of Nigeria.

LITERATURE REVIEW

This section reviews literature on the dependent variable (market value) and the independent variables (cash dividend, stock dividend, retained earnings, earnings per share). It also presents the theoretical underpinnings of this study.

Market Value of a Firm and Cash Dividend

Salih (2010) found a positive significant relationship between cash dividend and market value for the full UK market; however, this result was different when based on individual economic sectors. Miller & Modigliani (1961) asserts that the cash dividend policy is not important because it has no effect on a company's value, and as such it does not affect shareholder wealth. Watts (1973) study on the information contained in the dividend tested the relationship between unexpected dividend changes, future earnings and abnormal returns on shares in companies that announce unexpected changes in dividend. He found out that the unexpected change in cash dividend provides little information about future earnings and there is no abnormal return around dividend announcements month.

In their study, Black & Scholes (1974) set out to find the impact of dividend policy on market value of companies listed on the New York Exchange. The study covers from 1931 to 1966. They found that prices of shares may change temporarily in response to a change in cash dividend but in real sense such an increase will not affect the market value of companies. Lintner (1962) is of the view that the value of one dollar received by shareholders as dividend is more than the value of one dollar in retained earnings, therefore the market value of a company is positively related to dividend policy. Collecting announcement dates of all dividend changes for a set of 625 New York Stock Exchange firms for the period January 1964 – June 1968, Pettit (1972) found that share price reacts to increases or decreases individuals.

Blume (1980) in his study covering over 41 years to 1976 on the relationship between dividend payment and market value of a company found that the total returns on non-dividend paying stocks tended to exceed the return on most dividend paying stocks. Aharony & Swary (1980) in their study tried to isolate the impact of dividend from the impact of earnings, and found that the market's reaction to a dividend increase is positive, and negative for dividend decrease. Agreeing with the findings of Aharony & Swary (1980), Asquith & Mullins (1983) tested the initial dividend where they find that the market's reaction to initial dividend appears smaller than the earnings announcement with ten days from the dividend announcement. Based on this, it is assumed in this study that:

H1 There is no significant relationship between a company's cash dividend and its market value.

Market Value of a Firm and Share Dividend

A substantive body of empirical research supports the view that share prices are influenced by changes in company stock dividends. For example, questionnaire surveys of investors indicate that stock dividend information plays an important part in their assessment of the current value of a share (Arnold & Moizer, 1984; Pike, Meerjanssan & Chadwick, 1993) while interviews with financial managers suggest that companies take a great deal of care when setting their stock dividend level (Lintner, 1956). In addition, stock market studies demonstrate that share prices respond to stock dividend news; stock dividend increases tend to be associated with share price increases while stock dividend cuts are usually associated

with share price falls (Ahrony & Swary, 1980). Campbell & Shiller (1987) in their study supported the above submission that stock prices reflect dividend policy of a firm in the short-run. MacDonald & Power (1995) considers the results of Campbell & Shiller (1987) as poor because they fail to incorporate a measure of the company's growth prospects into their model of study.

According to MacDonald & Power (1995), once this deficiency is remedied, a unique long-run relationship can exist. Specifically they demonstrate that the inclusion of a retention ratio variable into the analysis to proxy for future growth prospects yields a more accurate estimate of the real rate of interest of 7.2%. They also calculate the error correction model implied by the relationship which shows how prices adjust to their long-run equilibrium levels and indicate that the predicted values from this model track the actual data well, capturing most of the important turning points. However, a number of criticisms can be leveled at these previous studies. First, they all employ the same US data set in their investigation; price and dividend information for the Standard and Poor's Composite Index is used in all the studies mentioned above. Therefore, one may conclude that, the findings as discussed above may be country specific and may not apply outside the USA. Second, no dividend information is provided by Standard and Poor prior to 1926 for this index; the dividend data for the early years of these investigations are constructed by adjusting a data series in Cowles (1938). Again, the conclusions may be the result of data problems from splicing together two different dividend series. Based on this, it is assumed in this study that:

H2 There is no significant relationship between a company's stock dividend and its market value.

Market Value of a Firm and Earnings per Share
According to Ward (1993) owner's wealth maximization comes as a result of profit maximization. Salih (2010) found a positive significance relationship between Earnings per Share (EPS) and market value for the full UK market; however, this result was different when based on individual economic sectors. Merton (1985) opine that dividend is a mechanism for conveying missing information on earnings to the markets. Therefore, the market value of a company does not respond to dividend policy but rather to unexpected earnings. Taking a sample of 3,800 observations for the period 1988 to 1993, Conroy, Eades & Harris (2000) found that earnings announcement can provide sufficient information to the markets making dividends sound like an additional mechanism for signals. In a study in China, Chen, Firth & Gao's (2002), used 1,232 announcements of listed companies for the period 1994 – 1997 and found that the market value of a company is closely associated with unexpected earnings and that cash dividends play only a limited role regarding this signal.

Taking a sample of 164 corporations, Gordon (1959) tested 3 hypotheses that there are 3 reasons why investors buy shares namely (1) dividend and earnings (2) dividend and (3) earnings. Using a cross section data, he found that it was difficult to conclude that the market value of an organization is impacted positively by dividend and earnings. In the second hypothesis (dividend) he also found that there is no significant and positive relationship between the market value of a corporation and dividend. Based on the result from the third hypothesis, a dividend increase will lead to an increase in the market value of a company and a reduction in the cost of equity.

Using an event study to test abnormal returns around the dividend announcements, Brown, Finn & Hancock (1977) found that a change in both dividend and earnings have a positive

relationship with abnormal returns, however, only the impact of dividend is statistically significant. Using a sample consisting of 352 observations of quarterly dividend and earnings announcements from 1979 to 1981; Kane, Lee & Marcus (1984) finds that the market tends to evaluate both the dividend and earnings announcements jointly. Furthermore, there is a positive and significant relationship between dividend and market value; and also between earnings and market value. In their study in the German market, Amihud & Murgia (1997) took a sample of 200 companies over a period of five years and found that earnings has an interpretation power on share price movement. Likewise, taking a sample of 150 companies on the Nigerian Stock Exchange, Nwaka (2012) finds that the earnings of listed companies in Nigeria proxied in his study by Earnings Per Share (EPS) has a positive and significant relationship with share prices. The above submissions, therefore, generates the hypothesis that:

H3 There is no significant relationship between a company's earnings and its market value.

Investment, Retained Earnings, Dividend Policy and Market Value
Internal financing consists primarily of retained earnings and depreciation expenses, while external financing is comprised of new equity and new debt, both long and short term. Decisions on the appropriate mix of these two sources for a firm are likely to affect both the payout ratio and the capital structure of the firm, and this in turn will generally affect its market value (Lee, 2010). Changes in equity accounts between balance sheet dates are generally reported in the statement of retained earnings. Retained earnings are most often the major internal source of funds made available for investment by a firm. The cost of these retained earnings is generally less than the cost associated with raising capital through new common-stock issues.

It follows that retained earnings, rather than new equity, should be used to finance further investment if equity is to be used and the dividend policy (dividends paid from retained earnings) doesn't seem to matter. The availability of retained earnings is then determined by the firm's profitability and the payout ratio, the latter being indicative of dividend policy. Thus we find that the decision to raise funds externally may be dependent on dividend policy, which in turn may affect investment decisions. Lee (2010) further opines that external financing usually takes one of two forms, debt or equity financing. However, the market value of the firm is unaffected by such factors if dividend policy and capital structures are irrelevant. It should also be clear that dividend policy can affect market values.

Salih (2010) found a positive significant relationship between REPS and market value for the full UK market; however, this result was different when based on individual economic sectors. Miller & Scholes (1978 and 1982) in their study on dividend and taxes confirm the validity of irrelevant theory and concluded that increase in market value comes from the investment policy of the company. Gordon (1962 and 1963) found that the dividend policy and investment policy are interconnected and investment policy cannot alone and in isolation from dividend policy affect the market value of a company. It is, therefore, assumed in this study that:

H4: There is no significant relationship between a company's investment policy and its market value.

Theoretical Framework
As earlier pointed out, we shall extrapolate on the relationship between dividend policies and market value of the firm. Miller & Modigliani (1961) suggests that there is no relationship between dividend policy and market value of the firm. While many researchers support this

theory, others have suspicions about it. These disagreements as to the relationship between dividend policy and company market value have created a number of theories viz: (1) a bird in the hand theory, (2) tax effect theory, (3) clientele effect theory, (4) signalling effect theory, and (5) agency cost theory.

This proposition stems from the fundamental idea that companies which distribute continuous high cash dividends to shareholders therefore secure a higher share price. As a result, investors' capital gains are very limited in such a company as they receive the same returns as other investors holding another company's shares with low dividends while its prices become high because of the retained earnings. These investors therefore obtain high capital gains which compensates the limited cash dividends. Lintner, 1962; Gordon, 1963; and Baker & Powell, 1999 tend to disagree with the proponents of the Irrelevancy theory. They came up with the 'bird in hand' theory, which proposes that capital gains are more risky than cash dividends and investors prefer companies that distribute cash dividends to companies that hold profits to convert them into capital gains. Due to this preference, investors pay higher prices for a company's shares with cash dividends compared to a company that holds their profits when other factors are fixed. In other words, the bird in hand theory indicates that if the company wants to maximize their share price, then they should adopt a high dividend ratio.

Brennan (1970) and Litzenberger & Ramaswamy (1982) tend to agree with the Irrelevant theory by proposing that if there is no tax for capital gains, or if the capital gains tax is less than the cash dividend tax, investors prefer companies that do not distribute cash dividends and retain profits in the form of undistributed profits. Whenever the cash dividends percentage decreases at the expense of undistributed profits, the owners' wealth will maximize with other factors being constant.

Tax effect theory supporters – in the countries where taxes on cash dividends are greater than the capital gains tax rate – believe that cash dividends cause damage to the investor who receives them because it is subject to a tax rate higher than the taxes applicable to the other alternatives for cash dividends. Therefore, cash dividends lead to a decrease in the company's value and reduce the owner's wealth. Black & Scholes 1974; Pettit, 1977 and Miller & Scholes, 1982 accused Gordon, 1963 and Baker & Powell, 1999 theory of a lack of information. They proposed that investors will invest their money in companies which follow cash dividend policy consistent with their wishes with no effect on the company's value. The clientele effect theory involves two important concepts (1) a company tends to choose clients (investors) through a cash dividend policy consistent with their aspirations, (2) since the company chooses its customers through the cash dividend policy; it can transform from a dividend policy to another without impacting the company's value.

Denis, Denis & Sarin, (1994); Impson, (1997); and Doron & Ziv, (2001) disagree with the dividend irrelevance theory, when they posit that managers use the change in cash dividends distributed rates as a means to deliver information to investors about the company. That is, increase in the cash dividends rate is an effective means of delivering information to investors because competitors cannot follow the company's policy unless they have the same capacity to achieve future profit.

Shleifer and Vishny, (1997) are of the view that the irrelevancy hypothesis on absence of agency costs is wrong; because decisions taken by managers are not always in the interest of shareholders, as many of them focus on achieving personal interests they are seeking to achieve. That is why as at today, shareholders incur 'monitoring costs' (in form of 'auditing

costs' and director's emoluments) and bonding costs (in form of management compensation and dividend payment. According to the proponents of the agency costs theory (Shleifer & Vishny, 1997); the cash dividend can serve as a way of monitoring and controlling managers' performance with the aim of reducing the agency costs. Through increasing cash dividends, the company can be kept in the need of external funding. Such a move is liable to keep managers under the control of external financiers. In addition, the increasing cash dividends would lead to withdrawing cash from the control of managers, which reduces the likelihood of the misuse of the funds. This will invariably increase the market value of the company.

In the present study, we examined similar issues while investigating the effect of dividend policy, companies' earnings and investment policy on market value of companies operating in Nigeria. However, we shall disaggregate the dividend policy not just into cash dividend but also into share dividend (i.e., stock dividend policy).

METHODOLOGY AND DATA

The survey research design* was adopted in this study. This is because we are interested in observing what is happening to sample subjects or variables without any attempt to manipulate or control them. This observation was done at one point in time; therefore we were involved in a cross-sectional survey research design. To be specific, since this observation was done over 10 year's period (2002 – 2011) with 35 readings (i.e., sample size of 35), panel data which is called cross-sectional cum time series data was adopted in this study.

In the study, there are basically five variables upon which data was gathered. These variables are the market value of the company, cash dividend, share dividend, earnings and investment policy. The secondary source of data collection was employed in this study. The data for market value was got from Nigeria Stock Exchange (NSE) price listings on-line; data for cash dividend was got from profit and loss account of sampled companies, proxied by dividend paid in the year; data for stock dividend was got as difference between the ordinary share capital in current and prior year, given that there is no revaluation of assets or new equity issues during the year; data for earnings proxied by Earnings Per Share (EPS) was got from the profit and loss account of sampled companies; data for investment policy was also got from the profit and loss account of sampled companies proxied by Retained Earnings Per Share (REPS) in the year (Gordon,1963, and Salih, 2010). The financial statements used in this study are as contained in the NSE Factbook (various years: 2002 - 2011).

The research population comprised the 38 companies in the financial services sector listed on the Nigerian Stock Exchange as at 31st December, 2011. We carried out a survey of the financials of these companies. Our sample size is 35. This was arrived at by applying Yaro Yamen's formular as shown below:

> n = N / 1 + N (e) ^{2}
> Where n = Sample size sought
> $\qquad$ N = Population
> $\qquad$ e = Level of significance (5%)
> The sample size is therefore:
> n = 38 / 1 + 38(0.05)^2 = 35

The simple random sampling technique was used in this study. The reason for the choice of this sampling technique is for each company in the sector to have equal chance of being selected. The simple random sampling involves numbering the companies in the financial services sector in the adequate range of 01 to 38. After which, a computer package (Excel) was

programmed to select 35 random numbers within the specified ranges. The numbers thus generated were used to choose the companies included in the study sample.

The dependent variable – Market Value – was taken to mean the share price of a company on earnings and dividend announcement day. The independent variables are measured as follows.

1. Dividend policy: two types of dividend (cash and share) were used as a proxy for dividend policy.
- The amount of cash dividend per share as a proxy for cash dividend.
- The share dividend per share as a proxy for share dividend.
2. Earnings: the year net Earnings per Share (EPS) is used as a proxy for the earnings.
3. Investment policy: Retained Earnings per Share (REPS) was used as a proxy for the investment policy (Gordon, 1963, and Salih, 2010).

Derived Model and Model Specification

It should be noted that, when testing the relationship between dividend policy and market value, it should be studied from two perspectives: that of management and that of shareholders (Salih, 2010). Management requires sufficient profit retention (Earnings) to satisfy the company's long-term needs such as investment demand (investment policy) against dividend only. On the other side, shareholders' preferences depend mainly on their income level (Earnings). Therefore, to the shareholder, the higher the net profit, the higher the market value of the company. Therefore:

$$SP = f (DP, IP) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where:
  SP   = share price
  DP   = dividend policy
  IP   = investment policy

From the above relation, we can see that the share price is a function of the managers (agents) preference (investment/retained earnings) and shareholders (principals) preference (dividend). We would recall that the assumptions (hypotheses) made earlier in Section 1.4 of this study has it that: there is a positive relationship between dividend policy of a company and its market value or share price. From the function above (equation 1), it is obvious that in studying the relationship between dividend policy and market value of a firm one cannot do it in isolation of the managers preference (retained earnings) and shareholders preference (dividends). According to Salih (2010), the above function can be represented as the function of optimizing the market value of the firm. This can be represented as:

$$MV = f (DP, IP, NP) \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Where:
    MV = market value of the firm
    NP = net profit from the firm's current investment

From equation 2 above, the higher the net profit from current investment of the firm, the higher will be the share price. In addition, according to Salih (2010: 95):

> *'… The market value of the firm also depends upon the dividend paid to shareholders representing the dividend policy and the retained earnings representing the investment policy…'*

Therefore, the market value of the firm can be represented as:

$$MV_t = f(DPT, NP_t, IP_t) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (3)}$$

Where:

MVt = market value of the firm,

DPT = dividend policy (shareholders' preference)

IPt = investment policy (managers' preference)

NPt = net profit from the firm's current investment

Since we shall be using a cross-sectional time series data we can write the above equation 3 in a functional form as follows:

$$Y = \propto_0 + \propto_1 X_1 + \propto_2 X_2 \dots \propto_n X_n \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (4a)}$$

Where μ_0; μ_1; and μ_2 … μ_n are parameters to be estimated, X1, X2, Xn are independent variables, and Y is the dependent variable. Since in the study, we decomposed dividend into cash and stock dividend (see Section 1.4), the form suitable for empirical testing of above functional specification is therefore:

$$MV = \propto_0 + \propto_1 CDS + \propto_2 SDS + \propto_3 EPS + \propto_4 RPS + U_t \dots\dots\dots\dots \text{ (4b)}$$

Where:

      CDS   = Cash Dividend per share

      SDS   = Share Dividend per share

      Ut   = Error term

Because there are different types of dividend policy (cash and share) with different effect on company market value, the company's management can decide to use one or more of them at the same time. Therefore, equation (4) can be represented as:

$$MV_{ti} = \propto_0 + \propto_1 CDS_{ti} + \propto_2 SDS_{ti} + \propto_3 EPS_{ti} + \propto_4 RPS_{ti} + U_{ti} \dots\dots\dots\dots\dots \text{ (5a)}$$

To control for the model derived above (see eqn. 4), company size (SZ) and age (AG) are introduced as the control variables. Therefore, the derived model in this study is:

$$MV_{ti} = \propto_0 + \propto_1 CDS_{ti} + \propto_2 SDS_{ti} + \propto_3 EPS_{ti} + \propto_4 RPS_{ti} + U_{ti} \dots\dots\dots\dots\dots \text{ (5b)}$$

$\propto_1$, $\propto_2$, $\propto_3$, $\propto_4$, $\propto_5$, and $\propto_6$ are parameters to be estimated. The apriori expectation is to follow the line of;

$\propto_1 > 0$, $\propto_2 > 0$, $\propto_3 > 0$, $\propto_4 > 0$, $\propto_5 > 0$ and $\propto_6 > 0$

The data analysis method used in this study is the ordinary least square method. The reason for adopting the ordinary least square procedure is to find out the amount of variance on the dependent variable (market value) that can be explained by the independent variables and assess their importance.

RESULTS AND DISCUSSION

The ordinary least square regression analysis was conducted for the financial services sector of the Nigerian economy. The results are presented and analyzed below.

Table 4.1 Regression results

Dependent Variable: MV				
Method: Least Squares				
White Heteroskedasticity-Consistent Standard Errors & Covariance				
Variable	Coefficient	Std. Error	t-statistic	Prob.
C	15.595	13.219	1.179	0.239
CDS	-0.726	2.153	-0.337	0.736
SDS	-29.771	28.546	-1.0429	0.298
EPS	0.857	0.492	1.742	0.082**
RPS	-0.643	0.511	-1.258	0.209
AR(1)	0.814	0.101	8.045	0.000*
R-squared	0.664			
Adjusted R-squared	0.659			
S.E. of regression	48.700			
Sum squared resid	877528.5			
Log likelihood	1991.51			
Mean dependent var	15.173			
S.D. dependent var	83.405			
F-statistic	145.981			
Prob(F-statistic)	0.000			
Durbin-Watson stat	1.875			

Source: Eviews 7.0 *significant at 5% level. **significant at 10% level.

The table 4.1 above shows the ordinary least squares regression result. As observed, the R2 and coefficient of determination is 0.664 which indicates that the model explains about 66.4% of the systematic variations in the dependent variable while the adjusted R2 is observed at 65.9%. The F-stat (145.98) and p-value (0.00) do not provide a basis for rejecting the hypothesis of a joint statistical significance of the model at 5% (p=0.00<0.05). The evaluation of the slope coefficients of the explanatory variables reveals that CDS ($\beta 1$=-0.726), SDS ($\beta 2$=-29.771) RPS ($\beta 4$=-0.643) all appear to impact negatively on market value with only EPS showing a positive effect on market value ($\beta 3$=0.857). At 10% significance level EPS appeared significant while the other variables were observed to be insignificant both at 5 and 10% levels. The Durbin Watson statistic (1.9) does not provide any evidence of serial correlation between the residuals.

Hypotheses Testing
The following hypotheses were specified for the study:

1. H¬0: There is no significant relationship between cash dividend per share and market value

H1: There is a significant relationship between cash dividend per share and market value

From the result conducted for the entire sampled companies, we observe that the evaluation of the slope coefficients of the explanatory variables reveals the existence of negative relationship between Cash Dividend Per Share (CDS) and Market value and also statistically not significant at 5% (p=0.00<0.05). Thus, there is no significant relationship between dividend policy (cash dividend) and the market value of companies in Nigeria. This result indicates that the irrelevant theory is valid. Therefore, the null (H0) hypothesis of no significant relationship between cash dividend per share and market value is accepted and the alternative (H1) is rejected.

2. H0: There is no significant relationship between stock dividend per share and market value

H1: There is a significant relationship between stock dividend per share and market value

From the regression result conducted for the entire sample companies, we observe that the evaluation of the long run slope coefficients of the explanatory variables reveals that Stock Dividend per Share (SDS) also appears to impact negatively on Market value and is statistically not significant at 5 % (p=0.00<0.05). Just as in the case of cash dividend enumerated above, stock dividend is also not significantly associated with market value of companies in the financial services sector of Nigeria. This also reaffirms the earlier position that the dividend irrelevant theory is valid. Hence, the null hypothesis (H0) of no significant relationship between stock dividend per share and market value is accepted while we reject the alternative (H1).

3. H0: There is no significant relationship between Earnings per share and market value.

H1: There is a significant relationship between earnings per share and market value.

From the result conducted for the entire sample companies, Earnings per share (EPS) is observed to impact positively on Market value and also statistically not significant at 5% (p=0.00<0.05). Hence the null hypothesis (H0) of no significant relationship between earnings per share and market value is accepted while we reject the alternative (H1).

4. H0: There is no significant relationship between retained earnings per share and market value.

H1: There is a significant relationship between retained earnings per share and market value.

From the regression result conducted for the entire sample of companies, retained Earnings Per Share (RPS) impacted negatively on market value and also statistically not significant at 5% (p=0.001<0.05).

Discussion of findings
Earnings per Share (EPS) was observed to exert a positive long run effect on Market value and also statistically significant at 10% level (p=0.00<0.5). This result is in consonance with the finding of Nwaka (2012) that there is a significant relationship between EPS and market value of shares. Our finding is also consistent with that of Salih (2010) which found a positive and significant relationship between earnings per share and market value for the full UK market. In contrast to our findings, Merton (1985) found that market value of a company does not respond to dividend policy but rather to unexpected earnings.

From the result conducted, we also observe that the evaluation of the slope coefficients of the explanatory variables reveals the existence of negative relationship between cash dividend per share (CDS) and Market value and also statistically not significant at 5% (p=0.00<0.05). Likewise, from the result of this study, Retained Earnings Per Share (RPS) is negatively associated with the market value as shown by the long run slope coefficient and also statistically not significant at 5% (p=0.001<0.05). This result is partially not in consonance with the finding of Gordon (1962 and 1963) that dividend policy and investment policy are interconnected and investment policy cannot alone and in isolation from dividend policy affect the market value of a company. However, the result in our study is in consonance with the finding of Miller & Scholes (1978 and 1982) where in their study on dividend and taxes

confirm the validity of irrelevant theory and concluded that increase in market value comes from the investment policy of the company alone.

This result also does not reaffirm Nwaka's (2012) finding that dividend payment has a significant effect on share prices. However, in this study like in Nwaka's study, the relationship was found to be negative for stock dividend. Also not in tandem with our finding, Travlos, Tsigeorgis & Vafeas (2001) found positive and significant for both cash dividend increases and stock dividend announcements on market values in emerging markets in line with signaling theory.

CONCLUSION AND RECOMMENDATIONS

The conclusion in this study is that, there is no significant relationship between cash and stock dividend policy and market value of companies in the financial services sector in Nigeria. Also, there is no significant relationship between retained earnings and share prices of quoted companies on the Nigerian Stock Exchange. However, a significant (at 10% level) and positive relationship between earnings (EPS) and market value of companies in the financial services sector was established.

Based on the above conclusions, the Irrelevant Theory is valid in Nigeria's financial services sector, while the bird-in-the-hand hypothesis is invalid.

Policy Implication

The findings in this study have some interesting implications for policy making. Thus the policy implications are discussed below. The overall result shows that Earnings per Share (EPS) exert a positive and significant (at 10% level) effect on Market value. The finding suggest in a broad sense the value relevance of earnings in the financial services sector in the Nigeria capital market and by implication the Nigerian Stock Exchange (NSE) should put in place policies aimed at creating awareness for investors in the financial services sector to key into adjusting their behaviour to earnings announcement thereby making the market to respond through changes in stock prices. A result of interest is that there is a negative relationship between dividend per share (cash and stock) and Market value. This result is most surprising because cash dividend is the most common and important type of dividend in Nigeria. This negative relationship between cash dividend and market value may be attributed to the fact that cash dividend emanate from being a cash flow out. Therefore, policy makers should ensure management of companies' in the financial services sector of Nigeria discontinuance emphasis on dividend payment.

From the result of this study, Retained Earnings per Share (RPS) is negatively associated with the market value and also not statistically significant. This ordinarily would have been very surprising but is not because it can be attributable to the near investment unfriendly climate of Nigeria. Therefore, Nigerian government should that ensure economic polices encompass friendly investment environment.

Policy Recommendations

Based on the policy implications of this study enumerated above, the following recommendations are made.

1. That companies in the financial services sector of Nigeria should not see dividend policy as a strategy towards increasing their market value. That is, companies in the financial services sector of Nigeria should jettison the dividend relevant mentality and lay less

emphasis on dividend policy since it was found to impact negatively and also not significantly on market value.

2. Given the negative relationship between retained earnings and market value, the Nigerian government should put in place policies that will create investment friendly environment in the Nigerian state by ensuring adequate security and empowerment of the anti corruption agencies (e.g. the Economic and Financial Crime Commission – EFCC) to fit into the standard set by the Transparency International (TI) in ensuring a corrupt free society.

3. Since there is a positive and significant relationship between earnings and market value of companies in Nigeria, investors should take into cognizance earnings announcements before taking their investment decision. Moreover, managers of companies should embrace the signaling theory of dividend policy if they are to improve their market value.

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APPENDIX
Data Used To Run the Regression

S/N	NAME OF COMPANIES	MV	CDS	SDS	EPS	RPS
1	Access Bank Plc	7.05	0.52	0.19	0.99	0.42
2	Diamond Bank Plc	9.52	0	0	0.81	0.65
3	Eco Bank Nig. Plc	8.97	0.14	0	0.32	0.14
4	Fidelity Bank of Nig. Plc	4.71	0.26	0	0.48	0.37
5	First Bank of Nig. Plc	26.05	0.26	0	4.83	2.04
6	FCMB Plc	8.23	0	0	1.15	0.94
7	GTB Plc	15.49	1.6	0	2.91	1.28
8	Skye Bank Plc	8.95	0	0	1.66	1.46
9	Stanbic IBTC Bank Plc	10.39	0	0	1.03	1.04
10	Union Bank of Nig. Plc	21.96	2.41	0	0.66	(2.91)
11	UBA Plc	16.63	0.97	0	0.66	2.13
12	Wema Bank Plc	5.11	0.52	0.33	(0.48)	(0.77)
13	Zenith Bank Plc	23.73	2.46	0	3.98	2.06
14	Custodian and Allied Insurance	3.36	0	0	0.72	0.72
15	Egurity Assurance Plc	1.84	0	0	(0.06)	(0.77)
16	Golden Link Insurance Plc	0.55	0.03	0	(0.23)	2.06
17	Guinea Insurance Plc	1.38	0.06	0	0.09	0.72
18	Intercontinental Wapic Insurance	3.08	0.32	0	0.22	(0.06)
19	Confidence Insurance Plc	0.62	0	0	0	0
20	AIICO Insurance Plc	2.09	0.2	0.43	0.31	0.3
21	International Energy Insurance	1.62	0.09	0	(0.2)	(0.13)
22	LASACO Assurance Plc	1.26	0.13	0.4	0.27	0.25
23	Law union & Rock Insurance Plc	1.71	0.27	0.42	0.16	0.1
24	Linkage Assurance Plc	1.42	0	0	(0.01)	(0.01)
25	NEM Assurance Comp. Plc	1.14	0.07	0	0.21	0.2
26	Niger Insurance Plc	3.09	0.22	0.32	0.01	(0.05)
27	Oasis Insurance	2.52	0	0	(0.12)	(0.11)
28	Prestige Assurance Plc	3.77	0.3	0.27	0.68	0.36
29	Sovereign Trust Insurance Plc	1.56	0.09	0.19	0.1	0.06
30	Staco Insurance Plc	2.76	0.04	0	0.13	0.11
31	Standard Alliance Insurance	1.7	0.05	0.11	(0.47)	(0.39)
32	UNIC Insurance Plc	1.37	0.2	0	0.13	0.19
33	Aso Savings & Loans Plc	0.68	0	0	(0.08)	(0.41)
34	Union Homes Savings & Loans	3.39	0.1	0.2	0.15	0.23
35	Crusader (Nig) Plc	2.35	0.14	0	0.31	0.23
36	Deap Capital Nig. Plc	4.09	0	0	(1.38)	(1.48)
37	Nigerian Energy Sector Insurance	658.71	0	0	0.08	0.08
38	Royal Exchange Plc	2.78	0.25	0.36	0.11	0

Exposure to Secondhand Tobacco Smoke Among Tertiary Institution Students of Apa Local Government Area of Benue State Nigeria: A Menace to Future Dilemma of Cigarette Complications

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Abstract

Background: Nigeria is one of the top ten countries in low and middle income countries where young adults are more exposed to secondhand smoke but the tobacco control policy is inadequate. This study assessed the prevalence and the correlates of secondhand smoke among young educated elites of APA local government area of Benue State, Nigeria. Materials and Methods: A cross-sectional study was carried out during the youth annual week programme with the team entitled "ingredients of a successful career "from 4th -8th January 2014. Inclusion was strictly based on the membership of the local government council elite youth association. Structured self-administered questionnaire was employed. Information obtained includes: Socio-demographic information; cigarrete smoking and pattern of exposure to tobacco smoke in the previous 30 days before the survey. Data was analyzed using SPSS version 20.0. Multiple logistic regressions were performed to test relationship between the predictor variables and the outcome variable (secondhand smoke), by controlling for possible cofounders. Results: The mean age of the educated elites was 25.8years (SD=±5.8 years), 84(20.7%) had history of smoking in the past, while 55 (13.6%) are currently smoking. Forty- three percent of respondents were aware of the harmful effects of SHS on their health. Overall, 49.0% of them were

exposed to SHS at Bars/restaurants, 25.2%) % in football viewing centre, and 11.5% in the home. Marital status, religion, and respondents past and current smoking status were among the significant determinates, whereas, parental and close friends smoking status were not significant (p=0.118 and p=0.236 respectively). Conclusion: Our results show that prevalence of SHS exposure was highest in public places. These findings underscore the need for enactment of comprehensive smoke-free legislation and implementation of educational strategies to reduce SHS exposure in homes.

INTRODUCTION

Globally, tobacco use is one of the leading and preventable causes of morbidities and mortalities including cancer and cardiovascular diseases annually [1]. However, it is not only smokers that suffers the negative impact of smoking as evidence shows that for every eight smokers who die from smoking, one nonsmoker also dies from secondhand smoke [2]. Secondhand smoke in this regard refers to the tobacco smoke that is exhaled by a smoker or is given off by burning tobacco and is inhaled by persons nearby [3,4]. Over the years, while the developed world are experiencing a decrease in the trend of tobacco consumption, the developing countries on the order hand have experienced either a stationary or increasing trend, thereby resulting to increased global prevalence [5, 6] In 2013 alone, the global mortality and economic damage due to tobacco epidemic was estimated to be 6 million and half a trillion dollar respectively and most of these problems are noted in low-and-medium income countries [7, 8].

The epidemic increase of tobacco consumption either as smokers or secondhand smoker in the low income countries like Nigeria will lead to major public health issues of concern as some of these countries are already faced with considerable challenges of fighting poverty, emerging and re-emerging diseases, security insurgence and political crises [9, 10]. It will also affect the economic growth and sustainable development of these countries [11, 12, and 13]

The Global Adult Tobacco Survey(GATS) done in Nigeria in 2012 revealed that among adults who had visited public places in the last thirty days preceding the survey, almost one out of every three were exposed to second hand smoke in restaurants; one out of every six in government buildings; and one out of every twenty in health care facilities. In that report , it was also indicated that, up to 18.4 million children are exposed to secondhand in their homes, while 27.6million are exposed in public spaces; making Nigeria one of the top ten countries in low and middle income countries where children are more exposed to secondhand smoke [14]. Interestingly up to 88.5% of Nigerian adults surveyed in the GATS favored increasing taxes on tobacco products. This shows that the citizenry are tired of the weak unenforceable regulations on tobacco products in Nigeria [14].

WHO is committed to fighting the global tobacco epidemic? The WHO Framework Convention on Tobacco Control entered into force in February 2005. Since then, it has become one of the most widely embraced treaties in the history of the United Nations with 178 Parties covering 89% of the world's population [7]. There has been some interest from the ministry of health to enact tobacco control legislations in order to domesticate the WHO's Framework Convention on Tobacco Control (FCTC) in Nigeria, but the Nigerian legislators are yet to show the prove as cigarrete smoking still abounds in places of work, offices, restaurants and individual homes. States like Lagos made attempts at making comprehensive law to regulate the manufacturing, advertising distribution and consumption of tobacco products in Lagos [15], but such laws or attempts have never been made in Benue state. That is to say; currently, there are no

operational legislations protecting youths from obtaining tobacco products in Nigeria. In addition, there are no regulations banning some or all types of tobacco advertisement, promotion and sponsorship. However, the onset of tobacco use occurs primarily in early adolescence [14]. Young people are influenced by what they see than what they are told. It is obvious that the deceptive incentive of tobacco industries and peer pressure have influenced young people to engage in smoking as 18.9% of Nigerian youths have been reported to smoke cigarrete at less than 15 years of age [14]. By implication young Nigerians will become daily cigarrete users and secondhand smokers before they could comprehend the adverse effect of cigarrete smoking if nothing is done in terms of their behavioral changes. This study assessed the prevalence and the correlates of secondhand smoking among young educated elites of APA local government area of Benue State, Nigeria in order to add to the sparse literature on tobacco usage among boys and girls in the Benue as to provide feasible intervention approach to mitigating the effect of smoking and secondhand smoke among youths.

METHODOLOGY

Study area

Apa Local Government Area (LGA) was created in 1991 by the then military head of State of Nigeria, General Ibrahim Badamosi Babangida; covering what was the old Ochekwu district of Otukpo division. It is one of the 9 local government areas in the southern senatorial zone which is majorly occupied by the Idoma people of Benue State. The LGA is made up 84 villages, (settlements), 18 clans, 11 district wards. The major big villages includes Ugboko (the headquarter), Oiji, Ojantele, Akpete, Iga-Okpaya, Ikobi, Odugbo, Ofoke, Oba Alifeti, Idada, Edikwu-Icho, Ugbobi, Ebugodo, Opaha. The LGA shares boundary with Agatu, Otukpo and Gwer West local government areas of Benue State to her north, south and east respectively, while to her west, she is bordered by Ankpa and Omala local government areas of Kogi State. The LGA has an estimated population of 790,454(2006 population census). About 257, 644 (32.6%) of the estimated population are youths between 15-25 years of age. The people of the local government area predominantly speak a dialect of Idoma language and majority of them are peasant farmers. All the villages in the LGA has at least a beer pallor where people who drink alcoholic beverages (beer) stay and drink, especially in the evenings after the closing of the days farming activities. Each of the village has at least a primary school where pupils are trained and some have secondary schools. At the period of the survey, about 6,000 youths were in different tertiary institutions of learning across Nigeria and abroad. About 4234 of these youths from different villages registered with the LGA youth organization named "Apa Youth Association". The eligibility criteria was based on being an indigene of the local government by birth or if parents have stayed in the local government for over 10 years and being in any tertiary institution of learning. Majority of them were in Benue State University Makurdi, University of Agriculture Makurdi, and Benue State polytechnic Ugbokolo, College of education Katsina- Alla and College of education Oju, all situated in Benue state. Only few of the registered youths school in tertiary institutions outside the state. The LGA is selected for the study because it is centrally located in the Idoma speaking communities of the state and is represented fairly by a cross section of other tribes because of its boundary.

Study Design and Study Participants

A community based cross-sectional descriptive study design was employed for the study from 4th to 8th January 2014 at APA Youths Association annual seminar/youth enlightenment campaign week. During the period of the study, the LGA council youths were holding a week programme with the team entitled "ingredients of a successful career". The study captured all the registered youth attendees. By the association criteria and definition, a youth is strictly on the basis of admission in higher institutions of learning, irrespective of the age.

Sample Size Estimation and sampling technique

A minimum sample size of 345 was arrived at using the formula

$$n = \left[\frac{Z^2 P_0 q_0/d^2}{1 + (Z^2 P_c q_c/Nd^2)} \right]^{15}$$

With assumption of 38.8% youths exposed to secondhand smoke from a previous study [16] and 5% tolerable margin of error at 95% confidence interval. Considering drop-out rate of 15% the calculated sample size was adjusted to 405. Simple random sampling technique was used for the study. The list of all the registered members was obtained from the general secretary's office and used as the sampling frame. Registered youth who were not in any higher institution of learning at the time the study was conducted were excluded from the study. Registered members who did not attend the youth week programme and those who were in attendant but did not consent to the study were also excluded from the study.

Instrument for data collection

Structured self-administered questionnaire was employed for data collection. Information obtained includes: Socio-demographic information; cigarrete smoking and pattern of exposure to tobacco smoke in the previous 30 days before the survey.

DATA ANALYSIS

All analyses were conducted using the Statistical Package for Social Sciences (SPSS) version 20. Information's sorted were categorized, summarized and presented in exploratory formats as frequency tables, figures and graphs. Chi-square ($\chi2$) test was used for test of association between the sociodemographic variables and the main outcome of the study, with statistical significance set at P value of 0.05. Linear relationship between the predictor variables and secondhand smoking (criterion variable) was further performed for the independent predictors that have significant chi-square, using linear logistic regression models by controlling for possible confounders.

Ethical Issues

Ethical approval for the study was obtained from the health research ethic committee of Benue University Hospital (BSUTH) Makurdi, before the study was conducted. An informed written consent was also obtained from APA LGA council chairman and the chairman of Apa Youth Association. The consent of all the respondents was also soughed. .

RESULTS

Sociodemographic characteristics

All the eligible respondents who consented to the interview completed the questionnaires correctly and returned them giving a response rate of 100%. Table 1 summarises the sociodemographic charteristics of the respondents. The age of the respondents ranges from 17- 42 years, with mean age of 25.8years (SD ±5.8 years).   The respondents were predominantly male (83.7%), with male to female ratio of 5:1. Majority (70.1%) of them were in the University, followed by those in the Polytechnics (24.7%), while the least proportion of the respondents were those in Colleges of Education (5.2%). Above two-third (70.1%) were single at the time of survey, while 21.7% and 8.1% were marriage and separated/widowed respectively. The predominant religion of the respondents was Christianity (89.1%).

Table 1: Sociodemographic characteristics of Respondents (n=405)

Variable	Frequency (%)
Age group (Years)	
≤19	52(12.8)
20-29	269(66.4)
30-39	65(16.0)
≥40	19(4.7)
Sex	
Male	339(83.7)
Female	66(16.3)
Current School Attended	
University	284 (70.1)
Polytechnic	100(24.7)
College of Education	21(5.2)
Marital status	
Single	284(70.1)
Married	88(21.7)
Separated /Divorced/Widowed	33(8.1)
Religion	
Christianity	362(89.4)
Muslim	44(10.6)

Mean age: 25.8 (SD=±5.8 years)

Respondents, family and friends smoking status

Table 2 summarises the respondent's self, family and friends history of smoking by sex and location. Of all, 84(20.7%) had past history of smoking, while 55 (13.6%) are currently smoking. Male to female ratio of those who had ever smoked was 7.4:1. Majority (44.6%) of them had their first cigarrete smoking experience when they were between 20-24 years, with mean age of 21.6 years (SD± 3.2 years). Twenty four (52.2%) male reported smoking in public places as against 6(66.7%) female. Overall, 317(78.3%) do not have family history of smoking. Among the respondents with positive family history of smoking, those whose wives or husbands smoke constitutes the highest proportion (59.1%), followed by those whose parent's smokes (25.0%). Majority (71.1%) of the respondents friends do not smoke.

Table 2: Summary of history of smoking by sex of respondents

Variable Ever smoked	Male Frequency (%)	Female Frequency (%)	Total (%)
Yes	74(21.8)	10(15.2)	84(20.7)
No	265(78.2)	56(84.8)	321(79.3)
Age at First smoke(n=74)			
≤14	4(6.3)	0(0.0)	4(5.4)
15-19	15(23.4)	1(10.0)	16(21.6)
20-24	27(42.2)	6(60.0)	33(44.6)
≥25	1828.1)	3(30.0)	21(28.4)
Currently smoking			
Yes	46(13.6)	9(13.6)	55(13.6)
No	293(86.4)	57(86.5)	350(86.4)
Place of smoking			
Public places	24(52.2)	6(66.7)	30(54.5)
Home	14(30.4)	3(33.3)	17(30.9)
Public and private	8(17.4)	0(0.0)	8((14.5)

Family smoking			
Yes	66(19.5)	22(33.3)	88(21.7)
No	273(80.5)	44(66.7)	317(78.3)
Family member who smoked			
Spouse	30(57.7)	22(61.1)	52(59.1)
Siblings	14(26.9)	8(22.2)	22(25.0)
Parents	8(15.4)	6(16.7)	14(15.9)
Friends smoking			
Yes	97(28.6)	20(30.3)	117(28.9)
No	242(71.4)	46(69.7)	288(71.1)

Mean age at first smoking 21.6 years (SD ± 3.2 years).

Awareness of harmful effects of secondhand smoking

A total of 172(42.5%) respondents reported that the tobacco smoke that is exhaled by a smoker or is given off by burning tobacco and is inhaled by persons nearby could have adverse health effect on the person who inhaled the smoke, while 28.1% cited that second hand smoking has no health implication on those who do not smoke and 29.4% were not sure of the health implications. Regarding the diseases associated with smoke, respiratory tract infection and cancer of the lungs were the only disease mentioned (70.1% and 8.1% respectively) (Figure 1).
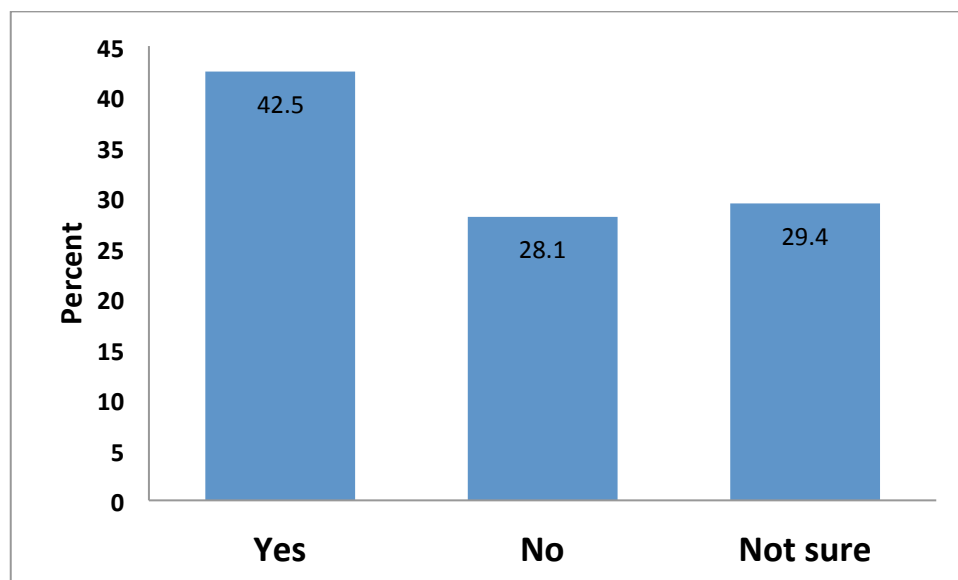

Figure 1: Awareness of harmful effects of exposure to secondhand smoke

Prevalence of exposure to secondhand smoke

Table 3 provides information on respondent's exposure to secondhand smoke 30 days before the study. Of the total, 286 (70.6%) had exposure, while the remaining 119 (29.4%) do not. Male to female ratio of the respondents exposed was aproximately11:1. Considering the prevalence by location of exposure, 125(47.0%) of the male reported exposure in bar/restaurants, 68(26.0%) reported in football viewing centers, 39(14.8%) reported exposure at motor parks and or while using public transport and 30(11.5%) reported exposure at home. Fifteen (62.5%) female reported exposure in bar/restaurants, 4 (16.7%) reported exposure in football viewing centers, 3 (12.5%) reported exposure at home and 2(8.3%) reported exposure at motor parks and or while using public transport. The relationship between to exposure secondhand smoke, location and sex of respondents are statistically significant (p= 0.000).

Table 3: Prevalence of Secondhand smoke and Location by sex

Secondhand smoke	Male	Female	Total
Yes	262(77.3)	24(36.4)	286(70.6)
No	77(22.7)	42(63.6)	119(29.4)
x^2 = 44.587; df=1; p=0.000			
Location			
Bar/Restaurant	125(47.7)	15(62.5)	140(49.0)
Football Viewing centre	68(26.0)	4(16.7)	72(25.2)
Motor park/public transport	39(14.8)	2(8.3)	41(14.3)
Home	30(11.5)	3(12.5)	33(11.5)
x^2=49.704; df=3; p=0.000			

Correlates of exposure to secondhand smoke

Table 4 explores the relationship between the independent variables (predictors) and the outcome (secondhand smoke). The relationship between all the sociodemographic variables (except age of respondents) and the outcome are statistically significant (p<0.005).

Table 5 is the linear multiple regression of the predictors that has significant χ2. Using the enter method, a significant model emerged (F8, 229= 69.132, p<0.0005, and Adjusted R Square =0.8642). Significant variables are sex, marital status, religion, ever smoked and currently smoking. Marital status, had higher impact (Beta= 1.038) on SHS as compared to the other predictors, followed by ever smoked (Beta = 0.255), sex (Beta= 0.111) religion (Beta= - 0.280) and currently smoking (Beta= - 0.117). Exposure to SHS among single/separated/divorced/widow men was significantly more likely as compared to married men and women (Beta= 1.038). Age at first smoking, immediate family member smoking, and friends smoking do not have a significant impact on exposure secondhand smoke

Table 4: Sociodemographic variables by exposure to secondhand smoking among respondents

Variable	Exposure to Secondhand smoking			p-value
	Yes	**No**	**Total**	
	n(%)	**n(%)**	**n(%)**	
Age (years)				
≤19	38 (13.3)	14(11.8)	52(12.8)	
20-29	190(66.4)	79(66.4)	269(66.4)	
30-39	45(15.7)	20(16.8)	65(16.0)	
≥40	13 (4.5)	6(5.0)	19(4.7)	0.968
Sex				
Male	262(91.6)	77(64.7)	339(83.7)	
Female	24(8.4)	42(35.3)	66(16.3)	0.000
Marital status				
Single	218(73.9)	66(60.0)	284(70.1)	
Married	66(22.4)	22(20.0)	88(21.7)	
Separated /Divorced/Widowed	11(3.7)	22(20.0)	3398.1)	0.000
Religion				
Christianity	286(100.0)	76(63.9)	362(89.4)	
Islam	0(0.0)	43(36.1)	43(10.6)	0.000

Ever smoked				
Yes	82(28.7)	2(1.7)	84(20.7)	
No	204(71.3)	117(98.3)	321(79.3)	0.000
Family member smoked				
Yes	88(30.8)	0(0.0)	88(21.7)	
No	198(69.2)	119(100.0)	317(78.3)	0.000

Table 5: Multiple linear regression

Predator Variable	Dependent Variable: Secondhand smoking	
	Beta	**p value**
Sex	.111	$p < 0.005$
Marital Status	1.038	$p < 0.005$
Religion	-.280	$p < 0.005$
Ever smoked	.255	$p < 0.005$
Age at first smoking	-.003	$p = 0.889$
Currently smoking	-.117	$p < 0.005$
Family smoked	-.081	$p = 0.118$
Friends smoked	.043	$p = 0.236$

DISCUSSION

Our study has attempted to explore the burden of secondhand tobacco smoke and cigarette smoking among young educated elites in a local government council in Nigeria and the likely threat it poses on their health. The overall sociodemographic charteristics of the study population depicts that of a typical Nigerian tertiary institution. By implication, majority of the elites are young people who can easily be influenced by what they see than what they are told.

In our study, the prevalence of smoking in the study population was 20.7%, and the mean age at commencement of smoking was 21.6 years (± 3.2 years). Our findings are consistent with the national prevalence [14]. The probably reason behind the findings could be due to the age of the participants and their educational status. It is obvious that since the participants are students in the tertiary institutions there could be deceptive incentive of tobacco industries in terms of promotion on campuses which may inform their decision on smoking behaviour. Furthermore, peer pressure from friends may have influenced the study population to engage in smoking.

Regarding SHS, the overall prevalence in our study was 70.6%, with male to female ratio of 11:1. The prevalence of SHS found in our study is higher when compared to other studies in Nigeria [16], South Africa [17] Cambodia [18], and China [19] that adopted similar methodology. It is consistent with the prevalence of 68% reported for a study conducted for Seoul city of South Korea [20] and 70% reported for Spain [21]. Majority of exposure to SHS occurs in public places (bars/restaurants, football viewing centre, motor parks or public transports). Also in this study 42.5% of the young elites are aware of the harmful effects of exposure to SHS. Despite the significant level of awareness on the harmful effects, exposure to SHS was still high. This may be attributed to the student's low level of awareness on ban on smoking in public places. By implication young elites in APA local government area of Benue State Nigeria, will become cigarrete smokers and secondhand smokers before they could comprehend the adverse effect of cigarrete smoking if nothing is done in terms of their behavioral changes.

Our study found in multivariate analysis that sex, marital status, religion and personal experience of cigarette smoking, were significant determinants of young elites to exposure to

both SHS at home and outside of the home. Marital status, had higher impact (Beta= 1.038) on SHS exposure among the students studied. This is contrary to study by Desalau et al where parental, close friends smoking status, allowing someone to smoke around you and perception that passive smoking is harmful were the main significant determinants of adolescent's exposure to both SHS at home and outside of the home[22]. The impact of marital status on SHS in our study could be due to high proportion of singles and the separated or divorced young elites in the study. Since majority of the SHS take place outside the homes, it's possible that the singles or the separated/divorced young elites who may probably have more time staying in public places with friends are more likely to be exposed to SHS. By implication, if the young elites are not properly educated on effects of smoking in public places and or educated on the dangers of SHS, they stand a chance of manifesting with harmful effects of SHS at older ages in life.

Conclusion: The prevalence of smoking and exposure to SHS among the young educated elites of APA LGA, Benue state Nigeria was high and majority of the exposure occur in public places. These findings underscore the need for enactment of comprehensive smoke-free legislation and implementation of educational strategies to reduce SHS exposure in public places.

Conflict of Interests
The authors declare that there is no conflict of interests regarding the publication of this paper.

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Traffic Congestion Impact on Energy Consumption and Workforce Productivity: Empirical Evidence from a Developing Country

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Abstract

Vehicular traffic congestion is an important public policy issue as it has the potential to impact fuel consumption and workforce productivity levels. As such, scholarly works have focused on explaining key drivers and outcomes of vehicular traffic congestion. Accordingly, this study examines a web of relationships that involves the individual and joint effects of private car usage and mass transportation services on vehicular traffic congestion as well as the impact of vehicular traffic congestion on fuel consumption and workforce productivity. To examine these relationships primary data is obtained from public school teachers in a metropolitan city of Kumasi in Ghana, an emerging Sub-Sahara African economy. The study finds that while private school teachers' private car usage is associated with increases in road traffic congestion, mass transportation usage does not directly impact traffic congestion levels. A more interesting finding is that high levels of private car usage and increases in mass transport usage jointly impact increases in vehicular traffic congestion. In addition, the study finds that whereas private car usage and vehicular traffic congestion are associated with increases in fuel energy consumption, mass transportation services is found to be associated with greater workforce productivity levels. A key public policy implication is that systematic management of vehicular flow is important for reducing traffic congestion and energy consumption in urban centers and for increasing workforce productivity.

Keywords: Transportation, Traffic Congestion, Energy Consumption. Workforce Productivity

INTRODUCTION

Transportation has a crucial role to play in economic development of any nation as it is has been recognized as the means by which communities and sectors of an economy fully participate in a nation's industrialization efforts [3]. For example, World Bank records show that by 2007, nearly 20% of World Bank lending activities were for transportation infrastructure construction projects, which was larger than lending to health and educational

sectors combined [46]. Thus, the relevance of transportation in an economy cannot be underestimated [30] as a provision of a high quality transport system is key to national development and the well-being of the society at large [36]. According to [16], an effective transportation system is important in sustaining economic growth in contemporary economies since it provides a linkage between different parts of the country and the global world [22].

In recent times, it has been estimated that more than 80% of the world's population live in urban communities [20]. As a result, it is argued that quality public transportation system plays an important role in the sustenance, and efficient mobility of high quality urban life [50]. According to [53], public transportation helps reduce traffic congestion, parking congestion, traffic accidents, road and parking infrastructure costs, automobile costs to consumers, excessive fuel energy consumption and air pollution. In addition, the public transport offers the means of mobility for pedestrians such as children, disabled and elderly people.

A major issue that remains under-researched and yet is crucial in explaining urban transportation problems (such as traffic congestion) in less developed nations is the consequences of private car use for transportation. Arguments have been made that as people's disposal income increase there is a greater likelihood of increased private car use [24], but such an increase in private car use has a corresponding knock-on effect on public transport use; hence an increase in traffic congestion. An increase in private car usage may also increase energy demand and reduction in workforce productivity [51, 24].

Intrinsically, policy makers have been concerned about the approaches to reduce congestion in Municipal areas to boost energy efficiency and workforce productivity [49]. It is argued that rather than attempt to eliminate traffic congestion in urban centers, policy makers should formulate public policy initiatives that minimize the levels of traffic congestion and its undesirable outcomes [52]. The premises for such a policy direction are that while different regimes have attempted to address the problem in different ways, ranging from road taxes levied on car usage, toll charges for cars entering central business districts (most recently in London), a ban on travelling in high traffic areas during the day, as well as controlling the growth of the vehicle population through possession taxes, none has successfully eliminated the occurrence of traffic congestion and its associated energy consumption and workforce productivity consequences, although a point can be made that in some nations such penalties have helped minimized the incidence and negative outcomes of traffic congestion.

Thus, the central motivation of this research is to contribute to transportation research by advancing knowledge on the underlying causal mechanisms that link private car usage to traffic congestion, the contingency factors that amplifies or mute the relationship, as well as explains energy consumption and workforce productivity consequences of traffic congestion. More specifically, this study proposes a conceptual model to argue that increases in private car usage is a major driver of vehicular traffic congestion, and that this relationship between private usage and traffic congestion is conditioned by levels of mass transport usage. The study then contends that increases in traffic congestion itself is a driver of energy consumption (or demand) and reduction in workforce productivity. By examining this conceptual model, this research seeks to provide valuable contribution to public policy making on road transportation.

First, a major benefit from this study is that it has the potential to enhance current scholarly understanding of the drivers and consequences of a major fuel energy consumption human activity: traffic congestion. In terms of public policy making, findings from the study may help inform public policy makers and traffic congestion experts on key variables, and cause and

effect relationships to look at when developing remedial measures to minimize traffic congestion in metropolitan areas. Second, an additional benefit from the study is that findings may serve as a source of empirical validation of transportation investment decision making regarding how fuel reserves could be managed to improve national energy security. The sustainability of the national environment is a key issue for the health of a nation [52]. However, empirical verification of the consequence of private car usage, the key drivers of fuel consumption, which is a major indicator of population, is lacking, and yet crucially needed to determine public health implications of fuel energy consumption. Third, the study sought to reveal the vital role of public transportation in reducing energy consumption and pollution and how congestion cost amplifies inefficiencies in the national economy through reduction in workforce productivity. Findings from this study might inform policy experts regarding workforce productivity consequences of traffic congestion. The conceptual model backing these propositions are now explained as follows;
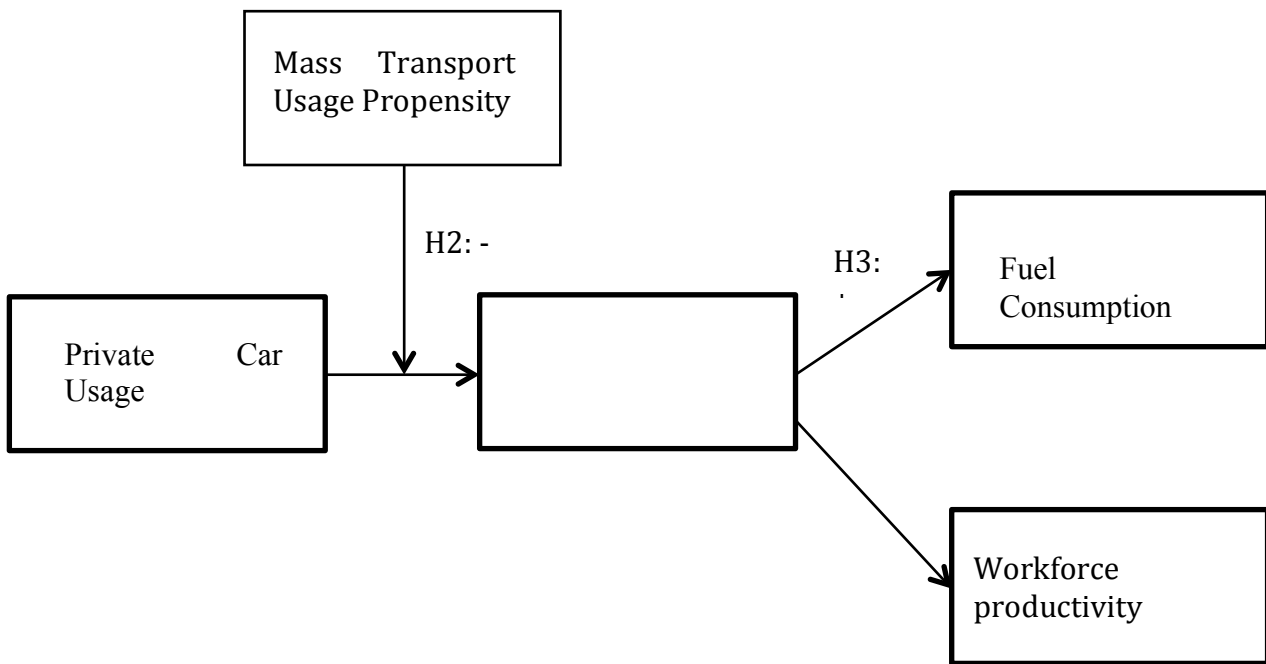

Figure 1: The theoretical background and research hypotheses

LITERATURE REVIEW

Overview of Urban Transportation

Urban transportation refers to a system of transportation that provides access and mobility for people, goods and services across urban centers [54]. Effective urban transport systems are essential to economic development and for that matter quality of life in urban areas. Urban transportation opens up opportunities to inhabitants to access essential services. Business activities depend on efficient urban transportation systems to ensure mobility of customers, employees, suppliers and information. According to [54], urban transport services cover a range of important social and economic activities such as leisure trips, business journeys (commuting, shopping) trips to places of education and freight distribution.

Effectiveness of Urban Transportation System

Effective urban transportation system therefore helps meet demand for accessibility within cities [33]. The effectiveness of an urban transportation system rests very much on the quality and management of transport infrastructure in urban centers including quality of roads, parking lots, vehicles, transportation terminals and networks. In view of the fact that urban transportation infrastructure directly affects urban transportation effectiveness and capacity,

urban traffic management system becomes an important process for controlling and guiding distribution of traffic on urban roads. In recent times, there has been an on-going movement towards urban transportation system planning, which has an impact on cities and urban settlement development. According to [23], urban transportation system is an essential factor that may facilitate and limit urban economic development depending on the degree of its management for effectiveness and efficiency. Along this line, scholars have identified several factors that may determine the effectiveness and efficiency of transportation systems. Key among these is adequate transport network, traffic management and control systems, efficient and reliable mass transit [16]. [55] also indicated that investment in adequate transport infrastructure improves transport efficiency in terms of increased reliability and productivity. [38] assert that mass transit is prerequisite for ensuring efficient and effective transportation system in urban areas in terms of energy conservation and environmental preservation. Effective traffic management and control system is also noted to enhance transport user mobility and productivity [7].

In particular, it is argued that efficient road transport management helps lower vehicular traffic congestion, and subsequently boost travelers' productivity at work. Productivity is defined as the ratio of volume of output to the volume of input. In other words, it measures the extent to which production input is utilized to produce output in the production process [32]. In advancing this argument further, [16] states that an effective transportation network is therefore key for sustaining economic growth in the contemporary economies. To him, transportation network links people to job, deliver products to markets where there is demand, drives supply chain and logistics and enabling domestic and international trade. He was of the view that improvement in transportation efficiency can influence cost, travel time, reliability, comfort, safety and security. He argued that the direct benefit of an efficient and effective transportation system is reduction in travel time, which translate into cost saving and increase in productivity.

Impact of Transportation on the Economy

Within the context of developing economies such as Ghana, public bus services have been instrumental for socio-economic mobility [27]. For example, in Ghana the Omnibus Services Authority has contributed to Ghana's economy through provision of transport services nationwide. While vehicular traffic congestion reduction has been one of the key drivers of investment in mass transportation in Ghana, what we currently do not know is empirical evidence to support the notion that greater private car usage accounts for greater variation in traffic congestion in urban centers and that mass transportation helps lower vehicular traffic congestion. In addition, while a lot has been said with respect to the consequences of vehicular traffic congestion on the economy, we lack information on its effects on key economic-related forces: energy consumption and workforce productivity levels. Accordingly, the purpose of the current study is to investigate the extent to which private car usage impact vehicular traffic congestion at differential levels of mass transportation usage, and the degree to which vehicular traffic congestion impact levels of energy consumption and workforce productivity.

Transport and Energy Consumption

Transportation is essential to our economy and quality of life, and currently accounts for 71% of the nation's total petroleum use and 33% of our total carbon emissions. Energy-efficient transportation strategies could reduce both oil consumption and greenhouse gas (GHG) emissions. Petroleum products constitute around 30 percent of total energy demand in Ghana [21]. The transport sector is the main consumer of petroleum products, accounting for over 80 percent of total consumption in 2003. Households accounted for 6.2 percent, industry 6.7 percent and agriculture 4.2 percent [46]. According to [19] increasing urban densities will

reduces energy consumption by transport and in the same way having more people close to their jobs will also reduce vehicle miles travelled, freeway traffic and tailpipe emissions.

HYPOTHESIS DEVELOPMENT
Private Car Usage and Vehicular Traffic Congestion
A high level of private car usage is positively related with high levels of vehicular traffic congestion. A lot of studies indicate that mass or public transportation reduces congestion. According to [37] public transport plays a greater role in reducing congestion. Again [16] notes public transport interventions reduce congestion. [17] Concludes that one of the policies and measures to control urban road transportation externalities like congestion is adopting mass transportation. Finally, [38] demonstrated that, travelling by mass transit per person and per mile, uses significantly less energy and produces substantially less pollution than comparable level by private cars as a result of reduction in congestion.

H1: Private car usage is positively associated with vehicular traffic congestion in urban centers

Private Car Usage, Mass transportation Usage and Vehicular Traffic Congestion
The positive effect of Private Car usage on vehicular traffic congestion becomes negative when levels of mass transportation usage increase in magnitude. This argument is in line with [40] suggestion that congestion leads to average speeds that are very low making the car engines consume more fuel than necessary. [38] asserts that public or mass transportation reduces congestion and as such reduces fuel consumption. [11] explains that fuel consumption increases unnecessarily when drivers do not drive at optimal speeds on most frequently used roads. Congestion causes vehicles to more bumper-to-bumper at stop-and-go speeds lower than optimal speeds.

H2: The effect of private cars usage on vehicular traffic congestion in urban centers is weakened when levels of mass transportation usage is high.

Vehicular Traffic Congestion and Fuel Energy consumption
Energy plays a vital role in the economic activities of any country. Human activities depend on the usage of several forms and sources of energy. In the same vein, transport which is responsible for the mobility of people, goods and services, is also of equal importance to the growth of every economy. Traffic congestion is mostly observed in economically vibrant cities. It is therefore important that congestion is managed in order to ease mobility [28]. [28] explains further that congestion lengthens journey times, disrupts business activities by holding potential business people in traffic and as a result decrease productivity. Again, increasing traffic congestion increases inventory holding cost by manufacturers and wholesalers as a result of travel time unreliability and thereby affecting productivity.

However, the transportation sector worldwide almost entirely depends on fossil energy. While transports may run on several forms of energy, petroleum oil seems to be the most widely used energy to power transportation equipment. A key issue is that as transportation services increase there is a corresponding increase in energy demand. A more interesting issue is that while increases in transportation activities may increase fuel energy demand and consumption, we posit that energy demand and consumption may be greater when increased road transportation cause traffic congestion. Regarding vehicular transportation in particular, argument can be made that when private (as well as public cars) on the road increase vehicular traffic congestion can be expected as a consequence, and congestion, we posit may subsequently cause greater fuel energy consumption by vehicles. While an increased

petroleum energy demand has become a major issue across the globe in recent times [48], an empirical test linking vehicular traffic congestion to energy consumption, particularly in less developed societies, remain limited.

H3: Increases in vehicular traffic congestion is related to greater energy consumption.

Vehicular Traffic Congestion and Workforce Productivity

Traffic congestion is mostly observed in economically vibrant cities. It is therefore important that congestion is managed in order to ease mobility [28]. [28] explains further that congestion lengthens journey times, disrupts business activities by holding potential business people in traffic and as a result decrease productivity. Again, increasing traffic congestion increases inventory holding cost by manufacturers and wholesalers as a result of travel time unreliability and thereby negatively affecting productivity levels. [40] argues that for those who are caught in congested condition outside normal working hours; it is arguable that the time losses suffered as a result of the congested conditions have impact on the economy. However, one can argue that time outside working hours does not only have economic impact but also increase people's stress level, which subsequently negatively impact productive levels at work. Thus, we hypothesize that:

H4: Vehicular traffic congestion is negatively related to workforce productivity.

RESEARCH METHODS

Data Collection

To test the study's proposed hypotheses, we conducted survey and field experiments with commuters that use private vehicles and mass transportation services in a large metropolitan city in Ghana. Specifically, public and private school teachers were included in the study. The study adopted face-to-face interview and questionnaire administration procedures to solicit information from the key informants (i.e. teachers who own private cars). Field experiments and the judgmental sampling technique then used to create a sampling frame of 1000 teachers, from which a sample size of 250 valid responses was obtained.

Measure development

We followed several procedures to measure the study's key constructs. Specifically, measures of private car usage, traffic congestion, and workplace productivity were newly developed as there were no readily available measures in the empirical literature to capture these constructs. The psychometric procedures suggested by the literature were followed in designing a questionnaire, which was pre-tested with several teachers and academic experts in transportation and supply chain management disciplines [12, 14]. Items measuring workplace productivity were drawn from the literature, as these measures have previously been validated within the context of teacher's competence [25]. In addition to the measures used to estimate the study's hypotheses, we also controlled for several variables in our model, in line with the established literature in the transportation literature (See Table 2).

ANALYSES

Assessments

Following [8], we examined the extent to which there were significant differences in the means of a number of important variables across early and late respondents. We obtained insignificant differences in the means of the teachers' age, income, working hours and weekly expenses on fuel between early and late respondents, indicating that non-response bias is lacking in our data. Subsequently, we performed the Harman one factor test to assess any potential common method bias problem [35]. We specifically estimated a Confirmatory Factor

Analysis (CFA) model by forcing all items measuring our constructs to load on a single bias factor. We obtained unsatisfactory results for our sample, indicating that common method bias is not a threat to our dataset.

Reliability and Validity Tests

For measure development and model testing purposes, a two-stage analytical approach was used whereby the measurement and structural models were tested consecutively, following [5] recommendation. First, an Exploratory Factor Analysis (EFA) was undertaken to determine the factor pattern and structure of the indicators used to measure the constructs. Having obtained a satisfactory factor structure, whereby each observed item loaded expectedly on the hypothesized factor, a Cronbach alpha was calculated for the set of items measuring each obtained factor. Each factor returned a satisfactory alpha value (see Table 1), demonstrating initial evidence of reliability of the measures.

Table 1: Details of Multi-item Measures and Results of Validity Tests

Construct and Item Details	Standardized Factor Loadings‡	Alpha Reliability	Composite Reliability	Average Variance Extracted
Private Car Usage (*1 = strongly disagree; 5 = strongly agree*)		.85	.88	.60
I regularly travel on my private car to and from work	.87 (fixed)			
I prefer to commute to and from work on my private car	.84 (15.31)			
I find it convenient travelling on my private when it comes to my work	.78 (13.76)			
It is important that I travel on my private car for work-related activities	.52 (8.12)			
I use my private car to and from work on every working day	.78 (13.64)			
Driving my private car to and from work is something that excites me*	-			
		.93	.95	.74
Traffic Congestion (*1 = not at all; 5 = to an extreme extent*)				
I often experience heavy traffic congestion on my way to and from work	.84 (fixed)			
There is often heavy traffic congestion on the road leading to my workplace	.87 (16.63)			
I spend lots of time on the road travelling to and from work due to traffic congestion	.90 (17.56)			
Driving in a heavy traffic is a normal experience during my working days	.77 (13.57)			
I need to leave home very early simply to avoid heavy traffic congestion	.82 (15.04)			
I arrive home late after work due to heavy traffic congestion	.82 (14.93)			
		.86	.87	.63
Mass Transportation (*1 = not at all; 5 = to an extreme extent*)				
When travelling to and from work, I am……				
happy to use a public mass transport	.61(fixed)			
open to the idea of using a public mass transport	.80 (9.36)			
willing to sit on a public mass transport	.91 (10.03)			
prepared to join a public mass transport	.82 (9.56)			
		.78	.80	.50
Workplace Productivity (*1 = strongly disagree; 5 = strongly agree*)				
During the past four weeks…..				
I have been able to finish hard tasks at work	.67 (fixed)			
I have been able to take pleasure in my work tasks	.62 (7.48)			
I feel hopeless about finishing certain work tasks*	-			
I have been able to focus on achieving my goals at work	.81 (8.17)			
I feel energetic enough to be able to complete all my work tasks	.75 (8.38)			
		.76	.78	.55
Fuel Consumption (*1 = not at all; 5 = to an extreme extent*)				
I use many litres of petrol/diesel every week (Monday to Friday) when school is in session	.70 (fixed)			
I spend lots of money on petrol/diesel every week (Monday to Friday) when school is in session	.90 (8.77)			
I spend a high percentage of my monthly salary on petrol/diesel every week (Monday to Friday) when school is in session	.59 (7.88)			

Fit Indices

Chi-square (DF)	P-value	RMSEA	NNFI	CFI	SRMR
291.04 (199)	.001	.046	.96	.96	.051

‡ = T-values are in parentheses   * = deleted items due to poor factor loading

Subsequently, a CFA was performed for each item that passed the EFA and alpha reliability tests. The purpose for the CFA test was to ensure that the reliability and validity of all constructs was robust and with measurement error being accounted for. As can be seen from Table 1, satisfactory factor loadings were obtained for each multi-item construct, demonstrating evidence of convergent validity. In using [9] model fit assessment criteria, overall good fitness indices were obtained for the sample: chi-square ($\chi2$)/d.f. = 291.04/199 = 1.46; p-value > .05, which is statistically non-significant; Root Mean Square Error of Approximation (RMSEA) = .046; Non-Normed Fit Index (NNFI) = .96; Comparative Fit Index (CFI) = .96; and Standardized Root Mean Residual (SRMR) = .051. In addition, the factor loadings for each indicator on its respective construct were statistically significant at 1% level, and because no evidence of cross-loadings was observed, it is argued that the constructs demonstrate unidimensionality in the sample studied.

Additionally, we find that the composite reliability of each construct was larger than .70, which exceeds [10] .60 recommendations. Similarly, evidence of discriminant validity for each construct was obtained because the lowest Average Variance Extracted was .51, which is larger than the highest shared variance between any pair of constructs. In following [5] recommendation, each possible pair of construct was collapsed into a single factor, and in comparing their fit indices, it was found that the two-factor models provided superior fit to the data relative to the single factor models. Details of these statistics are available in Table 1 and Table 2. Details on the descriptive statistics and inter-construct correlations for the variables that were included in the model are available in Table 2.

Structural Model Estimation
Having found support for measurement reliability and validity for each construct, we then estimated the structural relationships between variables. We used moderated structural equation modeling (MSEM) to test the moderating effect relationships in the study's theoretical frame work [13, 18]. Actual estimation of structural models was undertaken using maximum likelihood estimation method, which was implemented in LISREL 8.5. In following [34], model complexity was reduced by creating single indicants for each construct involved in multiplicative interactions (i.e. private car usage and mass transportation usage), while the remaining variables were estimated with full-information, producing a MIMIC model (Multiple Indicator Multiple Cause). For the constructs that were used for multiplicative interactive analysis, the scores were mean-centered, helping to minimize any multicollinearity problem. Subsequently, a series of three nested models were estimated and compared to test the hypotheses. Table 3 reports result of the estimated effects of the explanatory variables on the different dependent variables in the estimated structural model.

Concerning the exact hypotheses tested, hypotheses 1 theorizes that high levels of private car usage are positively related to high levels of vehicular traffic congestion. Findings from this study show that high levels of private car usage are positively related to increases in traffic congestion (t = 2.22; p< .05), in support of H1. In hypothesis 2, it is posited that the positive effect of private car usage on vehicular traffic congestion becomes negative when levels of mass transportation usage are high. Findings from the study reveals that when levels of mass transport usage are high, the increase is not significantly associated with reduction in the impact of private car usage on traffic congestion (t = -1.01; p> .05), thus, rejecting H2. In hypothesis 3, it is conjectured that high levels of vehicular traffic congestion is positively related to high levels of fuel consumption. Evidence from the study indicates that high levels of traffic congestion is positively associated with greater levels of fuel consumption (t=1.95; p< .05), providing support for H3. Additionally, evidence from the study shows that increases in

traffic congestion is not significantly associated with reduction in workforce productivity contrary to our prediction in hypothesis 4.

Additional interpretation of the study's findings is appropriate to provide additional insights. We find that at high levels of private car use, traffic congestion becomes higher (t = 2.21; p< .05), and high levels of traffic congestion is associated with increases in fuel congestion (t = 1.91; p< .05). Furthermore, it was found that high levels of fuel consumption is negatively related to workforce productivity, such that as levels of fuel consumption increases there is a corresponding decreases in workforce productivity, suggesting that high traffic congestion drives decreases in workforce productivity only through increases in fuel consumption, such that the negative impact of traffic congestion on workforce productivity is magnified when it is channeled through increases in fuel consumption. It can, therefore, be inferred that the impact of traffic congestion on workforce productivity is through increases in fuel consumption.

Similarly, it can be argued from the findings that the impact that private car usage has on fuel consumption is through the increase in traffic congestion which is also created by the increase in private car usage. While the propensity to use mass transportation does not affect traffic congestion levels, however, at high levels of mass transportation usage there is a corresponding increase in workforce productivity (t = 1.70; p< .05). We discuss the theoretical and policy implications of the findings in the sections that follow next.

Table 2: Descriptive Statistics and Inter-Construct Correlation

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Car usage																	
2	Traffic congestion	.028																
3	Mass transportation use	-.224**	.100															
4	Productivity	.174*	-.037	.004														
5	Fuel consumption	-.119	.151*	.197**	-.254**													
6	Public transport availability	-.022	-.069	-.032	.049	-.029												
7	Taxi availability	.089	.068	.065	-.004	-.100	.207**											
8	Gender	-.090	.072	.136	-.059	.060	.041	.023										
9	Age†	.096	.122	.013	-.150*	.089	.111	.040	.176*									
10	Educational attainment	-.010	.053	.085	-.087	.082	.052	.079	.323**	.406**								
11	Working hours	.027	-.047	.019	.032	-.057	.088	.055	.184**	.189**	.210**							
12	Staff number†	.063	-.009	-.002	.050	-.020	-.039	-.015	-.163*	.035	-.039	.068						
13	Student number†	.076	.086	-.066	.054	.003	-.008	-.029	-.040	-.019	-.044	.022	.352*					
14	Weekly Litre use†	.078	.158*	-.006	-.015	.173*	-.056	-.024	.012	.020	.079	.009	-.030	.244**				
15	Weekly expenses (GHC) on fuel†	.046	.150*	-.042	-.054	.136	-.037	-.035	.017	.113	.057	.068	.013	.012	.057			

16	% of monthly income on fuel	-.010	-.078	.110	-.016	.039	-.030	.047	-.229**	-.160*	-.222**	-.174*	.007	.049	.001	.001	
17	Car size†	.034	.051	.089	.054	-.066	-.037	.163*	.007	.184**	.053	.009	-.072	.024	.027	-.058	.065	-
	Mean	4.30	3.36	2.65	4.07	1.66	-	-	-	1.82	-	128.31	138.13	927.54	36.49	109.43	6.43	8.67
	Standard Deviation	.88	1.17	1.12	.80	.71	-	-	-	.98	-	39.59	145.61	1071.23	64.50	192.29	2.63	8.44

† = Natural log was taken before correlations were estimated

N = 202 private car users

Table 3: Results of Hierarchical Moderated Regression Analyses

Independent variables and estimated paths	Dependent variable: Traffic Congestion			Dependent variable: Fuel Consumption			Dependent variable: Workforce Productivity		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Control paths									
Staff number	-.09 (-1.17)	-.08 (-1.01)	-.08 (-1.01)	-.15 (-1.94**)	-.04 (-1.44*)	-.05 (-1.47*)	.09 (1.09)	.06 (.79)	.06 (.79)
Student population	.13 (1.75**)	.13 (1.71**)	.13 (1.70**)	.01 (.12)	-.01 (-.23)	-.01 (-.16)	.07 (.95)	.07 (.93)	.07 (.93)
Age	.13 (1.88**)	.13 (1.82**)	.13 (1.80**)	.10 (1.39*)	.05 (1.59*)	.05 (1.63*)	-.16 (-2.04)	-.16 (-2.12***)	**-.16 (-2.11***)**
Total fuel litre	.12 (1.56)	.12 (1.57)	.12 (1.56)	.08 (1.04)	.09 (2.95***)	**.09 (2.96***)**	.08 (.97)	.07 (.82)	.07 9.82)
Total expenses on fuel	.20 (2.59***)	.19 (2.49***)	**.20 (2.48***)**	.06 (.79)	-.01 (-.39)	-.01 (-.31)	-.08 (-.98)	-.08 (-.98)	-.08 (-98)
Monthly Working Hours	-.09 (-1.22)	-.08 (-1.06)	-.08 (-1.06)	-.09 (-.122)	.01 (.32)	.01 (.29)	.05 (.71)	.03 (.48)	.04 (.48)
Public transport availability	-.10 (-1.45)	-.10 (-1.45*)	-.10 (-1.44*)	-.01 (-.23)	.01 (.22)	.01 (.17)	.07 (.86)	.07 (.95)	.07 (.95)
Taxi availability	.09 (1.22)	.10 (1.33*)	.10 (1.33*)	-.11 (-1.45*)	-.06 (-1.95**)	**-.06 (-1.90**)**	-.01 (-.08)	-.03 (-.45)	-.03 (-.45)
Gender	.10 (1.45)	.10 (1.37*)	.10 (1.37*)	.07 (1.02)	.05 (1.59*)	.05 (1.63*)	-.04 (-.59)	-.03 (-.35)	-.03 (-.34)
Education	.05 (.69)	.04 (.56)	.04 (.56)	.11 (1.51*)	.04 (1.24)	.04 (1.26)	-.02 (-.24)	.00 (.03)	.00 (.03)
Main effects paths									
Mass Transport Usage		-.03 (-.42)	-.03 (-.41)		-.03 (-.96)	-.03 (-.98)		.16 (2.12***)	**.16 (2.12***)**
Private Car Usage		.16 (2.21)	**.16 (2.22***)**		.89 (30.50)	**.89 (33.20***)**		-.17 (-1.16)	-.14 (-.77)
Traffic Congestion			-			.15 (1.95**)			-.01 (-.15)
Interaction effect paths									
Fuel Consumption									**-.42 (-3.97***)**
Private Car Usage x Mass Transport Usage			-.07 (-1.01)		-	-			-
Fit statistics:									
F-value	3.44***	2.81***	2.60***	2.01***	89.73***	82.48***	1.18	1.99***	1.70**
R² (%)	.16	.17	.16	.10	.86	.89	.06	.12	.15
ΔR² (%)	-	.01**	.00	-	.76***	.03**	-	.06***	.03**

Notes:

1: Model 1, Model 2 and Model 3 have Congestion as an outcome variable; Model 4, Model 5 and Model 6 have Consumption as an outcome variable; and Model 7, Model 8 and Model 9 have Productivity as an outcome variable.

2: Model 1, Model 4 and Model 7 = contains control variables; Model 2, Model 5 and Model 8 = contains control, and main effect variables; and Model 3, Model 6 and Model 9 = control, main effect, and interactive paths

3: a = Critical t-value: *10% one-tailed test = 1.28*; 5% one-tailed test = 1.645**; and 1% one-tailed test = 1.960***; 4: t-values are reported in parenthesis

5. DISCUSSION AND IMPLICATIONS

The primary objective of this research was to examine a web of relationships that involves the individual and joint effects of private car usage and mass transportation services on vehicular traffic congestion as well as the impact of vehicular traffic congestion on fuel consumption and workforce productivity. Using primary data from public school teachers in a metropolitan city of Kumasi in Ghana, an emerging Sub-Sahara African economy, the study finds that while private school teachers' private car usage is associated with increases in road traffic congestion, mass transportation usage does not directly impact traffic congestion levels. A more interesting finding is that high levels of private car usage and increases in mass transport usage jointly impact increases in vehicular traffic congestion. In addition, the study finds that whereas private car usage and vehicular traffic congestion are associated with increases in energy consumption, mass transportation services is found to be associated with greater workforce productivity levels. The following sections discuss the theoretical and public policy implications of the findings.

Theoretical implications
Policy-making implications
Congestion reduction should be a central element of a regional economic development strategy in Ghanaian cities. More specifically, policymakers at the urban roads and feeder roads, levels should:

- Pay more attention to the accessibility of other roads within the various suburb, not just downtowns or central business districts where traffic is always at its peak.
- Add capacity in the rims of metropolis, where major suburban job and retail centers are located. Our findings are likely to be productivity-gaining. Not only is access likely to improve more per dollar invested than in the CBD, but future growth is likely to be higher.
- The urban roads approach to transportation planning and investment within the metropolis must have both tactical and strategic dimensions. Tactically, investments must be made in projects and programs that allow the road networks to operate most efficiently and to meet existing travel demand. Strategically, the right infrastructure must be built in the right place at the right time. This is present, Ghana is failing both tactically and strategically, with congestion rising and mobility declining.
- Upgrading freight rail operations is important in reducing road traffic congestions. Lack of adequate road infrastructure (and CBD routes in particular) contributes significantly to rising traffic congestion and lower national economic productivity.

Limitations and directions for future research
The aim of the study was to investigate how private car usage and mass transportation influence traffic congestion as well as fuel congestion and other levels of externalities. The study used Structural Equation Modelling (SEM) to test the hypotheses of the study developed and concluded that high levels of private car usage lead to increases in traffic congestion. On the other hand, when levels of mass transport usage propensity are high, the increase is not significantly associated with reduction in the impact of private car usage thus rejecting H2. But

this can be explained. Studies have shown that increase use of public transport reduces the level of private car usage and as a result, reduction in congestion as found in the literature reviewed. But [24] explained that people sought to live a more comfortable lifestyle and as a result will always prefer to use their private cars as a reliable means of transport than public transport. The public transport systems in developed countries are more comfortable and reliable. Unfortunately in Ghana, our public transport system is dominated by jitneys (trotro) which are mostly uncomfortable and unreliable. Hence people still prefer to use their private cars. Again considering hypothesis 3, the study demonstrated that high levels of traffic congestion are positively associated with greater levels of fuel consumption in support of H3. It can therefore be inferred that the impact of traffic congestion on workforce productivity is through increases in fuel consumption. Similarly, it can be argued from the findings that the impact that private car usage has on fuel consumption is through the increased traffic congestion that the increase in private car usage creates while the propensity to use mass transportation does not affect. Moreover, a number of causes of congestion were observed in the study. These include pedestrian obstruction, inadequate reserved parking lots, dysfunctional traffic control devices, recurrent congestion and picking of passengers anywhere along the roads not necessarily at bus stops. These are mostly due to non-enforcement of transport laws in the cities. The study is limited to emission of CO_2 which is also influenced by the traffic congestion. The model developed in the study could have included emissions as one of the dependent variables of congestion. Thus, the theory could have been high levels of private car usage impacts on traffic congestion and road traffic congestion impacts on emission, fuel consumption and productivity The study did not include research into emissions in Ghana since the Environmental Protection Agency (EPA) has no emissions standards in Ghana [31]. Therefore, research into road traffic emissions and its impact on the environment will be worth studying. This is supported by the fact that pollution as a result of emissions from road traffic congestion from the perspective of developing countries is troublesome as indicated "the spectrum of rapidly growing private vehicle ownership and usage in nations casts a worrying shadow over the projected course of global greenhouse gas emissions" [47]. Finally, the study concludes that, while the propensity to use mass transportation does not affect traffic congestion levels, however, at high levels of mass transportation usage propensity, there is a corresponding increase in workforce productivity.

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A Social-Cognitive Model of Entrepreneurship Failure: Beyond Attributional Style

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Abstract

Attribution theory (Heider 1958; Kelley 1967) attempts to explain how individuals assign causes for events they both observe and have happen to them. For many first time entrepreneurs, that event may well be failure. The relationship between attribution and failure has been addressed in the entrepreneurship literature (for example, Askim—Lovseth and Feinberg 2012). We extend that work with the argument that people bring a particular belief system (known as a mindset) to the entrepreneurial venture and this belief system leads to specific attributions in the face of negative feedback and/or possible failure. Research proposals to test the model are presented.

Keywords: mindset, attribution, business failure, entrepreneurship

INTRODUCTION

It is generally accepted that entrepreneurs begin new ventures because they recognize opportunities that others do not or recognize but fail to act upon (Ardichvili, Cardozo, & Ray, 2003). It logically follows that the entrepreneur would not risk time, energy, and capital if he or she did not have a reasonable expectation of success.

Scholars conducting research in entrepreneurship tend to focus on what makes an entrepreneur successful while paying scant attention to failure (Minniti & Bygrave 2001; Shepherd 2003; Singh, Corner & Pavlovich 2007). This bias toward success factors in the entrepreneurship literature deprives researchers and practitioners of valuable insights about what can be learned from failure. This lack of interest in failure is especially interesting in light of the high failure rate of new ventures. According to the Bureau of Labor Statistics, the survival rate of new ventures after five years is only 49.3 percent (Bureau of Labor Satistics). (Business Employment Dynamics, 2010)

Several researchers, however, have recently begun to examine the causes of entrepreneurial failure (Askim-Loveseth and Feinberg, 2012; Cardon, Stevens, and Potter, 2011; Rogoff, Lee and Sub 2004; Yamakawa, Peng, and Deeds 2015).). Each of these studies used attribution theory (Heider 1958; Kelley 1967) as the basis for determining the factors entrepreneurs attribute to their failure. Attribution theory has a long and valuable application in a number of business pursuits (for example, management, sales, and marketing). Yet, there are criticisms of attribution theory and some more recent concepts of social-cognitive motivation, specifically lay theories, may better explain one's attributions concerning failure or success (Hong, Chiu, Dweck, Lin, and Wan 1999; Silvera, Stein-Kjetil, and Iversen 2000).

The purpose of this paper is to propose a social-cognitive model that may be one explanation of why some entrepreneurs fail. Specifically, the model proposed here examines how

entrepreneurs react to unsatisfactory feedback once the venture is underway. That is, assuming an expectation of success, how does the entrepreneur process information that indicates his or her assumptions about success (actual opportunity, potential market, etc.) are not what they were believed to be when the venture began. The argument is that the entrepreneur's mindset, or manner in which he or she cognitively interprets the situation, will affect decisions to persist or withdraw. Thus, our model expands the attribution model used in prior research by examining attributional style before failure.

The paper is organized as follows: first, failure for the purpose of this paper will be defined; next, a brief review of attribution theory and its application to failure in the entrepreneurial literature will be examined. The following section is an explanation of mindset and the relationship of this concept to attribution theory. Finally, the concept of lay theories will be integrated into the attribution model and research proposals to test the model will be outlined.

FAILURE DEFINED

Failure has different meanings for different researchers. A simple definition of failure is to equate failure with liquidation bankruptcy or insolvency (Zacharakis, Myer & DeCastro 1999). Shepherd (2003) offers an expanded definition of failure as insolvency. By his definition, failure "occurs when a fall in revenues and/or a rise in expenses are of such magnitude that the firm becomes insolvent and is unable to attract new debt or equity funding; consequently it cannot continue to operate under the current ownership and management" (p. 318).

An even broader definition of failure is simply 'business discontinuance', adopted by Singh, et al. (2007). They preferred this broader concept because it includes not only economic factors but qualitative causes of failure as well. These include legal problems, disputes with partners or investors, and personal issues of the entrepreneur. It is this definition that is used for this paper. An entrepreneur may see the venture headed for failure and cease operations in time to salvage some of his or her investment. In this sense, the business 'failed' without declaring bankruptcy or becoming insolvent.

ATTRIBUTION THEORY

Attribution theory posits that people observe events and then attribute reasons or causes of, the events. Causes are determined if the factors surrounding one event are present in similar events or if certain factors are absent when a series of similar events takes place (Heider 1958). The causes one attributes to an event have been categorized into different causal dimensions. A classification of causal dimensions provides a means of comparison between various causal explanations. This is important since for any event, there may be a number of possible causal explanations. Causal dimensions include internal/external (Heider 1958), stable/unstable, controllable/uncontrollable (Weiner 1985), and specific/global (Abramson, Seligman, and Teasdale 1978).

For example, a person whose entrepreneurial enterprise fails may attribute the cause of that failure to a lack of ability (internal) rather than the economy (external). Further, the cause may also be stable (lack of ability) or unstable (illness). Internal factors are considered controllable by the individual, while factors external to the individual are considered uncontrollable. Finally, attributions that fall into a narrow range of situations are specific causal dimensions while attributions within a broader range of situations are considered global dimensions. For example, a student who fails a math exam may attribute failure to poor math ability (specific) or to low intelligence (global).

Attribution Theory and Entrepreneurial Failure

As previously noted, attribution theory has been applied in many areas of business and psychology, yet it has only recently been applied directly to entrepreneurship (Rogoff, Lee, and Sub 2004). Below is a review of several of the studies that have applied attribution theory to entrepreneurial failure.

A recent example of the research on entrepreneurial failure is the work of Askim-Loveseth and Feinberg (2012). The authors apply attributional explanatory style to new venture failure. Based on theories developed by Heider (1958) and Kelley (1967) and expanded by Abramson, Seligman, and Teasdale (1978) and Weiner (1985, 1986), Askim-Loveseth and Feinberg (2012) conclude that there is at least partial support for a relationship between attributions entrepreneurs make concerning failure and the consequences of those failures (financial well-being, continuing with an entrepreneurial career, family relations, and psychic well-being).

Cardon, Stevens, and Potter (2011) examined the attributions of entrepreneurs who had failed in different areas of the United States. The authors found that whether the attribution was due to mistakes made by the entrepreneur or to conditions outside of the entrepreneur's control, the consequences and stigmatization of the failure varied from one section of the country to another.

Rogoff, Lee, and Sub (2004) looked at the concept self-serving attribution bias. This bias occurs when people take credit for their successes (internal attribution), but blame others or the situation for failure (external attribution). Their study concluded that the self-serving attribution bias was indeed present in many entrepreneurial failures.

Finally, Yamakawa, Peng, and Deeds (2015) looked at how previous entrepreneurial failure influenced one to try another venture. Cognitive factors investigated included attributions for failure, intrinsic motivation, and overall failure experience. In terms of attributions, the authors proposed that the more an entrepreneur attributed failure to internal causes, the more likely he or she was to try another venture. The idea is that he entrepreneur understands what went wrong and believes the mistakes can be corrected in a new venture.

Criticism of Attribution Theory

Despite its usefulness and application, there are three fundamental criticisms of attribution theory. The first involves the concept that attribution theory is actually bi-directional rather than unidirectional as proposed by Weiner (1985). Specifically, Bandura (1990) maintains that the emotional feedback loop of attribution theory influences self-efficacy and the self-efficacy, in turn, biases causal attributions. For example, an entrepreneur receiving negative feedback on the success of his or her venture will assign attributions based, in part, on self-efficacy. Self-efficacy is a person's belief about his or her ability to perform a specific task (Bandura 1989). The higher the entrepreneur's self-efficacy, the more likely the he or she will attribute impending failure as lack of effort (internal) while those with lower self-efficacy will attribute the failure to the external factor of luck (Bandura 1990).

A second criticism relates to the stability and controllability dimensions. In classical attribution theory certain traits or characteristics of the individual are believed to be unchangeable and uncontrollable (Weiner 1985). Ability to run a business is an example of such a trait. However, Dweck and Leggett (1988) argue that all traits and characteristics of a person are malleable, and, to some extent, under the control of the individual.

The third criticism of attribution theory is that there is a more basic cognitive process that individuals bring into a situation and that influence attributions (Dweck & Leggett 1988). Thus, attributions are part of a behavior pattern that is influenced by other factors. Criticisms, two and three relate to mindset, which we will discuss next.

MINDSET

Mindset is a mechanism used by people to make sense of the behavior and actions of themselves and others and fall along a continuum that measures the degree to which that person believes human traits are fixed. Those who believe human traits and characteristics are fixed and unchangeable have an entity mindset. People who believe that traits are malleable and changeable have an incremental mindset. For example, a person with an incremental mindset of intelligence believes that one's ability is not fixed but can be changed with effort. In contrast, one who holds an entity mindset of intelligence believes that ability is a fixed and uncontrollable trait.

It should be noted that while most people hold a particular mindset in most situations, people do not necessarily hold the same mindset in all situations (Dweck & Leggett 1988; Levy & Dweck 1998). For example, a person may hold an entity mindset in relation to intelligence and an incremental mindset concerning morality. That is, a person may believe that people cannot change their intelligence but can change their moral character.

Those with an entity mindset tend to base their judgments on initial observations. For example, children with an entity mindset who face their first challenging math test decide, based on that one test, that they are not good at math (Butler 2000). Further, adults with an entity mindset have demonstrated a willingness to stereotype others based on initial and limited information (Levy, Stroessner & Dweck 1998) and to resist changing trait assignments even when faced with objective evidence to the contrary (Plaks, Dweck, Stoessner & Sherman 2001). People with an entity mindset tend to make attributions that are global and stable. They also believe that an attribution made at one time is predictive of attributions that will be made in the future (Chiu, Hong, & Dweck 1997).

In contrast, people with an incremental mindset require more than an initial observation before assigning traits and are more likely to engage in and accept stereotype-inconsistent information (Levy, et al. 1998; Plaks, et al. 2001). An incremental mindset leads a person to take into account all relevant aspects of the situation and the individual's goals and intentions. Thus, often their attributions are unstable and controllable (Chiu, Dweck, Tong, & fu. 1997).

Mindset also has a motivational element. In a study of managers' willingness to coach employees, Heslin, Latham, and Vandewalle (2005) found that managers with an entity mindset were less motivated to coach employees (i.e., give guidance, facilitate problem solving, and inspire employees) than were incremental mindset managers. For entity mindset managers, traits are fixed and no amount of coaching will improve employee performance. On the other hand, incremental mindset managers see traits and ability as malleable and believe investment in employee coaching will lead to greater performance.

The concept of mindset (a/k/a implicit personality theory or lay theories) has a rich history in the cognitive psychology literature beginning with Heider (1958) and Kelly (1955). More recently, Carol Dweck and her colleagues (e.g., Dweck & Leggett 1988; Levy & Dweck 1998; Molden & Dweck 2006) have expanded the concept. Lay theories have been applied in research in a variety of areas: intelligence and motivation (Dweck & Leggett 1988); morality (Chiu, Dweck, Tong & Fu 1997); social judgment (Levy & Dweck 1998); stereotype formation (Levy,

Stroessner & Dweck 1998); academic achievement (Butler 2000; Robins & Pals 2000); older workers' ability (Wren & Maruer 2004); and shyness (Beer 2002).

Below we discuss how this willingness or unwillingness to engage in and accept negative feedback may affect the eventual failure of the entrepreneurial venture.

MINDSET AND ENTREPRENEURSHIP

As previously noted, an important step in the entrepreneurial process is opportunity recognition (Ardichvili, et al. 2003). Further, it is assumed that the entrepreneur holds an expectation of success sufficient to deploy the necessary resources to begin the venture. Should the venture prove successful, the entrepreneur's beliefs about the opportunity are confirmed and the venture continues.

However, often the entrepreneur is wrong about some belief related to the success of the firm. The error may be quantitative in that the entrepreneur over estimates cash flow from operations. Beliefs about success can also be qualitative. For example, two people who are social friends may find they do not work well as business partners. Once the beliefs about the success of the venture are challenged by the reality of the situation, the entrepreneur's mindset will influence the reaction to the new information.

Erdley and Dweck (1993) note that negative events are more likely to cause attributional processing than are positive events. Further, as attributional processing increases, there is more divergence in attributions assigned between entity and incremental mindsets. Thus, the event of an entrepreneurial failure is ripe for the study of how different individuals assign causes.

As an example, suppose an entrepreneur believes there is an opportunity for a restaurant in a small town and secures the necessary capital to begin the venture. For illustration purposes, assume the entrepreneur overestimated the market and, subsequently, cash flow from operations. With fewer customers and revenue than expected, the belief that the restaurant was a good opportunity is challenged by the facts.

The entity entrepreneur will, at least initially, attribute this negative feedback as a lack of ability. That is, you either know how to run a restaurant or you don't. Often, for the entity mindset, this information will be based on limited information leading to correspondence bias. In terms of attribution theory this casual explanation is internal, stable, uncontrollable, and global. The apparent lack of success of the restaurant is proof positive of this fact. The entity theorist, then, will likely abandon the project because he or she "just wasn't cut out to run a restaurant." Moreover, the entity mindset is less likely to correct this attribution in light of the situational context (e.g., a recession).

In contrast, the incremental entrepreneur will treat the negative feedback as diagnostic. That is, he or she will attribute the information to lack of effort or the situational context of an economic downturn and will increase effort or knowledge in order to make the restaurant a success. As an attribution, this is internal, unstable, controllable, and specific.

It is important to note that neither the entity nor incremental theorists is ignoring what they perceive to be reality. Mindset is an important trait to us because it helps us interpret the world around us.

Research Proposals

Consistent with the entrepreneurship literature (e.g., Ardichvili et al. 2003) the model assumes opportunity recognition is an integral part of the decision to begin a new venture. Further, it is logical to assume that the entrepreneur's employment of resources in the venture is based on a reasonable expectation of success. Success may be defined as a specific return on investment or simply the desire to be one's own boss. In either case, the venture must remain viable (solvent) to be successful in the long-term.

Should information that is inconsistent with this assumption of success (i.e., negative feedback) develop after the venture begins, the entrepreneur's lay theory will influence the reaction Thus, we propose:

P1: Entrepreneurs with an entity mindset will attribute negative feedback to internal, stable, uncontrollable, and global traits (e.g., ability).

P1a: Entrepreneurs with an entity mindset are more likely to withdraw from the venture in the face of negative feedback than are entrepreneurs with an incremental mindset.

P2: Entrepreneurs with an incremental mindset will attribute negative feedback to internal, unstable, controllable, and specific traits (e.g., effort or situation).

P2a: Entrepreneurs with an incremental mindset are less likely to withdraw from the venture in the face of negative feedback than are entity theorists.

SUMMARY

Research into entrepreneurship failure is small compared to studies concentrating on entrepreneurial success (Zacharakis et al. 1999). This imbalance provides a less than holistic view of the entrepreneurial process. While there are many causes for failure, some can be recognized early as negative feedback is received.

This paper proposes that the social-cognitive concept of lay theories influences the entrepreneur's attributions and reactions to negative feedback. Entity entrepreneurs will attribute negative feedback to internal, stable, uncontrollable, and global traits leading to a tendency to abandon the venture. On the other hand, incremental theorists will attribute negative feedback to internal, unstable, controllable, and specific traits leading to a redoubling of effort to make the project a success. High self-efficacy strengthens the avoidance of failure in both groups.

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Financial Exclusion of Small and Medium Enterprise and Poverty Alleviation: Nigeria Experience

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Abstract

The role of banks especially sourcing from the surplus units and supplying to the deficit units of the economy (which is no other than the poor that have been denied access to the financial services by the banks) is mostly needed for the alleviation of poverty in Nigeria . Banks, instead of supplying to the deficit units, ended up in supplying funds to the surplus unit believing that the poor as well as rural dwellers cannot repay if loans are granted to them. Robust economic growth cannot be achieved without putting in place well focused programmes to reduce poverty through empowering the people by increasing their access to factors of production, especially credit (CBN, 2005). This paper sets out to assess how poverty can be alleviated through banks' roles and the level of poverty experienced by people. Based on our research findings we posit that allowing access to financial services at a reduced interest rate will enhance in poverty reduction in the country and make most active poor self-reliance. Again, due to the large population of the country and the state of the Nation's economy, the role of the financial institutions alone would not be sufficient in alleviation poverty in the country. Therefore, provision and maintenance of social amenities by government for populace in the country is required. The implication of this study is that government should design a policy for banks that focus on including the poor on the financial services instead of multiplication of programmes to reach the poor which have never been successful.

Key words: Banks' Role, financial services, Poverty alleviation, Poor and Rural populace, Small and Medium Enterprises, economy and development.

INTRODUCTION

More than half of Nigerians eat twice daily if not once because of the economic situation in the country. Lager numbers of people continue to live in poverty and more dwell in abject poverty. Poverty is characterized by the absence of the basic needs of existence –food, shelter and clothing. It often finds expression in voicelessness and powerlessness- not having a say in issues that concern the oneself; not being represented adequately and knowing there is nothing you can do about it (Mini.C.C 2007)

More so, UNDP (2010) ranked Nigeria as 142nd in a sample of 169th poorest countries in the world. Unsurprisingly, the poor are disproportionately located in rural areas, primarily engaged in agricultural and associated activities; some are owners of SMEs and are mostly women and children than adult males (Todaro, 2000). The poor commenced their businesses in small scale and that was how many SMEs were started yet they been deprived of formal financial services.

The roles of banks include; intermediation- sourcing fund from surplus units and supply to deficit units and granting of credits to people. The issue of financing active poor in the rural areas through formal financial institutions is difficult in Nigeria. Kanu .C. (2014) maintain that people are created equal and should be treated fairly. The poor, especially poor women are business worthy as any other person and they deserve to have access to financial services. The inability of commercial banks to render their services religiously and to the benefit of the society at large made government to initiate another programmes to reach the poor. The question is whether the programmes initiated by government have breached the gap. The role of intermediation – from surplus to deficit units and granting of credit make no distinction between the poor and rich clients of the banks.

After all, the deficit units should be no where other than in the hands of the poor where the funds are lacking. According to National Financial Inclusion, in the provision of financial services, Nigeria lags behind many African countries. In 2010, 36% of adults – roughly 31 million out of an adult population of 85 million – were served by formal financial services. This figure compares to 68% in South Africa and 41% in Kenya

Several efforts made by Nigerian government to raise the standard of living of People and to turn out more entrepreneurs not job seekers include the following:
- Directorate of food, Roads and Rural Infrastructure (DFRRI)
- Better Life/Family Support Programme
- The Family Economic advanced programme
- Peoples Bank
- Community banks
- Microfinance Bank.

The aim of government for establishing these banks is to make available small credit with minimum interest to the poor without insisting on asset based collateral and those financial services will be easily accessible even to the people at the grass root. It is good to note that none of these programmes succeeded in achieving its objective due to poor implementation and host of other factors. However, amidst all these efforts, the poor ones are still becoming poorer. The objectives of this study are to evaluate the factors that enhance the exclusion of small and medium enterprise from financial services and to investigate the level of availability and accessibility of social amenities to the poor in the urban and rural areas. The paper is divided into five sections; following this introductory part, is literature review on the poverty alleviation and role of banks in the economy, section three deals on the SMEs and financial services delivery, section four: methodology and summary of the findings, concluding remarks in section five.

REVIEW OF LITERATURE
The issue of poverty alleviation is the impact of resources allocation on the lives of poor people.

Narsir (2002) defined poverty as a concept that entails socio-economic and political deprivation which may affect individuals' households, or communities and which may result in lack of access to the basic necessities of life. Poverty is not having a job, is fear for the future. Poverty is losing a child to illness as a result of malnutrition.

Economic development is about enhancing the productive capacity of an economy by using available resources to reduce risks, remove impediments and alleviate poverty. Mini C.C (2007), maintain that due to fragile resource base of the country, slight distortions in the allocation of resources enormously aggravate the already existing poverty. Where there is equal distribution of resources all of which gear up to raise the standard of living of the rural population and reduce poverty alleviation

Most nations concentrate their development in the urban area but when a nation extends its development to the rural areas poverty is alleviated and economy improved. Rural dwellers produced the highest percentage of nation's food with no significant development in the areas, no good roads, electricity, and good water supply, education, health services no banks among things. The banking sector has not done much to enhance eonomicc development in the country by not extending financial services to the poor and rural dweller. Many researchers conclude that in most developing countries, the formal financial system reaches to only top 25 per cent of the economically active population. This leaves 75 per cent without access to financial services apart from those provided by money-lenders and family. Savings have continued to grow at a very low rate, particularly in the rural areas of Nigeria. Most poor people keep their resources in kind or simply under their pillows because of inadequate savings opportunities and products. Such methods of keeping savings are risky, yield no returns, and reduce the aggregate volume of resources that could be mobilized and channeled to deficit areas of the economy. (Kanu, 2014).

Improving households' access to financial services will also help to reduce poverty and improve income equality while financial exclusion can retard economic growth and increase poverty and inequality (Butler and Cornaggia, 2008). Robust economic growth cannot be achieved without putting in place well focused programmes to reduce poverty through empowering the people by increasing their access to factors of production, especially credit (CBN, 2005).

Adeyemi (2008) observes that across the globe, governments of various developing countries have sought to provide finance to the poor through the creation of agricultural development banks, special lending schemes, and the support of the growth of cooperatives and other self-help groups (SHGs). The aim is to reduce the level of poverty in the lives of people. The organization whose responsibility it is to grant this credit does not have active poor as one of their target groups.

Ehigiamusoe (2008) maintain that the improving condition of living in Bangladesh is a good example of how to develop with small loans. Again, the South East Asian nation was in mid-1970s branded a 'basket case' by Henry Kissinger (the US Secretary of State at the time) on accounts of the nation's hopeless development prospects. In the of Nigeria, banking sector concentrate in granting loans to the rich with the aim that they are only people that can repay; at the end of the day, many will turn out to be bad loans even the loans borrowed by the government . The percentage of people that have no access to banking services is above average. Imagine where these people are opportune to enjoy such services, many lives could have been touched; hence imp roved standard of living. After all the poor know what to do but obtaining the finance to achieve their aim is the major problem.

Stuart Rutherford in Bangladesh observed that even where microfinance institutions moved into underserved markets, they commanded a small share of business compared to other informal services. His work has revealed the poor as discerning consumers, who use a variety of informal products to meet complex financial needs. Some practitioners stress the need to replace informal services with formal inclusion that offers reliability, less risk of loss, and better privacy.

Adeyemi (2008) however, documents that despite decades of public provision and direction of provision of microcredit, policy reorientation, and the entry of new players, the supply of microfinance in Nigeria is still inadequate in relation to demand. Above all, microfinance banks in order countries have donors, as a result, their cost of operations are much lesser than that of Nigeria. It may not be possible for microfinance banks that are struggling to survive to sustain businesses in the country or alleviate the poverty of the people in the grass root.

Although, Odoko (2008) argue that finance alone is not enough. Other complementary strategies must be adopted if we are to realize the goal of poverty reduction in Nigeria. Some of these factors are reviewed as the type and size of the project, the credit history of the borrower, the prevailing economic conditions, and the level of competition in the industry. Hence Okpara (2010) maintain that these factors are of secondary concern. It is when finance sources are established for purpose of the poor that one can talk of appraisal and disbursement technique. The researcher strongly believe that if banks can extend their services to the poor who are the initiator of small and medium enterprises in various rural areas of the country, the level of poverty should be reduced.   After all the poor know what to do but securing funds to actualize their vision turns to a nightmare fantasy.(Okpara, 2010).

Nigerian government has initiated many programmes before establishing microfinance banks, aimed at alleviating poverty but none was free from inefficiency, high transaction cost, inconsistencies and lack of sincerity, focus and commitment in their implementation, The inability of the formal financial institutions to provide financial services to the poor, coupled with non sustainability of government programme makes it difficult to stem the tide of poverty in the country. Many researchers maintained that sustained economic growth can contribute significantly to poverty reduction. Indeed, countries that have enjoyed economic growth for long periods of time have witnessed marked declines in poverty incidence; an economic and financial crisis could frustrate such development.

Small and Medium Enterprises and Nigerian Economy
Earlier before now small and medium enterprise have been taken to be instrumental for economic growth and national development both in developed and developing countries which Nigeria is one of them through generation of employment. (Kanu, Onuoha & Isu, 2014)

Small and Medium Enterprises are seen today as the backbone of every economy throughout the world, (Ojeka and Dickson, 2011). SMEs are significant in the country's economy. SMEs are defined using a certain characteristics, but differs with economies. Some of these include: ownership structure, size, turnover, number of employees, total assets and capital base. These kinds of companies exist all over the continent and in all sectors in Nigeria.   SMEs in Nigeria consist of the private sectors, professionals groups and associations. They drive the economy of Nigeria.   Imagine where these were better funded and organized, SMEs could have contributed more to the economy.

Various studies conducted by academia, professional and governmental agencies confirm the fact that SMEs are the engine of economic growth and development. While the actual figures vary from country to country, it is believed that on average SMEs (both from the formal and informal sectors) account for between 70% and 90% of employment and bb70% of National output.

Agric. Sector accounts for 40% - 45% of GDP in Nigeria and 70% of employment. Over 80% of the Agriculture sector is either subsistence farming or SMEs Agro-allied business if properly setup, managed and funded, SMEs provided the much needed employment to a large section of the economy in Nigeria. SMEs provide household incomes which drives consumption and which in turn drives economic growth. Some researchers maintain that in the central and eastern Europe SMEs are perceived as the most vibrant and healthier sector of the economies in comparison with the larger entities

Also, good number of SMEs grow over the years to become huge corporations. All companies essentially start small as SMEs but some later grow and become the big corporations we love to hear and talk about example, Tantalizers, ABC Transport, Computer Warehouse Group, Ibeto Group of Companies.

Unfortunately, a large proportions of SME startup but never make it off their business plan or past their first year of existence.

The financial lives of the poor are unpredictable, they have low and UN steady income, some days they could get more   while other days they would go without any income.

 The poor households are lack of financial tool that could help them manage their resources better as a way to get their lives out of poverty.

For individuals who are engaged in activities like peasant farming, which are seasonal, their income could vary even more. Some researchers observed that the nature and flow of income to the poor members of society, their level of uncertainty is high. This translates to them living less healthy lives, staying in less secure places and facing income volatility associated with the market supply and demand dynamics.

Given the low, irregular and unreliable income, tools that facilitate savings, streamlining of cash flows and accumulation for bigger ticket items (lump sums) are of greater value for this class. In their study, Collins et al. (2009) summarised three needs that drive the financial activities of the poor as i) management of basics, which entails managing their cash flow so as to transform the low irregular income into a dependable source for daily living, ii) coping with risk particularly emergencies and iii) raising lump sums whereby they could reliably accumulate meaningful sums of money to buy expensive items or invest.

As earlier stated, most of SMEs in Nigeria do not achieve their fullest potentials of growth and profitability. They are unable to attract any funds to start-off the business. Most SMEs (with the exception of trading companies, government contractors and oil traders) are effectively locked out of traditional sources of financing, and this leads to increased level of poverty in the country. SMEs in Nigeria are faced with numerous challenges as, - Inadequate, inefficient, and at times, non-functional infrastructural facilities,
  - inefficient administration
  - absence of long-term finance to fund,
  - lack of accountability and transparency/ Poor governance

- incomplete records,
- under project finance for SMEs,
- lack of scientific and technological knowledge,
- Lack of suitable training and leadership development and others.
- Poorly thought-out business ideas / concept
- Lack of separation of "owners pocket from business pocket"

These have hindered them from playing the expected role in Nigeria's economic growth and development. Numerous efforts have been made by government to enhance the survival and the impact of SMEs in Nigerian economic development, but it seems that both environmental and political factors have not give way for the objective to be achieved. Hence, Molokwu B. (2005) said that unfortunately, these SMEs over the years, have been bedeviled by several inhibitions, which tend to make their growth perpetually stunted by infrastructural decay, insecurity of lives and property, multiplicity of taxation, lack of access to good and modern technology, lack of research and development as well as good entrepreneurship, difficulties in building coalitions and business linkages among others. The current problems of hunger poverty and unemployment have undermined the capacity of the economy and small and medium scale enterprises are seen as mechanism for intervention to addressing these long term problem of the economy. Unfortunately, SME have not been able to propel economic growth and development which are quintessence of mitigating the effect of Poverty, hunger, unemployment, and low standard of living. (Abiodu. 2011)

SMEs have played and continue to play significant roles in the growth, development and industrialization of many economies the world over. In the case of Nigeria, SMEs have performed below expectation due to a combination of problems which ranges from attitude and habits of SMEs themselves through environmental related factors, instability of governments and frequent government policy changes and somersaults.

Government is not relenting in their efforts to make SMEs in Nigeria what they should be because of the prospects of SMEs in the country which some authors listed as the crucial role of engine of growth, development and industrialization, employment/ wealth creation and poverty reduction.

Molokwu maintain that SMEs are the largest employer of labor, providing livelihood for over 80 percent of the African work force especially women and the youth and that it is a well-known fact that the African economy is government-driven while SMEs are the veritable engine of growth in developed economies.

Impact of Credit to Smalland Medium Enterprises
Loans are essential weapons for fight poverty since most poor cannot afford any amount to expand or even to start a small scale business. However, they know what to do but no money to execute the plan.

The capacity of poor for entrepreneurship would be significantly enhanced through the provision of financial services to enable them engage in economic activities and be more self-reliant, thereby creating employment opportunities rather than turning out more job seekers impacting positively to the economy. Financial access increases incomes through productive investment, helps create employment opportunities, facilitates investments in health and education, and reduces the vulnerability of the poor by helping them to smooth their income patterns over time.

Lack of rural access to financial services in Nigeria not only retards rural economic growth, but also increases poverty and inequality. Financial access increases incomes through productive investment, helps create employment opportunities, facilitates investments in health and education, and reduces the vulnerability of the poor by helping them to smooth their income patterns over time. While it is well understood in Nigeria that financial exclusion of the rural population from financial services retard economic growth.

Role of Banks in the Nigeria Economy

The banking system plays the vital role in promoting economic growth and development through their various functions. The role of financial intermediation by banking system is the process by which banks source fund from surplus unit and supply to deficit unit of the economy. Some researchers place the role of financial intermediation at the center of economic development and argued that financial intermediation through the banking system played a pivotal role in economic development by affecting the allocation of savings, thereby improving productivity, technical change and the rate of economic growth. This role also is meant to reduce level of poverty where banks perform it religiously. If the surplus fund will be efficiently allocated to entrepreneurs and active poor in the society to enhance their businesses or even to commence one; standard of living will be improved. This will reduce the level of poverty in the economy where banks will identify the deficit units of the economy. Banks source funds from surplus units and supply to the surplus units in steady of supplying to the deficit units of the economy; thereby leaving the gap uncovered. Banks can only perform their role of intermediation efficiently and effectively by rendering financial services appropriately.

There is general consensus among researchers are expensive for the poor, which keeps them away from the banks because they cannot build dependable credit history, to enable them contribute meaningful to the formal economy.

Formal banking has excluded the small and medium enterprise and could not solve the financial problem of the poor. Nigeria with its expertise experience in the financial sector, banks are only interested in dealing with rich clients and to handle high value transactions, but less keen and slowly in meeting the needs of the poor.

Several developing countries which Nigeria is one of them still struggle with financial sector inefficiencies that affect the economy.

Good number of economists believe that the financial system, with banks as its major component, provide linkages for the different sectors of the economy and encourage high level of specialization, expertise, economies of scale. Some researchers believe that the economic status of any nation depends to a large extend on how effective their banking industries are. This measure is geared towards the use of banking industries in realization and actualization of the development of much neglected rural areas in the country.

Another function of banks is to receive deposits and advance loan to promote business and commerce. The problem is that banks do not extend this service to all the clients that needed it especially the small and medium enterprises. .In most developing countries, formal banks do not consider small and medium enterprises as well as active poor in granting credits. The poor are considered incapable of making savings.

The poor are excluded in the most of the financial services rendered by the formal institutions. According to National Financial inclusion, financial products must be within easy reach for all groups of people and should avoid onerous requirements, such as challenging KYC procedures.

Formal financial services should be affordable even for low-income groups, particularly when compared to informal services, e.g. esusu or money lenders.

The creation of credit markets in poor countries is a crucial factor for their development. If well implemented, people would be able to sell their products, pay a fair interest rate, and use the extra money to improve their quality of life. With the appropriate help they will become educated and that will allow them to expand their business, to think by themselves and to realize that they have rights. Hence, Kanu.C. (2014) maintain that for human dignity and social justice to flourish, individuals must have hand in their personal development, as opposed to having development "done" to them.

Banks also perform important functions of making payment against cheque, discounting bill of exchange, letter of credit to enhance their business operations. Many researchers in economic growth in Asia maintained that the above activities focus on the role of the financial system in supporting economic growth in Asia, including issues related to financial development, regulation and supervision. Banks provide a convenient and efficient payments system without which specialization in productivity improvement and trade would be greatly impeded. Banks as clearing and settlement institutions constitute channel in the payment system and the medium through which the effects of monetary policies are transmitted to the rest of the economy.

Financial Services Delivery in the Rural Areas of Nigeria

Rural area is an area that does not well developed, that is to say that the area lack social amenities, good road, pipe bone water, electricity and other social services. In Nigeria, the issue of accessing financial services by the poor and the rural dwellers is a very difficult. Banks have failed to establish their branches in the areas where the poor and rural dwellers should have access to financial services. In most developing countries, the formal financial system reaches to only top 25 per cent of the economically active population. This leaves 75 per cent without access to financial services apart from those provided by money-lenders and family. But the absence of efficiently operating rural financial markets is a serious constraint to sustainable rural development in Nigeria. According to World Bank (2008), the rural space is home to 53 percent of the nation's population and more than 70 percent of its poor. Rural financial access is important for both poverty alleviation and the non-oil growth agenda, a fact recognized by the Nigerian government and its partners.

The poor financial services delivery in the rural are as a result of the following : unfavorable rural operating environment, provision of financial services to rural areas and small-scale entrepreneurs, lack of adequate rural infrastructure, i.e poor availability of electricity, water roads, telephone service, lack of technologies that will enhance financial delivery.

Olaita (2006) observes that the inability of the active poor to obtain credit facility from formal institutions leaves them with no other option than to borrow money from local money-lenders on high interest rates.

Jamil (2008) opines that a large number of active poor in the rural areas is left unattended to by existing microfinance banks. Similarly, Sacerdoti (2005) argued that faster economic growth will not be possible without a deepening of the financial system and, in particular, more support from the banking system. He further showed that there is strong association between access to bank credit and overall economic development of a country. The ability of the poor to borrow a small amount of money to take advantages of a business opportunity not only

impacts positively on eradication of poverty but also tend to swell the rank of micro-entrepreneurs (Egwuatu, 2008). Rural financial markets are important because financial intermediation facilitates general economic growth and poverty reduction. Financial intermediaries mobilize funds, allocate them among competing uses, create money, and function as a payments system. The efficient provision of loan, deposit, payment, and insurance services enables entrepreneurship, innovation, and production to develop and flourish. Safe savings facilities, payment services, access to credit, and reliable insurance mechanisms enable poor households to reduce vulnerability by smoothing consumption and mitigating risks. Because rural income cycles are particularly volatile, financial intermediation is especially important to shift purchasing power over time, as well as between net savers and net investors or spenders at any given time.

The availability of appropriately-designed financial services is an essential component of the enabling environment for rural economic growth and poverty reduction. Access to working capital or investment credit offered by rural finance institutions can substantially accelerate the adoption of modern agricultural technologies and production patterns which improve the ability of the rural sector to provide for the subsistence needs of the poor, produce the surplus in primary and intermediary products required for urban consumption and export, and avoid environmental degradation. Suitable credit products can also permit entrepreneurs to take advantage of investment opportunities in processing and off-farm enterprises. The availability of liquid and term deposit services encourages remunerative saving and the accumulation of financial assets, whether for "lumpy" investments and

RESEARCH METHODOLOGY

The study was carried out in Abia State on some selected Bannks, Small and medium enterprises, active poor in the urban and rural areas of the 17 LGA which were targets for the study.

The study employed primary data that were obtained from questionnaires administered to the 17 Local Government Areas of Abia State and the selected banks meant to serve the dwellers of these areas.

For the primary source, a structured questionnaire was used. 1500 respondents were randomly selected from the total population of 1500 which consist of farmers, retail traders, the owners of rice mill, transporters, cocoa farmers etc. There were two different sets of questionnaires – the first set solicited information from the management and staff of the banks and the second set from the poor in the urban and rural dwellers (Small and medium enterprises) who are the clients of the banks. 1000 questionnaires were returned. The data were analyzed using descriptive statistic -bar chart on the following variables: factors that enhance the banks to exclude SMEs in the financial services and poverty indicators. The study is based on the following objectives (1)   To evaluate the factors that enhance the exclusion of small and medium enterprise from financial services (2.) To investigate the level of availability and accessibility of poverty indicators to the poor.

The study was carried out in Abia State where some banks and small and medium enterprise were used as targets for the study. The researcher made use of primary sources to collect data. For the primary source, a structured questionnaire was used. 1000 respondents were randomly selected from the total population of 1500 which include the management staff of the banks and the clients who have benefited from these banks under study. They were initially identified through a preliminary survey. There were two different sets of questionnaires – the first set solicited information from the management staff and the second set from the small and

medium enterprise. The data were analyzed using descriptive statistics including pyramid. The result in the stacked pyramid above shows that inability of small and medium enterprises to repay, lack of collateral, low income and lack of financial instruments are the major factors that made formal financial institution to exclude SMEs from financial services thus increasing the level of poverty in the country.

Table 1
RESPONSE
Factors that enhance the exclusion of small and medium enterprise from financial services

Factors that enhance the exclusion of small and medium enterprise from financial services	FEESMESFS	TOTAL RESPONSE
Inability to repay	ITR	950
Low income	LI	850
Lack of collateral	LOC	900
Poor sources of fund	PSOF	600
Lack of financial instrument	LOFI	800
High cost transaction	HCT	750

This table indicates the number of people that agreed that these factors enhanced banks to exclude small and medium enterprise (poor).
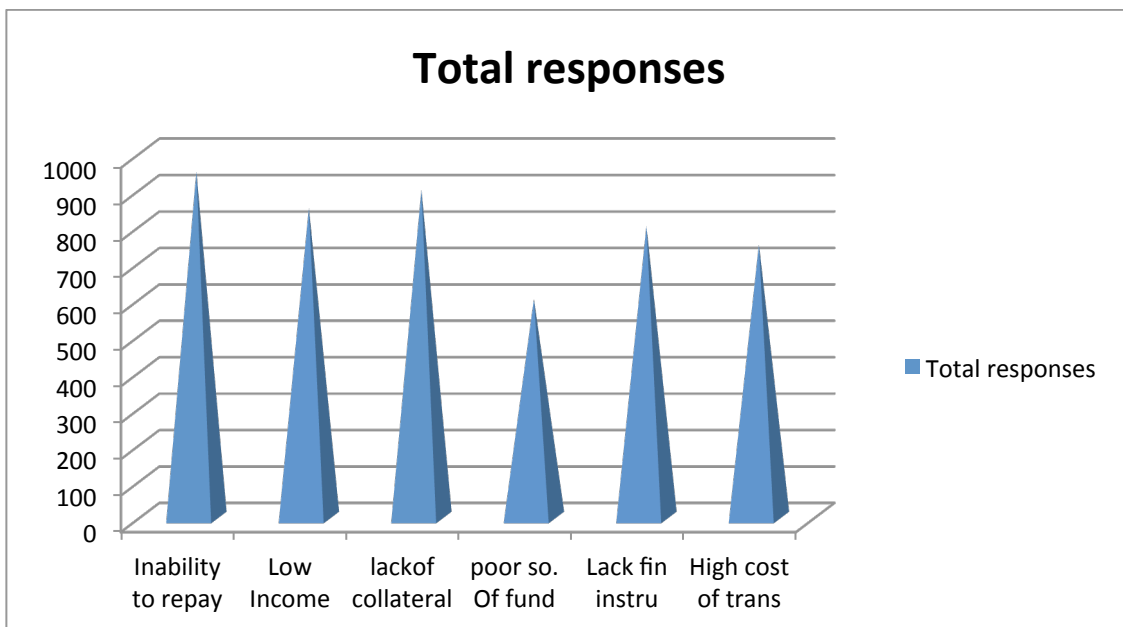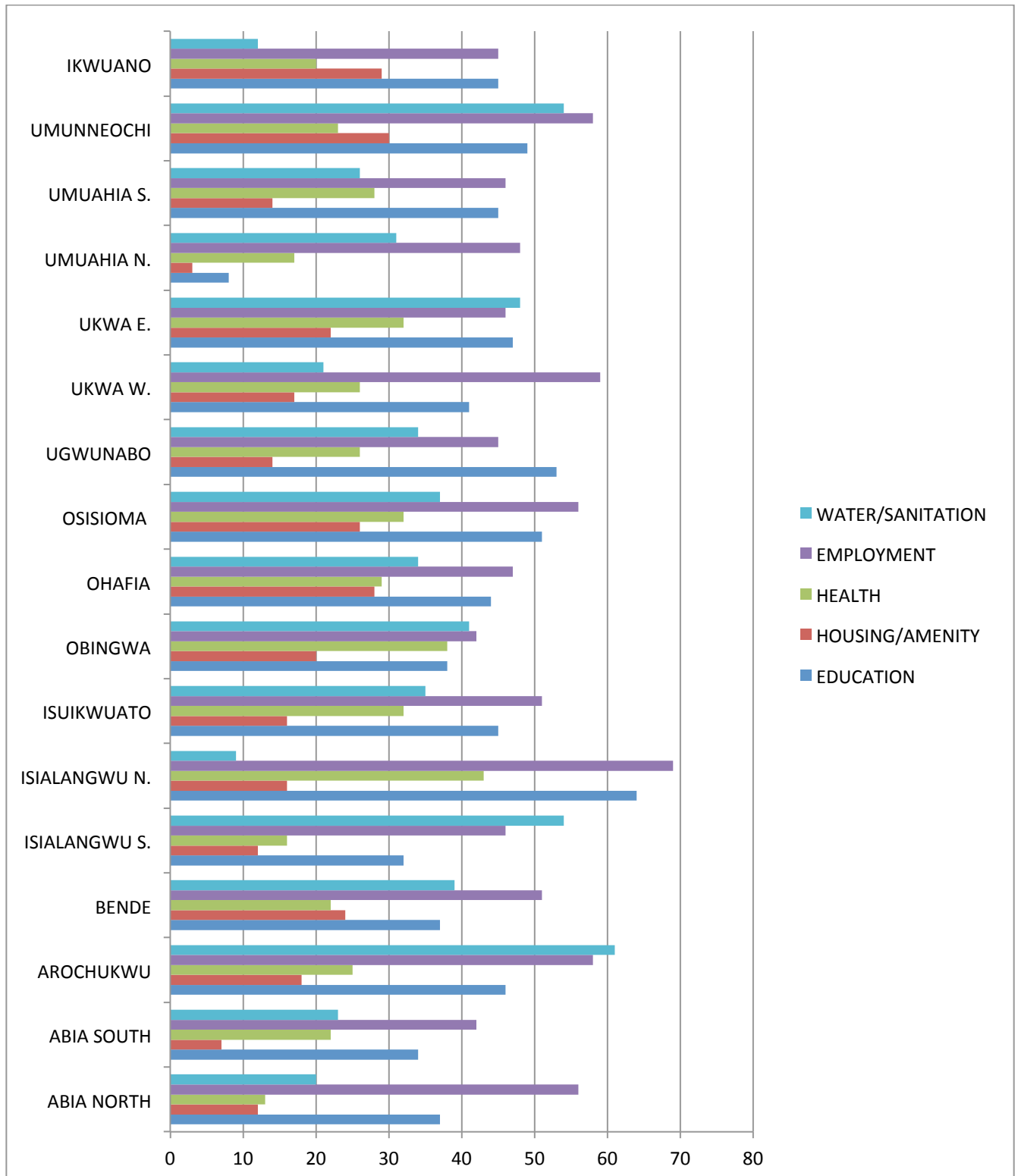

POVERTY INDICATORS TO SMALL AND MEDIUM ENTERPRISE.
The study looked at some components/indicator of poverty:

- Education
- Health

- House amenities
- Water and sanitation
- Employment

RESPONSES FROM THE 17 LOCAL GOVERNMENT AREAS IN ABIA STATE ON THE LEVEL OF AVAILABILITY AND ACCESSIBILITY OF ALL COMPONENTS OF

SUMMARY OF THE FINDINGS

In table 1, the responses obtain from some selected banks and small and medium enterprise shows that the factors that contributed to the exclusion of SMEs from financial services by the commercial banks are: the inability of SMEs to repay loans, lack of collateral to pledge for the loan, low income of SMEs and Lack of sources of funds.

The results from the poverty indicators: Health services, Education, Employment, Housing and household amenities, Water and sanitation indicate that Umunneochi was the most privilege in all the components, meaning that the level of poverty experienced by the people of this L.GA. Is mild compare with other LGAs because of the level of availability of these amenities in this LGA? This is followed by Isialangwa north which is ranked second and Arochukwu was ranked third most privileged LGAs.

However, Obiomangwa and Aba south are seen as the least privileged. The availability and accessibility of the poverty indicators are least available in Obiomangwa and Aba South.

Isuikwuato is seen as the second least (poorest LGAs) in the overall accessibility of these indicators. Obingwa and Ohafia LGAs are the least in having access to these social amenities. The little or non-existence of these social amenities in these area made almost impossible for financial institution to enter and establish their branches. Many people in these rural areas cannot travel far in search of the financial services. Small businesses owners, especially peasant farmers who produce various crops cannot find market for it, because of lack of the required social amenities.

CONCLUSIONS AND RECOMMENDATION

The paper stressed the need to develop viable and responsive financial services for the poor in Nigeria which will contribute toward improved savings and investments in the country.

The paper conclude that accessibility of financial services by the poor will go a long way to improve their living conditions, make them self reliance and enhance economic development.

Number of poor people in the rural areas make money and keep the money under their pillows due to lack of financial services in the areas. The money which could have contributed to the growth of the volume of savings in the country is under the pillows as idle cash- yielding no interest.

We recommend that Central Bank of Nigeria should improve in their monitor duty to enhance the effective performance of the banking sectors in the rural area of the country.

Government should provide infrastructure in the rural and sub urban areas of the country for the expansion of branches in the rural areas. The presence of infrastructure will attract other providers of funds even from outside the country. This will also enable banks to intensify the use of mobile banking in the rural areas and   encourage the role of sourcing funds from the surplus units and supply to the deficit units of the economy by the banks. Financial institutions should accommodate the active poor ones in their financial services. Government should therefore help   to give people the tools they need to work their way out of poverty by providing avenue for small loans, business training and other financial services to poor men and women to start their own businesses.

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APPENDIX

NAMES OF LGAs	EDUCATION	HEALTH	EMPLOYMENT	WATER & SANITATION	HOUSE AMENITIES
			INDEXES FOR POVERTY		
ABA NORTH	4	1	12	5	3
ABA SOUTH	3	5	10	17	2
AROCHUKWU	11	8	14	12	11
BENDE	12	5	1	15	13
IKWUANO	8	4	3	1	16
ISIALA NGWA NORTH	2	2	5	10	3
ISIALA NGWA SOUTH	17	17	4	15	8
ISUIKWUATO	8	14	2	8	8
OBINGWA	5	10	17	2	12
OHAFIA	16	8	10	3	15
OSISIOMA	15	9	1	16	14
UGWUNABO	6	4	8	5	7
UKWA EAST	12	1	2	9	6
UKWA WEST	1	4	3	5	2
UMUAHIA NORTH	8	4	16	5	6
UMUAHIA SOUH	6	1	16	14	2
UMUNNEOCHI	14	4	5	3	15

The Impact of Stock Price Volatility on the Performance of the Nigerian Stock Market for the Period 1990 To 2011

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Abstract
This study examines the impact of stock price volatility on the performance of the Nigerian stock market for the period 1990 to 2011. To achieve this objective data were gathered on macroeconomic variables such as stock price volatility, market capitalization, exchange rate, interest rate and inflation rate were captured for the purpose of analysis. The data were tested using the Elliot-Rothernberg-Stock Test, the Generalised Autoregressive Conditional Heteroskedasticity (GARCH) Test and the Granger Causality Test. The multivariate Johansen Cointegration Test was performed to establish the long run relationship among the variables. The Vector Error Correction Mechanism (VECM) under the framework of Vector Autoregressive (VAR) Model was used to estimate the short run relationship. The result of the GARCH test showed that volatility shocks in the Nigerian stock market were not quite persistent during the study periods. The result of the Cointegration test revealed that there exist long-run relationships among the variables in the model. The result of the Granger Causality test showed that stock price volatility granger caused market capitalization in Nigeria. The result of the short run estimation showed that stock price volatility is negatively related to stock market performance. It is recommended that there is need to ensure stability of the stock market, so as to boost and restores investors confidence in the market. Such confidence will lead to increased investment in the market.

INTRODUCTION
This work investigates the sway of stock price volatility on the routine of the Nigerian stock market. The increase or decline in price fluctuation stems from the changes in investors' attitudes in the market place. When new information is made available in the market it will lead to a rise in stock price fluctuation. The extent of the rise is estimated by the importance of the new information and the level of expectation placed on the new information by investors (Rajni & Mahendra, 2007). Financial experts and economist founded theories on the causes of price fluctuation. For instance, Engle (1982) believe that price instability is cause the influx of

modern and unforeseen information that modify likely proceeds on a stock. Whereas, the rest looked at changes in trading capacity, patterns or practices of trading which are the main focused by the variation in macroeconomic policies changes in investor's risk lenience and increase ambiguity as the cause of volatility(Rajni & Mahendra, 2007). Indeed, stock market volatility has implication, which is mainly negative. Another way that it will have effect on the economy will be through investor expenditure.   (McCluer, 1998; Campbell, 1996 Ludrigson & Standel, 1999; Poterba, 2000; and Rajni & Mahendra, 2007).

A decrease in the market of stock prices will wane investors' poise and thus force downwards investors' expenditure (Rajni & Mahendra, 2007). Stock market volatility may also have an effect on business nest egg (Zuliu, 1995) and economic enlargement unswervingly (Levine & Zervous, 1996). An increase in stock market fluctuation is interpreted as an increase in equity and as a result of these funds will be invested in assets that are less risky. This approach have been known to result in an increased charge to companies resources and as such new companies (new entrants) may accept this upshot as investors go round to acquiring stocks in largely, healthy recognise companies (Rajni & Mahendra, 2007). The stock market will be useful sympathetic of fluctuation in the willpower of the cost of investment and in the assessment of asset allotment resolution. Policy makers consequently rely on market estimates of fluctuation as a measurement of the susceptibility of financial markets (Olowe, 1999). However, the presence of extreme fluctuation in financial market plays down the importance of stock prices as an indicator of the real value of an entity, a perception that is core to the concept of the informational competent of markets (Karolyi, 2001).

The recapitalization of the Nigerian banking and insurance industries in July, 2004 and September, 2005 respectively boosted the number of securities traded on the stock exchange, thus improving public awareness and faith in the stock market. Also, the Nigerian stock market is an emerging and inefficient one characterized by the time lag between information availability about a stock and its full reflection on the price of the stocks (Olowe, 1999). Poor infrastructural facilities in the country make it virtually impossible for information to flow freely and speedily to actual and potential investors.

Vacillation of stock prices is not disparaging per se and is a sign of market effectiveness in most stock markets. In a competent market, stock prices are a sign of available information. Thus, stock prices swing in response to new information. Any progress that can affect the firmness of the economy habitually have serious impact on the stock prices. In modern times, the Nigerian stock exchange has for all time lost point and the stocks have veteran razor-sharp decline. The unprecedented downturn of activities of several quoted firms which were attributed to certain factors such as exchange rate, inflation rate and interest rate have led to high level of volatility and fluctuation (both positive and negative) in stock prices of the Nigerian stock exchange.

The main dilemma with price instability that affects the financial market competence is disparaging surplus fluctuation that ends up in crashes and/or crises in pecuniary markets. In such circumstances, difference connecting stock built-in assessment and it's associated with market value and is important, and has several penalty. The recent global financial crises and associated declines in economic activities of stock market performance experienced by a number of emerging market economies has made it imperative to appraise the links between stock prices, it volatility and the performance of the Nigerian stock market. The general intent of this study is to investigate the volatility of stock price and how this volatility affects the performance of the Nigerian stock market. Specifically this work sought;

1. To examine the effect of stock price volatility on market capitalization in Nigeria.
2. To determine the persistent of shock on the performance of stock market in Nigeria.

3. To determine the long run relationship between stock price volatility, exchange rate, interest rate, inflation rate and stock market performance in Nigeria.

Research hypotheses

Based on the research objectives the following research hypotheses were formulated

1. H_0: There is no significant relationship between stock price volatility on market capitalization in Nigeria.
2. H_0: There is no significant long-run relationship between stock price volatility, exchange rate, interest rate, inflation rate and stock market performance in Nigeria.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Random walk theory

The random walk hypothesis is a financial theory which states that price in the stock market develop in accordance to a to random walk, (so much such that the price cannot be predicted). Theory is in lyric with the efficient market hypothesis. The concept is easily traced to (Ragnault, 1963; Bachelier, 1900) which contained same outstanding insight and commentary. Similar ideas were subsequently expanded by (Cootner, 1964 & Fama, 1965)

Malkeil (1973) carried out his test by giving his students a hypothetical stock that was initial worth fifty dollars. A flip of coin was used to determine the price at which the stock closed daily, such that if the result was heads, stock price would close higher by half point, however, if the result was a tail, the stock would close at half point lower. Thus at every given time, the price had equal probability of closing lower or higher than the previous day. Trends or cycles were then determined from the test. He recorded the result in a chat and graph from which he then took to a chartist, a person who seeks to forecast movement in the future by analysing past trend based on the assumption that "history trends to recap itself" (Kean,1983). The chartist persuaded that they should immediately buy the stock and was disappointed by Malkeil confession that the result was based totally on flipping a coin. He went on to argue that this is an indication that the market and stocks could also be as random as the flip of a coin.

Similarly, the random walk hypothesis was performed in NBA basketball by psychologist they made a detailed study of all shorts made by philadephia 76ers over one and a half basket ball seasons. They found that no positive correlation exist between the previous short and the outcome of the next short. Economist and believers in the random walk hypothesis apply this to stock market returns being that the actual lack of correlation of past and present is seen easily. Thus, if the value of a stock rises one day, it cannot be predicted accurately by any market participant that it will go up again the next day. Just like a basket ball player with the "hit hand" can moss the next short, stocks can rise and fall at anytime making it completely unpredictable.

A non random walk hypothesis: However, there are other economist profesors and investors who are of the view that the market can be predicted to a certain degree. These group argue that prices may move in trends such that the direction of future prices could be predicted by studying past prices. There are some economic studies that lend support to their view and two professors have authored a book that tries to prove the theory wrong (Lo, 1999). Martin Weber a seasoned researcher in behavioural finance has performed several test and studies aimed at unhealthy trends in the stock market. In one of his research he observed the stock for ten years and discovered that within this period, stocks with a high price in the first five years tend to perform poorly in the next five years. This has been cited by Webber and other non-believers in the random walk theory and a key contradictor to the random walk theory (Fronlet, 2011). Webber ran another test that contradicted the random walk theory, this time

he found out that stocks that have had an upward revision for earnings out performed others in the next six months. With this knowledge, investors can forecast what stock to leave in the market and which one to take out. The study opposes the random walk hypothesis because he is of the opinion that trend and other tips exist for forecasting the stock market. Similarly, in a book titled " A non-random walk Down wall street written by Professors of finance they prove it with what is called the simple volatility-based specification test, which is an equation that states:

$$X_t = \partial + X_{t-1} + \rho$$

Where;
X_t is the price of the stock at time t
∂ is an arbitrary drift parameter
ρ_t is a random disturbance term.

With this formula they were able to input prices of stock over a number of years and study trends that have unfolded. Through the years, they found little incremental changes in the stocks. With this changes Mackinlay and Lo believe that the stock market can be predicted thus challenging the random walk theory.

Literature review
Indices in the financial system are unstable, thus causing fluctuations in reality and outlook. This is as a result of the volatile nature of the consistent component of the financial system (Wikipedia, 2008).

The daily decisions of the different component of the financial system being individuals, corporations, businesses and industries in fostering their going-concern objective are by no means less volatile. Thus fluctuations on the prices of stocks are always as a result of differing decisions on stock investment.

The stock market is one part of the financial system, which responds to a little uneasiness among the variables or system of the whole economy. The stock market also desires a going-concern, which however, depends on factors that seldom remain stable overtime.

Volatility has been defined as a measure of dispersion around the mean or average return of a security (Wagner, 2007). It is also often times referred to as the standard deviation of the change in value of a security within a specific time period and is usually used to qualify the risk associated with the instrument over that time horizon (Wikipedia, 2008).

It is worthy of mention that financial transactions that take place in the stock market or stock exchange involve assets, which by nature have an extended time horizon relative to most goods transactions. This in turn makes the financial system more sensitive to uncertainty about the future (Koubi, 2008).

Stock price seldom stay the same over time and show a situation of anomaly on a specific stock if its price does so. This is due to transaction cost. Koubi's (2008) study on financial development observes that stock return volatility is directly related to the stock market performance and posits that transaction cost effect on stock prices volatility may be ambiguous, however and Pirouz (2007), Mala and Reddy (2007), and Wagner (2007) attest to this. This they did for a cross section of countries employing pooled data and coefficient.

Wagner (2007), for example, records that there is a positive correlation between price volatility and stock market performance. Investigating this on developed economies of Canada, Australia and the United States, he opines that price volatility tends to decline as the stock market decreases and increases as the stock market rises. This is also the same with risk, he noted.

The return on a stock for an individual spurs the individual for a continuous and sustain investment in the stock market. It should, however, be noted that decisions of investors can affect stock market returns adversely and thus price volatility as well (Priouz, 2007).

Irrational behaviour from investors, both individual and institutional, novice and professional, can significantly affect stock market returns and price volatility (Priouz, 2007) as mentioned earlier. This is closely related to national culture dimensions as evidenced by Jegadeesh and Titman in Pirouz (2007). The authors proposed that above average returns can be made by investing with the momentum of the market. The momentum of the market, however, is associated with a variety of factors, ranging from household decisions to that of corporation, organizations and governments that are usually volatility.

The momentum of the market is also adversely and inversely affected by the inflationary rate of the entire economy given the monetary policy in operation at a given point in time (Mala & Reddy, 2007). This will invariably affect the expectations of investors, and by extension affect the market performance.

The expectations of investors as regards stock returns can be hampered by price volatility which influences inflation (Adamgbe, 2006). Adaptive and rational expectations of these investors are nonetheless, based on a non-analytic method, which is taken care of by the notice of volatility based on information about a stock market is liberalised.

On the other hand, the expectations of investors, be it adaptive or rational, lead to volatility, which is mostly based on the impulse response functions of investors. Impulse response function can be described as the intuition in which an investor has in selecting a stock (Pirouz, 2007). Types of volatility as identified, include stochastic volatility, SABR Volatility, implied volatility, local volatility, volatility smile, volatility clustering.

Estimation of these volatilities is the least simple and constitutes a very vital characteristics on prices of stock in the stock market (Little, 2007). These types of volatility traverse general terminologies. On the other hand, the types of volatility affecting stock prices specifically, invariably, affecting stock market performance include historical and implied volatility (Little, 2007).

Poon (2005) presumes that historical volatility can be measured from past market prices. Docking and Koch (2005), explain that historical volatility also known as realised volatility is associated with a period of time, actually, two periods of time. Expatiating, they posit that the measure of the amount of randomness in a financial quantity at any point in time can be described a s historical volatility and assert that it is difficult to measure since it deals more with past stock prices that cannot be used for future investment decisions.

Wilmot (2007), quoting Desmond Fitzgerald, termed historical volatility as 'bouncy bouncy' and asserts that it is used to measure how active a stock price typically is over time. That is, the

fluctuations in share prices. This volatility over a long period of time can show how well the stock market has performed.

Beside historical volatility, implied volatility also exists. Implied volatility is that level of volatility that will calculate a fair value of an option that is equal to the current trading option prices and reflect today's market perception of the future (Dynamic, 2008).

Implied volatility can be determined when looking at an option through the strike price, the expiration date of a transaction, the current stock price, and the stock dividend paid by the stock investment strategies (Poon, 2005).

In other words, implied volatility explains the nature of the recent trend of the stock market and can be affected by government regulation, legislation, monetary policy, decisions of households, firms, investors, exchange rate, to mention a few, given how the market has been liberalised and the general level of prices (Nasseh & Strauss, 2000).

Implied volatility is very important in that it tends to be a leading indicator of stock direction. For instance, it is posited by (Caldwell, 2004) that when a stock falls the implied volatility does not change and the market does not show this. Conversely, if the implied volatility rises, then the market is nervous about the stock's downside potential.

A stock's downside potential implies that the stock market and its returns are declining and this implies risks taken by investors since volatility implies risk that is associated with the degree of dispersion of returns around the average (Wagner, 2007).

Furthermore, volatility is important to be noted as it traverses all spheres of investment, especially, investment in the stock market, which is of the type investors commit monetary or other resources forward subjecting themselves to future risks (Magnus & Fosu, 2006). It needs to be mentioned that almost all risks associated with financial assets derive their bearing from volatility of varied economic indices. The impact of volatility on the stock market can be likened to a pendulum that swings back and forth as illustrated by stock prices noticed from market reports.

In a typical stock market report, looking at the price columns for each stock in each sector, it could be observed that prices seldom stay the same on as little as on a day-to-day basis (Chukwuogor, 2007). This hitherto, is as a result of the volatile nature of the constituents of the stock market and the most vital of this is information (Teresiene, Aarma & Dubaukas, 2008).

The impact of information that comes up inadvertently on individual stock prices cannot be over-emphasised, most especially that of a company in trade (that is, a company whose stocks are listed) on the floor of the exchange. Be it positive information, the stock's price reacts and if negative, the stock's price reacts all the same (Catao, Fostel & Kapur, 2007).

In a nutshell, investors do not need to lose sight of volatility, though its measurement is said to be tricky, given the unquantifiable items that mostly cause a price shift. This, however, can be taken care of by the foremost Black Scholes Model (Wikipedia, 2008). In addition volatility presents itself on all economic indices and the reaction of the Nigerian stock market to the volatility of macroeconomic indices forms the interest of this current study as derived from literature, volatility of economic and financial indices reacts on stock prices and stock market performance.

Imoyo (2007) challenged Oluba's (2008) assertions noting that the Nigerian market has ignored major fundamentals after having an unprecedented and undaunted 'roller-coaster'. This, Imoyo (2007), observed for fundamental strong companies in fundamentally strong sectors who still continues to do well as compared to the rest of the market and attributes this to effective monitoring of macroeconomic indices that gives rise to sector imbalance in the stock market. In other words, a downturn can occur in the market but would not affect fundamentally strong companies as a result of some investors buying shares due to market hear-say, thus arbitraging on stock with go prospects.

RESEARCH METHODOLOGY

Research Design

A research design can be viewed as the structure of a study. It can also be seen as the blueprint of the study that defines clearly how the parts of the study work in harmony to achieve the laid out objective(s). The appropriateness of the research design enhances the quality of any research to be carried out. Therefore, this study was both descriptive and historical in nature as it sought to describe the pattern of returns of the Nigerian Stock Exchange (NSE) in the past.

Techniques of data analysis and Model Specification

Various tools were applied on the time series data collected for this study. First the ARMA test was applied to ascertain the relationship between market capitalization and its lagged values. The study also applied the ARCH and GARCH models to estimate the conditional variance of Nigerian annual stock returns. Furthermore, ERS was used to test for the non-stationarity of the variables. Other tests conducted by this study were the cointegration and VAR tests.

In order to estimate volatility and predictability of stock prices in Nigeria stock market, it was necessary to specify the model that was utilised to analyse the data. The market capitalization will be used as a proxy for performance indicator of the Nigeria stock market and as such was the dependent variable. The independent variables utilised in this study were stock price volatility, exchange rate, interest rate and inflation rate are taken as proxy for stock price. The model thus;

$$\Delta LogMCAP_t = \alpha_0 + \alpha_1 \Delta Logp\_vol_t + \alpha_2 \Delta LogEXCH_t + \alpha_3 \Delta LogIR_t + \alpha_4$$

$$\Delta LogINFLA_t + \alpha_5 \sum_{k=1}^{p} \beta_i \Delta Logp\_vol_{t-k} + \alpha_6 \sum_{k=1}^{q} \mu_i \Delta LogEXCH_{t-k} + \alpha_7 \sum_{k=1}^{r} \varphi_i \Delta LogIR_{t-k} + \alpha_8 \sum_{k=1}^{s} \Omega_i$$

$$\Delta LogINFLA_{t-k} \ e_t$$

Dependent variable is MCAP = Market capitalization

Where
α0 = Constant
α1to α8, βi, μi, Ωi andφi= Model parameters
Δ Log = First difference of logarithm
The following are the independent variables
P-VOL = Stock price volatility
INF   = Inflation rate
INTR   = Interest rate
EXCHR = Exchange rate
$e_{t =}$ Stochastic error term
4.0   Analysis and discussion of findings

DATA ANALYSIS

The ARMA test was performed to establish the stationary nature of the dependent variable (MCAP). Only the first difference operator was considered directly in the estimation specification. The optimal order of ARMA term was taken to be ARMA (2,1). This means that there were two autoregressive terms and a single moving average term. Since it is known that only general results are interpreted for ARMA, we employed only the F-Statistics and not individual statistics in our interpretation. From the result obtained, one can reach the conclusion that the overall ARMA model is statistically significant given the high value of F-Statistics (223.6462) and zero value of its probability. Similarly, the analysis of the inverse root of ARMA polynomials shows the invertibility and stationarity of the ARMA model. This is so because as revealed from the ARMA correlogram result, none of the root was found to rally around the acceptable region. It is therefore safe to say that, the current value of MCAP indeed depended on its lagged values.

The GARCH test was also carried out primarily to ascertain the volatility shocks persistency over time. It was carried out without imposing any restrictions either on the parameters or variance targeting. From the result obtained, the R-square, is negative due largely to the absence of regressors in the mean equation (Startz, 2009). Consequently, adding the coefficients of ARCH and GARCH (0.289091+0.132105 = 0.421196), is very far from one. This is a strong statement that the Nigerian stock market volatility shocks were not quite persistent during the study periods. Thus, we can conclude that volatility shocks in the stock market were not persistent.

Taking consideration of the time series nature of the data used for estimation, it is certainly possible that we may obtain spurious results. To overcome this problem, stationarity test was conducted on the series using the Elliot, Rothemberg and stock test. The result of the Elliot, Rothenberg-stock unit root test shows that two variables (p-vol and interest rate) were stationary at levels. This is so because its ERS test statistic of 2.635900 and 1.397448 is less than the critical values of 1.870000 at one per cent, 2.970000 at five per cent and 3.910000 at 10 per cent. Except for interest rate and stock price volatility, all other variable were found not to stationary at levels. However, all variables were not stationary at 1 percent level when the series was differenced. Meaning that, the order of integration was 1(1) when the series was differenced once.

The integration of the series of the second order suggests that the variables of study exhibit the presence of a long-run relationship. By establishing this long run relationship, we employed the Johnansen multivariate cointegration as presented in appendix (6). The cointegration tests as presented in appendix (6) using both the trace and maximum-eigenvalue tests revealed two cointegration equations at 5 percent level. This is because their trace and maximum-eigen statistic values for the two cointegration equations exceed the 5 per cent critical value indicating the presence of the long-run relationship among the variables.

The long-run estimates as presented by the result shows that stock price volatility and interest rate have a positive and significant long-run relationship with market capitalization. Specifically, a 1 percent increase in both stock price volatility and interest rate will lead to a 1.33 percent and a 0.12 per cent increase in MCAP respectively in the long-run. As expected, there was a long-run significant negative effect on MCAP by both exchange rate and inflation. The results revealed a 1 percent increase in both exchange rate and inflation decreases MCAP by 0.03 per cent in the long run.

Since we have been able to establish the existence of the long-run relationship among the variables of interest, we proceeded to perform the causality test to determine the causality directions among the variables. After critical assessment using the Akaike Information Criterion (AIC), 2 lags were utilized for the test. The results indicated a uni-directional relationship between the stock market volatility and market capitalization. From the results obtained, it means that it is stock price volatility that granger causes market capitalization but not the other way round. Based on the granger causality test result, the significance effect of the stock market volatility on the Nigerian quoted stocks' performance during the reference periods. Further examination also reveals a uni-directional relationship between: inflation and exchange rate; inflation and stock price volatility; market capitalization and interest rate; and exchange rate and market capitalization. This is established based on the fact that the probability values in these equations are less than 0.05 in the respective equations.

The short-run error correction model (ECM) estimates are estimated under the framework of VAR model. As shown by the results, only one out of the five models has a fairly good fit, given the values of R-squared in this model. The remaining four models have poor fits. Meanwhile further examination of the five models showed that only one model (Market Capitalization model) was statistically significant. This is so because the F- statistics value. The remaining models were not statistically significant as their F- statistics calculated were all less than the critical values at 5 per cent significant level.

However, focusing our attention on the stock market performance model, the result of the short-run dynamics indicated that the ECM coefficient was correctly signed and judged to be statistically significant. As can be seen from the result, about 35 per cent speed of adjustment to the equilibrium was witnessed in one year. The 0.701 value of the R-squared indicated that the explanatory variables have explained about 70 per cent of the total variations in stock market performance in Nigeria. The F-statistics value (4.302) also showed that the explanatory variables collectively were significant in explaining short-run changes in stock market performance in Nigeria. The short-run estimates showed that previous two period's value of market capitalization has negative impact on the current value of market capitalization. Surprisingly, stock price volatility is negatively related to stock market performance. A per cent increase in stock price volatility leads to a 0.03 per cent decrease in stock market performance in Nigeria, ceteris paribus. Similarly, the negative effect of interest rate on MCAP is in consonance with theoretical expectation, indicating a decrease in stock market capitalization by 0.03 percent other variables held constant.

Contrary to a priori expectation, inflation rate has positive relationship with stock market performance and inconsistence with theoretical expectation. However the result showed a per cent increase in the value of inflation will increase stock market capitalization by 0.005 percent other things remaining the same. Lastly, the positive effect of exchange rate is also in consistence with the theoretical postulation. The positive sign of the exchange rate coefficient shows an increase in stock market performance by 0.15 percent, other things being equal.

DISCUSSION OF MAJOR FINDINGS

The result of the short run dynamics showed that there exists a positive relationship between stock price volatility and market capitalization in Nigeria. A negative relationship between them may attribute to the under-developed nature of capital markets in the developing countries, including Nigeria.

As shown in the result, interest rate impacted negatively on stock market performance. This was consistent with Aurangzeb (2012). The negative impact of inflation on stock market performance is inconsistent with the theoretical belief that an inflationary condition devalues the purchasing strength of money. This is inconsistent with the Fama's proxy hypothesis because under high inflation, stocks and other financial assets fail to keep up with the increase in the prices of goods.

Also high inflation creates volatility in stock market returns, which usually leads to the collapse in the stock values. For exchange rate, theoretical background has established that exchange rate has two kinds (positive and negative) impact on stock market but this study revealed a negative effect.

Statistically, only one out of the four explanatory variables was statistically significance, which is the interest rate. The variable was significant at 10 per cent significant level. On this note, it is concluded that interest rate have significantly impacted on the performance of the Nigerian stock market. In addition, the two period lagged value of market capitalization, inflation rate, price volatility, and exchange rate were not statistically significant because their t-statistic value calculated were all below the critical values at 5 and 10 per cent significant levels. This means that market capitalization, inflation rate, price volatility, and exchange rate were in influencing stock market performance in Nigeria.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION
Summary of findings

This research study was undertaken to examine the effect of stock price volatility on the performance of the Nigerian stock market. Various estimations as well as tests have been performed on the specified model and the major findings from the various estimations and tests are highlighted as follows;

The test conducted on the dependent variables (MCAP) showed that the model was statistically significant and hence its accuracy cannot be doubted. In the same vein, the analysis of the inverse root of autoregressive moving average polynomials showed that the model is stationary and invertible since none of its roots was found outside the unit circle.

The test was conducted to test the degree of persistency that the volatility of stock price exhibits and its effect on the quoted stock performance; it showed that the volatility shocks in the Nigeria stock market were not quite persistent for the period under review.

The unit root test using Elliot- Rothemberg and Stock test revealed the non-stationarity of the series at levels but became stationary when the series was difference once. Since the series was integrated of order 1(1), cointegration test was conducted. The revelation of the presence of the long-run relationship among variables came into effect through the results obtained from the cointegration test.

A unidirectional causality relationship was revealed from the Granger causality test between the volatility of the stock price and market capitalization (MCAP). There were also uni-directional relationship between market capitalization and interest rate. This was also the case for exchange rate and market capitalization; inflation and stock price volatility; and inflation to exchange rate.

CONCLUSION

It was the thrust of this study to examine and determine the effect of stock price volatility on the performance of Nigerian quoted stocks. Stock markets in the world are known to play a vital role by helping to allocate funds efficiently to end users for investment purpose. However, several risk factor have been identified which financial experts believed posed serious problem to the efficient workings of the stock market. One of such risk is stock price volatility. Stock price volatility has real wealth effect on consumer spending as well as dampening of consumers' confidence. Whether this risk has affected the performance of the Nigerian stock market was the main objective of the study.

Based on the result obtained, it is found that stock price volatility has negative and insignificant impact on market capitalization. The result also found that exchange rate and inflation rate have positive and insignificant relationship with market capitalization, whereas the effect of interest rate on stock market performance was seen to be significant but negative. In general, the result obtain from the GARCH test showed that stock price volatility has not had persistent shock quoted stock in Nigeria during the study periods. We can therefore conclude that stock price volatility has not enough destabilizing effect on the performance of the Nigerian stock market, since the shocks arising from stock price volatility has no persistent effect on the quoted stocks in Nigeria.

RECOMMENDATIONS

In line with the analysis and results obtained in this study, it is therefore recommended that:

The negative impact of stock price volatility on the on the stock market performance demands that concise and appropriate policies and reforms to be implemented aimed at encouraging investment in the stock market.

There is need to ensure stability of the stock market, so as to boost and restores investors confidence in the market such confidence, will lead to increased investment in the market.

A reduction in the rate of interest rate should be adopted and implemented since interest rate acts as alternative source of investment. This was due largely on the negative effect of interest rate on the dependent variable.

Meanwhile, the positive effect of inflation on stock market calls for policies to reduce inflation rate to a single digit. This is because under high inflation, stocks and other financial assets fail to keep up with the increase in the prices of goods, leading to the collapse in the stock values.

Lastly, stabilization policy on the movement of exchange rate should be carried out owing to the positive effect it has on the stock market performance in Nigeria.

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An Empirical Research on the Ranking of Chinese State-owned Banks in Corporate Social Responsibility

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Abstract

Purpose - This paper aims to provide a ranking of the four Chinese state-owned banks: Industrial and Commercial Bank of China (ICBC), Bank of China (BC), China Construction Bank (CCB) and Agricultural Bank of China (ABC) based on corporate social responsibility by using an assessment model proposed by Zhu so as to test the model and drive the best CSR performance of these leading Chinese banks.

Methodology - The paper ranks the four Chinese state-owned banks by using Zhu's model (see Sect. Appendix), which covers not only the CSR practice of banks but also management system. Furthermore, our ranking is constructed by content analysis, assigning scores manually. To rank the four banks, we adopted four kinds of information resources: corporate annual report in 2013, CSR annual report in 2013, articles of company and website. Our ranking can be a useful instrument for bank's self-assessment to find out the existing problems, identify their area to improve in CSR and set proper goal and guidelines to enhance their CSR behavior.

Findings - The study finds that the four state-owned Chinese banks are ranked in CSR performance as follows: 1. Industrial and Commercial Bank of China, 2. Bank of China, 3. Construction Bank of China, and 4. Agricultural Bank of China. In general, the four banks can protect stakeholders' interests and their policies conform to sustainable development and national macroeconomic policies. But improvement is needed for information disclosure, etc.

Originality/value - The paper is of great theoretical and practical significance. One the one hand, we fill the gap of lacking empirical research on Chinese bank ranking based on CSR in literature. On the other hand, our research provides clues for a boarder range of banks' ranking based on CSR in the future. For further research, we will apply our model to evaluate all Chinese commercial banks based on CSR and report the ranking annually, providing stakeholders with information about CSR to help them to adjust their decision, and simultaneously providing banks with information about the status quo of their CSR performance and promoting their CSR management.

Keywords: Corporate Social Responsibility, Chinese State-owned Banks, Ranking, Assessment Model

INTRODUCTION

Corporate social responsibility (henceforth CSR), recently defined by the European Commission as "the responsibility of enterprises for their impacts on society" (European Commission, 2011) is one of the main topics of interest for the academic community and industries in the past decades. With the dissemination of the concept of sustainable development "to meet the needs of the present without compromising the ability of future generation to meet their own needs" (World Commission on Environment and Development, 1987) and the repeated occurrence of certain high-profile events, labeled as 'scandals' in some corporations, which damage the image of the corporation, the importance of CSR is further accentuated in most corporations for the recovery of corporate credibility and customers' trust.

As for commercial banks, their CSR activity can not only bring merits that CSR activity brings to other common corporations, such as good corporate image and sustainable development, it can also has a huge impact on our society for its nature of acting as financial intermediaries in our society: pricing and valuing financial assets, monitoring borrowers, managing financial risks and organizing the payment system (Greenbaum and Thakor, 2007). For example, through green-credit policy, commercial banks can control the number of high pollution industries. What is more, the sub-prime mortgage crisis and the following credit crunch provide illumination for us that CSR of commercial banks is essential for the stability of national economic growth.

Hence, measuring and publishing the ranking of commercial banks' CSR performance is of great theoretical and practical significance. On the one hand, publishing the ranking makes it easier for stakeholders, defined as "groups and individuals who can affect or are affected by the achievement of an organization's mission" (Freeman, 1984) to get access to information about CSR performance of a bank and check whether the bank takes care of the stakeholders' interest in its business operation. On the other hand, in order to hold or attract more customers and investors, a bank should take some measures to regulate its CSR performance, which, to some extent, improve banks' CSR performance. But so far, there is no any organization in China using any framework to assess banks' efforts in CSR and publishing the ranking.

As a tentative study, this research tries to rank the four Chinese state-owned commercial banks (the largest commercial banks of the country) based on their CSR performance by using an evaluation model proposed by Zhu (2009) to fill this gap in literature. Zhu's evaluation model contains two parts of banks' CSR performance audit factors including management systems and real practices, with different weightings totaling 100 points. This model has been created and published for several years, however, it has not been applied in the real business world to evaluate any bank' CSR contributions. Banks' CSR performance concerns with not only their own sustainable development cause but also the whole society's economic and social security. It is necessary to conduct the related rankings each year to drive the banks to perform more socially responsibly. And, in the longer term, our intention is to further enrich and apply the model to undertake comparative researches encompassing a broader range of commercial banks in the whole country, and even in the whole world.

The content of this paper is divided into four parts as follows. Section "CSR and Banks: a Literature Review" provides a critical literature review on CSR with reference to banks. Section "methodology, model and sample" focuses on the research method, model and sample used for CSR performance ranking. In section "Result analysis and suggestion", we analyze the situation where the four banks' CSR performances were, point out the existing shortcomings and give

some suggestions. In section "conclusion", we come to a conclusion of the whole paper, which will sum up what has been found from the above analyses in the former sections, point out limitation of current research and express expectation of future study.

CSR AND BANKS: A LITERATURE REVIEW

In the past decades, numerous studies have been done about CSR and banks. Here we summarize the previous views as the following four dimensions: connotation and necessity of bank's CSR, determinants of bank's CSR, the effects produced by banks' CSR policies and the measurement of banks' CSR performance.

As regard to the connotation of commercial bank's CSR, it is usually described in four aspects: economic, legal, ethic and philanthropic responsibility (Carroll, 1991, and Cao and Wang, 2008), whilst it is also defined from the perspective of stakeholder. Zhu (2008) elaborated bank's CSR for community and the public, customers, employees, suppliers and competitors, and shareholders in his paper. And Prior and Argandona (2008) pointed out that social responsibility of commercial banks includes not only being financially sustainable in all their undertakings in microfinance, but also expanding outreach and making financial services more available to the unbanked segments of the population. Zhu (2009) explained why commercial banks should fulfill CSR from the perspectives of development in commercial era, nature of modern corporate system, shareholders' long-term profit, and coexistence in ecological environment, legal regulation, social contract theory and globalization.

In respect of CSR determinants, Chih et al. (2010) found that banks are more likely to implement CSR strategies when: banks are with large size, market competitiveness is more intense, banks are in a country with stronger levels of legal enforcement, more cooperative employer–employee relations, higher quality management schools, and a better macroeconomic environment and there is self-regulation within the financial industry. However, it is found that banks in countries with stronger shareholder rights tend to less engage in CSR activities. Other researches about the success of CSR performance mainly focus corporate governance. It is pointed out that increasing ratio of non-executive directors, women directors and foreign directors have positive impact on CSR reporting (e.g., Sharif and Rashid, 2014; Barako and Brown, 2008) and CEO duality also impacts positively on CSR disclosure (Jizi et al, 2014). Furthermore, Scholtens (2006) holds that finance works as a driver of CSR.

With reference to the effects resulting from CSR, the link between corporate social performance (CSP) and corporate financial performance (CFP) is a typical research focus though contradictory conclusions have been achieved. Soana (2011) proves that there is no statistically significant link between CSP and CFP, while a growing number of analyses indicate a positive relationship between CSP and CFP (e.g., Simpson and Kohers, 2002; Scholtens, 2006). By presenting a credit score system based on sustainability issues to improve banks' lending policies, Zeidan et al (2013) proved that sustainability and profitability do not tend to be inversely related. Other researches supposed that CSR is a vehicle to reveal corporate identity and numerous banks perceive it as an inherent part of their idiosyncrasy (Bravo et al, 2012; Perez and Bosque, 2012). Another effect produced by CSR is that lenders are more sensitive to CSR concerns in the absence of security and low-quality borrowers face higher loan spreads and shorter maturities, but lenders are indifferent to CSR investments by high-quality borrowers (Goss and Roberts, 2011).

Finally, for CSR measurement, there are literatures about the assessment of CSR performance of banks prevail in the past years. Aribi and Arun (2013) analyze how banks are responding to the welfare needs of society and found that a thorough understanding of CSR by managers has

not been reflected sufficiently in practice through analyses of interview data and disclosures. Similar research like paper of Belal et al. （2014） and paper of Izquierdo et al. (2012) examine social responsibility situation in financial institutions such as saving banks. What is more, some scholars try to put forward some framework to evaluate bank's performance in CSR. For example, Scholtens (2008) provided a framework to assess CSR with international banks. Perez et al. (2013) develop a new scale based on stakeholder theory to evaluate customers' perception concerning the CSR performance of their banking service providers. Birindelli et al. (2013) construct a multidimensional ethical rating model, based on items representing the most significant CSR drivers of the banks. Zhu Wenzhong (2009) proposes a framework which includes 50 items divided into two parts: management systems and CSR practices to evaluate efforts of banks in CSR.

Though the assessment model has been put forward by Zhu, no organization so far has put them into practice, and tries to rank the banks based on CSR performance, thus our research is of great significance for the practical application of the model and the further perfection of it. In other word, it contributes to the enrichment of the related theoretical and practical studies.

METHODOLOGY, MODEL AND SAMPLE

The connotation of CSR of banks includes numerous aspects, which make it multidimensional. This means that when assessing of banks' CSR performance we should take the multiple CSR behaviors implemented by banks into consideration. Based on this context, our paper ranks the four Chinese state-owned banks by using Zhu's model (see Sect. Appendix), which covers not only CSR practices of banks but also management systems. Furthermore, our ranking is constructed by content analysis, assigning scores manually (without the use of software). To rank the four banks, we adopted four kinds of information resources: corporate annual report in 2013, CSR annual report in 2013, articles of companies and websites. Our ranking can be a useful instrument for bank's self-assessment to find out the existing problems, identify their area to improve in CSR and set proper goals and guidelines to enhance their CSR behaviors.

Zhu's assessment model that we adopted in our paper was divided into two parts: management systems and CSR practices. It includes 50 relevant items to evaluate banks' CSR performance and determine the ranking. By applying the content analysis methodology and verifying the presence or absence of information on the websites and in the documents (corporate annual report, corporate CSR annual report, and articles of company) of the four sample banks, a score was assigned to each of the 50 items for each bank. In our research, if the bank offered details about an item in the four kinds of information resources we chose, full marks of this item will be given to that bank. If the bank just offered general information about an item, only half of the marks of that item will be given to that bank. And if no information was offered, the mark of that item of that bank will be zero. The aggregate scores had led to the ranking of the four banks, based on the level of social responsibility previously determined.

Zhu's model is a relatively comprehensive and scientific model for it covers not only CSR practice but also management system as we have mentioned above. The part of management system has three objectives: first, this part was designed to verify the practice of dissemination of the concept of CSR. Items like "corporate value", "existence of code of conduct", "activities about disseminating the concept of CSR", "lecture and training about CSR for employees" were designed to achieve this goal. The implementation of these items is crucial for the implementation of the bank's CSR polices. Second, this part tends to verify measures ensuring the implementation of CSR policies. Items about governance structure were designed for this purpose. And this model highlights the diversity of non-executives directors which can

promote CSR disclosure as was stated in previous literature (Sharif and Rashid, 2014; Barako and Brown, 2008). Thirdly, this part tries to verify the accessibility of documents about CSR such as corporate annual CSR reports and complete CSR records. The accessibility of such documents provides the public with adequate information about their CSR performance and presents the corporation's identity, thus enhancing the bank's reputation.

The second part of Zhu's model "CSR practice" focuses on ensuring stakeholders' interest, socially responsible financial instruments and adoption of some principle and policies. For ensuring stakeholders' interest, this model evaluates four aspects: (1) consumer rights, consumer satisfaction and sustainable investment program (2) employee's legitimate rights, employee satisfaction and training (3) fair competition and observation of market rule (4) shareholders' profit maximization and management mechanism. In respect of supply of socially responsible financial instruments, this model focuses on microcredit, student loans and charitable donation. As regard to adoption of some principle and policies, this model takes supporting national macroeconomic policies including public health, taxation, environment protection and supporting community construction, and Equator principle into account.

The sample examined is made up of four Chinese state-owned banks, also the top four banks by market capitalization according to the ranking in 2013. The choice of a sample based on market capitalization aims at verifying whether those banks that are more exposed to assessment by investors are also aware of the impact of their business on the community and are eager to build and retain their reputation through socially responsible practices. We also believe that the analysis of such banks, that hold a prominent position within the Chinese banking system, can provide useful information on best practices of CSR behavior.

RESULT ANALYSIS AND SUGGESTION

After analyzing the content of the documents and websites we chose as information resources, assigning score to each item of the mode and summing up all the scores, it came out that ICBC got the highest mark (76), followed by CBC and BC (68.5), and then ABC (67). In the following paragraphs, we will analyze this result and try to make suggestions.

For management system, the concept of CSR was included in the corporate values of these four Chinese state-owned banks, which means that all of them attach great importance to CSR and regard it as their strategic goal to keep good reputation. The four banks all ensure the diversity of independent directors. The number of independent directors in the four banks accounts for more than one third of the total directors. The number of independent directors is an important element to ensure the quality of decision made by the Board and therefore to improve the quality of governance. Independent directors can ensure an incisive scrutiny of transactions involving conflicts of interest and more considered evaluations of management decisions to ensure the interests of all shareholders. In addition, in these four banks, processes of director election and decision making are overt. While among the four banks, only CBC and ABC have established CSR committee to guide CSR work. None of the four banks has a special CSR department and appoints a manager to specialize in CSR work.

All of the four banks have published a CSR annual report which ranges from dozens of pages to more than one hundred pages. The report usually incorporates the following parts: company profile, chairman's report, corporate value, and corporate governance and CSR practice towards stakeholders. In addition, the banks' website is user-friendly access to the CSR section which provides you with details about the bank's CSR performance. In order words, the websites are created to facilitate the search for their CSR performance. Among the four banks, only one click is enough to get access to BC's CSR section. And it requires two clicks to get

information about CSR on the websites of ICBC, CBC and ABC. Although all the four banks have published their CSR annual report, they have not published a complete CSR record yet.

In relevance to accounting system, none of the four banks takes social costs and social benefits into account while taking social costs and social benefits into consideration is an important aspect to evaluate bank's impact on the society. At the same time, none of the banks has code of conduct which is important to guide their CSR activities. Referring to educational policies, they do not report the activities they carry out to disseminate the bank's CSR values and seldom give lectures or offers trainings about CSR to employees, which is essential for banks to carry out their CSR policies.

scores of the part of management system of the four banks
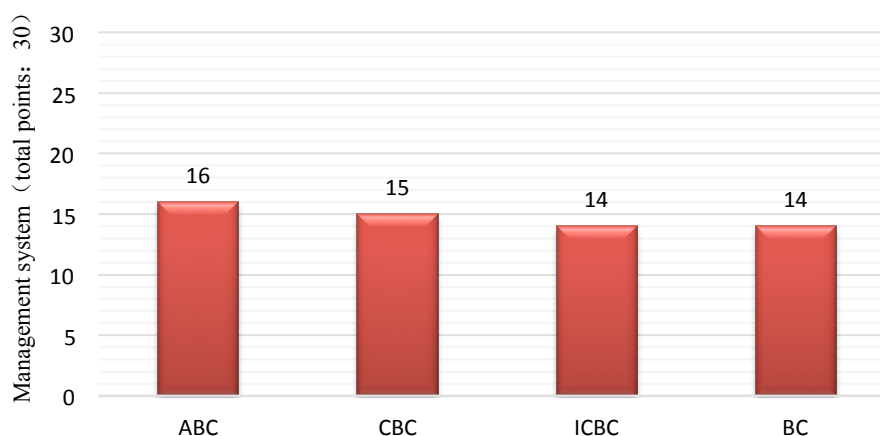
In summary, from the above analyses and figure1, we can find that there is a great space for the four banks to improve in the management system of CSR. The marks the four banks get in this part are 14(ICBC), 14(BC), 15(CBC), 16(ABC), less than or a little above 50% of the total marks (30) of this part. First, they are encouraged to establish a CSR department and appoint a CSR manager to be in charge of their CSR affair regularly. Second, they should incorporate social costs and social benefits into the accounting system to weigh their costs and benefits more scientifically and comprehensively. Third, they are badly in need of code of conduct to guide their CSR behaviors, and more lectures and trainings about CSR are wanted.

In respect of CSR performance, these four banks all make great contribution to employment, recruiting increasing number of employees. All of them pay close attention to public health, support community construction and make large amount of donation. 100% of the sample banks are environmental friendly, reducing the use of paper and per capita consumption of gas, electricity and water to accelerate energy conservation and emission reduction. Meanwhile, they support national macroeconomic policies and microcredit policies. But two of them (ICBC and ABC) do not report their behavior of providing student loans, thus they just get half of the marks for the item of supporting microcredit and student loan. None of the four banks publishes their taxation record and adopts Equator Principle to regulate their project lending policies.

For CSR behavior towards customers, 75% of the banks conduct surveys about customer satisfaction, offering clients opportunities to express their opinion about their level of satisfaction, their loyalty to the banks and the quality of advisory services. In general, all the

banks report that they take measures to protect customer rights, but only ICBC offer details in their CSR annual report to support that and the other three banks just mention it.

For CSR behavior towards employees, except ABC, the other three banks report that they regularly survey employee satisfaction to see how satisfied employees are with their working conditions and where they would like to see improvements in order to create a positive and stimulating work atmosphere. Two of the four banks offer details about optimizing management and performance appraisal system in CSR annual report since employee motivation and dynamism are driving forces behind the success of a company. Except ABC, the rest three banks carry out strategies to promote diversity and equality in their workforce, such activities about caring female employees. These three banks report the proportion of female employees and ethnic minority employees because a non-discriminative working environment must treat each employee equally regardless of race, religion, nationality, age, sexual inclination or physical ability. The four banks claim that they protect employees' legal rights such as paying wages on time and security of the workplace, but some of them does not provide details about some items in their CSR annual report. None of the four banks publishes the complain rate of sexual harassment and employees' participant rate of trade union.

As for CSR behavior towards suppliers and competitors, all the four banks observe market rules and establish win-win cooperative relationship with their counterparts to avoid monopoly. With regard to behavior towards investors, all the four banks run well and their earnings keep growing to ensure shareholders' profit maximization. In addition, they have established the mechanism of venture management, innovative management and sustainable management, and good notification system of supervision information, audit information and investment information.

scores of the part of CSR practice of the four banks
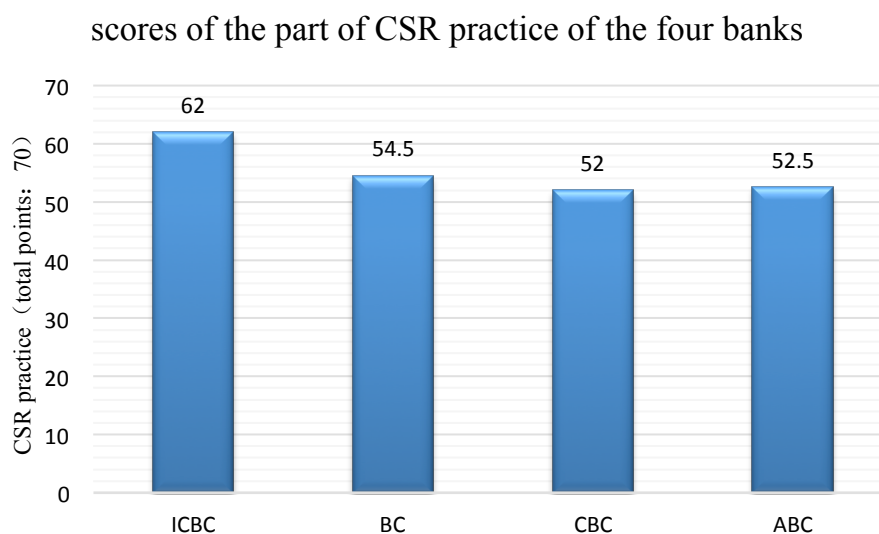
In summary, the four banks behave better in the part CSR performance comparing to the part of management system. As we can see in Figure 2, the marks the four banks get in this part are 62(ICBC), 54.5(BC), 52(CBC), 52.5(ABC), all above 74% of the total marks (70) of this part. In general, the four banks can protect stakeholders' interests and their policies conform to sustainable development and national macroeconomic policies. But improvement is needed for information disclosure. Some of them should offer details about some items in their CSR annual report. And they should disclose information more comprehensively, not just publishing positive information about their behavior. They should also disclose negative information objectively, for example, the complain rate of sexual harassment.

CONCLUSION

As we have mentioned, so far there is not any organization in China using any CSR assessment model to rank commercial banks. As a tentative study, our paper tries to rank the four Chinese state-owned banks based on their CSR behaviors by adopting Zhu's model as a kind of testing and application of it.

The study finds that the four state-owned Chinese banks are ranked in CSR performance as follows: 1. Industrial and Commercial Bank of China, 2. Bank of China, 3. Construction Bank of China, and 4. Agricultural Bank of China. In general, the four banks can protect stakeholders' interests and their policies conform to sustainable development and national macroeconomic policies. But improvement is needed for information disclosure, e.g., they should disclose information more comprehensively, not just publishing positive information about their behaviors, and they should also disclose negative information objectively, for example, the complaining rate of sexual harassment, etc.

At the same time, we are well aware of the limitation of our research. The number of the banks we have analyzed is limited and the model we have adopted still needs to be improved. When analyzing the CSR annual report of the four banks, we found that all of them provide information about promoting financial literacy, which is very important for customers' financial safety. But the model we adopted does not incorporate such an item to evaluate bank's CSR performance towards customers.

In all, our research is of great theoretical and practical significance. One the one hand, we fill the gap of lacking empirical researches on Chinese banks' ranking in CSR performance in literature. On the other hand, our research provides clues for a boarder range of banks' ranking based on the CSR evaluation model in the future. For further researches, we will apply the model to evaluate all Chinese commercial banks' CSR performance and report the ranking results annually, providing stakeholders with information about CSR performance so as to help them to adjust their decision, and simultaneously providing banks with information about their status quo of CSR performance and promoting their CSR management.

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APPENDIX
Zhu's assessment model, Management system

		Mark of the item	ICBC	BC	CBC	ABC
Corporate value	1. Sustainable development included in corporate core value	1	1	1	1	1
	2. Concept of CSR included in mission	2	2	2	2	2
	3. CSR objectives included in strategic management	4	4	4	4	4
Governance structure	4. Diversity of non-executive directors	3	3	3	3	3
	5. Transparency of election and decision making process	1	1	1	1	1
	6. CSR committee	1	0	1	0	1
Management structure	7. CSR department	3	0	0	0	0
	8. Top manager appointed to change CSR affairs	1	0	0	0	0
Annual report	9. Complete CSR records	1	0	0	0	0
	10. CSR annual report	3	3	3	3	3
Accounting system	11.Social cost included in accounting system	2	0	0	0	0
	12. Social benefit included in accounting system	2	0	0	0	0
Educational policies	13. Code of conduct	4	0	0	0	0
	14. Activities to disseminate CSR value	1	0	0	0	0
	15. Lecture and training about CSR for employees	1	0	0	0	1

CSR practice

Community and the public	16. Quantity of employment	2	2	2	2	2
	17. Records of taxation	2	0	0	0	0
	18. Contribution to public health	2	2	2	2	2
	19. Contribution to community construction	2	2	2	2	2
	20. Records of environmental protection	1	1	1	1	0.5
	21. Compliance with Equator Principle	3	0	0	0	0
	22. Support for macroeconomic policies	3	3	3	3	3
	23. Support for microcredit and student loan	2	1	2	2	1
	24. Charitable donation	2	2	2	2	2
Customers	25. Measurement of customers satisfaction	1	1	1	1	0
	26. Protection of customer's right to know	2	2	1	1	1
	27. Protection of customer's option	2	2	1	1	1
	28. Protection of customer's safety	2	2	1	2	1
	29. Protection of customer's right to complaint	2	2	1	2	1
	30. Improvement of service quality	2	2	2	2	2
	31. Sustainable investment program	2	2	2	2	2
Employees	32. endowment insurance& health	2	2	2	2	0

	insurance					
	33. Wage paying	4	4	0	0	4
	34. Race, sex, age, religion discrimination of	1	1	1	1	0
	35. Safety of workplace	2	2	2	2	2
	36. Measurement of employee satisfaction	1	2	0	2	0
	37. Protection of right to rest on statutory festivals and holidays	2	1	2	1	2
	38. Signing of contract of labor	3	3	3	1.5	3
	39. Participant rate of labor union	1	0	0	0	0
	40. complain rate of sexual harassment	2	0	0	0	0
	41. Optimization of management and performance appraisal system	2	2	0	1	2
	42. Employee training	2	2	2	2	2
Suppliers & competitors	43. Business integrity	4	4	4	4	4
	44. Win-win cooperative relationship with competitor	1	1	1	1	1
	45. Observation of market rule	1	1	1	1	1
Investors	46. mechanism of venture management, innovative management and sustainable management	1	1	1	1	1
	47. notification system of supervision information, audit information and investment information	1	2	2	2	2
	48. shareholders' profit maximization	4	4	4	4	4
	49. Growth of net benefit	1	1	1	1	1
	50. Growth of return on equity	3	3	3	3	3
		100	76	68.5	67	68.5

Earnings and Dividend Announcements, Semi-Strong Efficiency and the Nigerian Stock Market: An Empirical Investigation

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Abstract

The major objective of this paper is to find out whether stock prices adjust to dividend and earnings announcements in the Nigerian Stock Exchange. The study is anchored on the Efficient Market Hypothesis (EMH) and we adopted the Event Study methodology for the period of six years ranging from 2006-2011. The modified market model was also adopted to investigate whether the Nigerian Stock Market reacts efficiently to dividend and earnings announcements with respect to price adjustment. The findings of our study reveal that stock prices in the Nigerian stock market did adjust efficiently to dividend and earnings announcements in the three sub-periods covered by our sample. In addition, the cumulative average abnormal returns for the different combinations of dividend and earnings in the three sub-periods are not significant suggesting that the Nigerian stock market is semi-strong efficient. This shows that the Nigerian Stock market did react efficiently to publicly available information such as dividend and earnings announcements during the three sub-periods of pre-global financial crisis (2006-2007); the global financial crisis (2008-2009); and the post global financial crisis of (2010-2011). Based on these findings, the authors recommend that the Nigerian Stock market should vigorously sustain the numerous capital market reforms adopted over the years to further address the issue of adequate communication infrastructure, ease of accessibility of publicly available information, regular review of policies and regulation of the market as well as guide against the issue of insider dealing as this will enhance further efficiency of the Nigerian stock market.

Keywords: Event Study, Semi-Strong Efficiency, Dividend and Earnings announcement, Cumulative abnormal returns.

INTRODUCTION

It is an established fact that capital plays a significant role in the productive process and economic performance of any nation (Ragazzi, 1981; Bhatia and Khatkhate, 1975). Capital according to (Babalola & Adegbite, 2001; Finn 2004) provides a stimulus for the effective and efficient combination of other factors of production to ensure sustainable economic growth and development. The effective utilization of productive resources accumulated over time

would determine the pace of growth of an economy (Lewis, 1954). Growth as in a productive and distributive activity, determines the social wellbeing of the citizenry. Capital formation can only be achieved through making conscious efforts in mobilization of savings as well as accumulation of resources by both the public and private sectors of an economy (Onoh, 2002). To this end, financial markets generally provide avenues for savings of various tenors that are made available to be utilized by various economic agents (Mbat, 2001). The capital market, which is a major segment of the financial market, provides a setting through which medium to long-term resources are obtained for productive utilization (Akpan, 2004).

A study of the semi-strong information efficiency of the Nigerian stock market is of immense significance to investors, policy makers, regulators and researchers. Investors and portfolio managers intend to understand the extent the market adjusts to dividend and earnings announcement, in order to identify opportunities for profit making by trading around dividend and earnings disclosure dates in the market. For policy makers and regulators, the stock market efficiency is a matter of concern because of its allocative function of investment resources within the economy.

Many of the previous studies conducted on the semi-strong information efficiency of the Nigerian stock market relied mainly on the use of monthly and weekly price data and were also conducted during the period when the Nigerian Stock Exchange was arguably at its teething stage and prior to the introduction of major reforms in the Nigerian Stock Exchange. In addition, the methodologies adopted in a number of those studies have become obsolete and in many cases, were wrongly applied such as the use of very wide event windows of six months or one year as well as the use of small samples over a very short period all of which may leads to spurious findings. Given that a plethora of studies on the information efficiency of stock markets of developed countries have been conducted with varying results, it is therefore imperative and compelling for such studies to be replicated in emerging markets like Nigeria to ascertain the level of efficiency of such markets.

This study therefore, serves to fill the gaps mentioned above by making a departure from previous studies conducted in the Nigerian stock market with respect to semi-strong information efficiency of the market. The study intends to also contribute to the scanty literature that exists with respect to semi-strong efficiency of the Nigerian stock market in a number of important ways. First, the study employs daily prices of all the quoted companies in the stock exchange and secondly, more modern and robust statistical testing methods such as the modified market model and small event windows are adopted. Thirdly, the study combines both dividends and earnings announcements and examines the speed of reaction of the market to these pieces of information as they hit the market.

Thus, the following hypotheses will be tested in this study:

I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend decrease and earnings increase announcement in the Nigerian stock market.

II.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend unchanged and earnings increase announcement in the Nigerian stock market.

III. Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend unchanged and earnings decrease announcement in the Nigerian stock market.

REVIEW OF LITERATURE

The theoretical underlying concept of efficient stock markets assume that current stock prices fully reflect all available information about the securities traded in a market such that no investor can consistently outperform the market on the basis of any information at the disposal of the investor. The concept of efficient stock markets has received so much research attention in the five decades or so that it is necessary to elucidate on some of the key notions and terms that are associated with the concept of efficient stock markets.

Operational Efficiency of Stock Markets

A stock market according to Baumol (1965) and Fama (1970) is operationally efficient based on its degree of functionality. The basic areas of emphasis include, the transaction cost, which determines whether one should invests or not; availability of price information, which guarantees that it is easy enough for investors to know the prices of stocks, through record keeping and effective and efficient information dissemination mechanisms; price continuity, which measures the ability of the market to sustain large trades in stock without significantly impacting the prices (that is to say, that the market must be liquid);and timeliness, which stresses that the investor must be able to complete a transaction (in buying or selling of stocks) in the shortest possible time. Testing stock market efficiency from the operational perspective seeks to address these aspects of the market.

Information Efficiency of Stock Markets

On the other hand, stock market information efficiency test which is the main focus of this study, seeks to measure how the stock market responds to information. It suggests that if potential investors hold the belief that a particular stock is undervalued, from available information, then they will all strive to purchase the stock thereby driving up the price to the equilibrium level. Again, where such stocks are believed from available information to be overpriced, investors will sell such stocks thus, pushing down the price to the equilibrium level.

In effect, the profit motive of the investors will always cause them to correct any perceived mispricing of stocks from the investor's valuation of such stocks, judging from the information available to them. The information efficiency of the stock market therefore means that, at all times, the market adjusts quickly to new information consistent with financial valuation theory. This denotes that the market is able to capture appropriately the impact of any new information in the stock price, such that it will be needless for any investor to undertake independent valuation. This is the hallmark of the Efficient Market Hypothesis (EMH) upon which this work is anchored.

The traditional economic paradigm assumes that individuals are "rational", meaning that they make optimal decisions based on the information available to them. In the field of asset pricing, the implications derived from this view is that prices reflect all available information, such that opportunities to earn extraordinary returns arise only from private information (Grossman & Stiglitz, 1980). According to this view, investors without special information, no matter how savvy they may be, cannot improve on the performance index of portfolio (Asness, 1997).

Behavioural finance offers an alternative paradigm to the efficient market theory, one in which individuals make systematic mistakes in the way they process information. The psychology literature describes a myriad of behavioural biases that can potentially explain almost any

observed deviations from the efficient market hypothesis. However, the most prominent anomalies can be explained by what is called "investor overconfidence".

This notion implicitly assumes that individuals have an unlimited ability to both observe and process information. In reality, individuals have limited processing ability and hence use vague ad-hoc rules to translate the information they receive into estimates of cash flows and company valuations (Barberies, 2000). For example, investors may not be able to incorporate the news about the antitrust proceedings for example against Microsoft Corporation into concrete views about the future competitiveness of the industry and how this future will, in turn, affect Microsoft's future cash flows. In reality, investors must do much of their analysis based on "feelings", which can easily be influenced by behavioural biases.

Overconfidence is not likely to bias the pricing of all securities equally. Experimental evidence, suggests that overconfidence is likely to influence the judgment of investors relatively more when they are analysing fairly vague and subjective information (Black, 1990). For the information used to value investments, the subjectivity is likely to vary cross-sectionally. Consider a real estate investment trust with stable existing operations and few growth options. The information used to value such a company is likely to be fairly concrete, thus, the pricing bias resulting from investor overconfidence should be minimal. In contrast, to value a company such as Amazon Com or Microsoft Corporation, whose value probably depends on future growth options and intangible assets, an investor must rely on much more subjective information. For such companies, the overconfidence relating to mispricing effects should be stronger than for stable companies.

Levels of the Efficient Market Hypothesis
It is common to distinguish among three levels of the Efficient Market Hypothesis: the weak, semi-strong and strong forms of the hypothesis. These versions differ by their notions of what is meant by the term "all available information" (Bodie et al, 1999).

Weak-Form Efficiency
The weak form of the EMH asserts that stock prices already reflect all information that can be derived by examining market trading data such as the history of past prices, trading volume or short interest. This version of the hypothesis implies that trend analysis is fruitless. Past stock price data are publicly available and virtually costless to obtain. The weak-form hypothesis holds that if such data ever conveyed reliable signals about future performance, all investors would have learned already to exploit the signals. Ultimately, the signals lose their value as they become widely known because a buy signal, for instance, would result in an immediate price increase (Bodie et al., 1999).

Semi-Strong Efficiency
The semi-strong-form hypothesis states that all publicly available information regarding the prospects of a firm must be reflected already in the stock price. Such information includes, in addition to past prices, fundamental data on the firm's product line, quality of management, balance sheet composition and patents held, earning forecasts and accounting practices. The semi-strong hypothesis further asserts that if any investor has access to such information from publicly available sources, one would expect it to be reflected in stock prices (Lumby, 1994).

Strong-Form Efficiency
The strong-form version of the efficient market hypothesis states that stock prices reflect all information relevant to the firm, including insider information available only to a privileged few. This version of the hypothesis is quite extreme. Only a few would argue with the

proposition that corporate officers have access to pertinent information long enough before public release which enable them to profit from trading on that information. Indeed, much of the activity of the Securities and Exchange Commission is directed towards preventing insiders from profiting by exploiting their privileged situation (Fabozzi & Modiglianni, 1992).

Anomalies of Efficient Market Hypothesis (EMH)

A key feature of the EMH is that it is not possible to make consistently higher returns except by holding a portfolio with a higher level of risk. However, anomalies exist because of the following reasons:

I. The small firm effect or the smaller companies puzzle. Here, evidence is available on the existence of consistently higher returns from investing in the shares of smaller companies (Friend & Lang, 1988; Dimson & Marsh, 1989).

II. Seasonal Variation in Returns: The so-called January effect came to light in 1984 (Kein, 1983; Stanbaugh, 1984). This showed that in the United States of America, nearly all the differential size effect occurs at the turn of the year, that is, during the early part of January. Similar seasonal effects have been identified by (Lumby, 1994).

This constitutes a further puzzle which seemed to contradict the random walk thesis on the non-existence of persistent and replicable market behaviour. The argument that the observed seasonal patterns apply only to segments of the market or to market indexes rather than individual share prices still leaves a fairly uncomfortable problem for proponents of EMH. If the market is informationally efficient, why do seasonal regularities occur at all? (French, 1992).

One possibility that has been adduced is that the anomalies are there in the stock market but are simply below an exploitable level. Share transactions are subject to dealing costs hence, if the disparities in returns are sufficiently large, then trading will not be able to take advantage of such effects. In this case, one is likely to observe the existence of a variety of the so called irrational seasonal effects and these would be quite compatible with a slightly modified form of the EMH (Keane, 1989).

There is also evidence which points to the fact that share prices overshoot in reaction to new information. This may be a consequence of myopic behaviour in the sense that shareholders give too much emphasis to recent events and hence overreact. This has been tested in the United Kingdom (Nickell & Wadhwani, 1986).

Empirical Literature Review

Olowe (1998) examined the response of stock prices to stock splits. The author used a sample of eighty-six (86) stock splits for 59 companies between 1981 and 1992 and found that abnormal returns could be earned. Olowe however failed to isolate the price impact of other simultaneous events occurring near the dates of announcements of stock splits and this may have influenced the overall results. Similarly, Oludoyi (1999) examined the reaction of stock prices in Nigeria to earnings announcements. Using weekly data, the author concluded that the evidence suggested that the Nigerian stock market is not semi strong form efficient as stock prices drift 10 weeks after the corporate earnings results had been released to the public.

Adelegan (2003) also conducted a study to analyze the reaction of stock prices to dividend announcements and capital market efficiency in the Nigerian stock market. The author used the standard event study methodology to test the semi-strong form of market efficiency and his findings showed that the Nigerian stock market was semi-strong inefficient.

In yet another study, Adelegan (2009) examined the speed of adjustment of stock prices to dividend announcements for a total of 742 announcement dates. Using the event study method, the author reported evidence of significant positive abnormal returns for dividend paying firms, 30 days from the date of the announcement. Similarly, the abnormal returns for dividend omitting firms were significantly negative over the same period. Adelegan (2009) therefore concluded that the Nigerian stock market is not semi-strong form efficient and that dividend announcements do contain relevant information to which stock prices react. (What emerges from a review of the literature for the Nigerian case is that most of the studies relied on monthly and weekly data and were conducted prior to the year (1999) when the NSE adopted the use of Automated Trading System (ATS). Technological development, recent reforms in financial market regulation and increased integration and internationalization of the Nigerian capital market may have increased the availability and speed of financial information and this has important implications for the efficiency of the stock market.

With the exception of Izedonmi and Eriki (1996) and Adelegan (2003), the inconclusive controversy seemed to have come to a temporary halt in the late 1970s. The attention of academic scholars became diverted in the early 1980s to studies of the weak–form efficient market hypothesis (EMH) on the Nigerian stock market. For example, Ayadi (1984) and Omole (1997) found evidence to support the weak form hypothesis. Few other scholars have attempted to find reasons to justify the semi–strong form efficiency of the Nigerian capital market and the studies of Emenuga (1989), Olowe (1998) and Oludoyi (1999) are too scanty to draw any meaningful conclusion on this issue.

Brown and Warner (1985) first introduced the event study methodology in looking at market efficiency. After a study of nine fiscal years (1957-1965), the authors observed that of all the available information of a firm over three quarters is captured in the figure of the income for those years. They therefore concluded that security prices reflect over 80% of the information in the annual earnings report.

Fama, Fisher, Jensen and Roll (1969) having used the event study method to test for semi-strong form of market efficiency for the period 1927-1959 in the US discovered that the prices of securities adjusted to the information displayed in stock spilt announcements.

In a test for market efficiency, Mackinlay (1997) categorized earnings announcements in either good news, no news or bad news and affirmed that earnings announcements convey useful information to enhance the valuation of a firm.

In estimating the speed and accuracy with which market prices react to changes in the announcement of dividend payments, Pettit (1972) discovered that based on the daily and monthly data used in response to dividend announcements, the market is reasonably efficient.

Aharony and Swary (1980) tested the information content of dividend hypothesis and discovered that the capital market reaction to dividend announcements shows that changes in the quarterly cash dividend provided useful information beyond that provided by corresponding quarterly earnings announcements.

Furthermore, Asquith and Mullins (1983) sampled 168 firms and using the naïve expectation model, observed that excess returns were significant for the 2-day announcement dates only and of lesser value for the other 19 days. It goes to show that information effect is more pronounced at the initiation of the dividend since this is unexpected unlike subsequent regular dividend announcements which are preceded by the firm's dividend history.

In a test of the semi-strong efficiency of the Karachi Stock Exchange in Pakistan, Ali and Mustafa (2001) examined the linkage of news published in Daily Dawn and Business Recorder with aggregate stock market activity measured by market returns and trading volume. Using daily news headlines collected from July 1st, 1998 to December 31st, 2000 as well as daily stock market prices and employing the statistical tools of correlation coefficients and regression analysis, the authors observed that at the aggregate level, the news surprises and number of news were both negatively related to stock market activity in Pakistan. In addition, the relationship is statistically significant in case of trading volume but insignificant with respect to stock returns. Furthermore, the authors observed day of the week patterns in these relationships and then concluded that in the Karachi Stock Exchange, public information does not play as important role in the day-to-day variations in stock returns than the role played by private information.

In addition, Akbar and Baig (2010) investigated the semi-strong form of market efficiency by Examining the reaction of stock prices to dividend announcements. The study analyzed a total of 129 cash announcements, 24 stock announcements, and 40 simultaneous cash and stock dividend announcements of 79 companies listed on the Karachi Stock Exchange from July 2004 to June 2007. Using daily stock prices, abnormal returns from the market model were evaluated for statistical significance using the t-test and Wilcoxon Signed Rank Test. The findings of the study report negligible (insignificant) abnormal returns for cash dividend announcements suggesting that the Karachi Stock Exchange is efficient in the semi-strong form with respect to cash dividend announcements. On the contrary, the average abnormal and cumulative average abnormal returns for stock and simultaneous cash and stock dividend announcements were reported to be mostly positive and statistically significant which demonstrate that the market is semi-strong inefficient.

In a very recent study, Asiri (2015) investigated the reaction of investors in the Bahrain Bourse to two types of signals from the Telecommunication sector in Bahrain namely-marketing and financial announcements made by corporate management. Using event study methodology in which six events that were announced over the period of 3rd November, 2011 to 26th April, 2014 by Batelco, the only listed Telecommunication company in the Bahrain Bourse, as well as daily stock market returns which were analysed, the author observed that regardless of the type of signal, investors exhibited significant reactions to all the announcements. In specific terms, the author reported that investors reacted positively to the announcement of additions to investment, Batelco winning the award for best investor relations and slashing of broadband rates and negatively to change in management. In sum, the results of the analysis revealed that investors generated positive cumulative abnormal returns (CARs) on the event days as well as on the 21st days of four of these announced events and generated negative abnormal returns in reaction to two of these events. The author therefore concluded that the Bahrain Bourse is inefficient in the semi-strong form in the Telecommunication sector,

From the empirical literature review undertaken above, it is obvious that all the empirical studies have one deficiency or the other, ranging from the methodology employed, coverage of study, small sample size as well as the omission of investigating the combined effect of the simultaneous announcement of changes in both dividend and earnings. The observed gap is thus the motivating force for the current study.

METHODOLOGY AND DATA

The stratified sampling method was adopted to guide this work as it affords the researchers the opportunity of separating the heterogeneous population of firms listed at the NSE into

homogenous components or strata (Afonja, 2001). The stratified sampling technique enabled the researcher to classify the companies quoted in the Nigerian Stock Exchange based on the following criteria.

1. Firms with Dividend Decreases, Earnings Decreases (DD-ED)—included those firms in which both dividend and earnings decreased.
2. Firms with Dividend Unchanged, Earnings Increases (DNC-EI)—included those firms which show no change in dividends, despite reporting earnings increase.
3. Firms with Dividend Unchanged, Earnings Decreases (DNC-ED)—included firms with dividend unchanged and decrease in earnings.

Model Specification

This study employed the naive dividend and earnings expectation model, mean adjusted returns model, market adjusted returns model and market and risk adjusted returns model (OLS market model) as applied by Aharony and Swary (1980) and Isa and Subramaniam (1992). In order to investigate the impact of announcements, it is assumed that dividend on

Security i are given by:

$$E(D_{it}) = D_{i, t-1} \qquad\qquad \dots (1)$$

Where $E(D_{it})$ is the expected annual dividends from company i in financial year t, and $D_{i, t-1}$ is the amount of dividend paid in year t–1. The dividend model states that the expected annual dividends for the year t will be equal to the annual dividends declared in year t–1. If $D_{it} > D_{i, t-1}$, then there is a Dividend Increase (DI). On the other hand, if $D_{it} < D_{i, t-1}$, then there is a Dividend Decrease (DD). When $D_{it} = D_{i, t-1}$, then there has been no change in the dividends (DNC). The earnings expectations (EPS) are obtained in a similar manner. In a similar framework to that of the dividends, when $EPS_{it} > EPS_{i, t-1}$, then there is an Earnings Increase (EI). When $EPS_{it} < EPS_{i, t-1}$, then there is an Earnings Decrease (ED).

Following the trend of studies in this area (such as Gunasekarage and Power, 2006), our study regarding the impact of dividend and earnings announcements is conducted by further dividing the total sample into seven groups.

1. Dividend Decreases, Earnings Decreases (DD-ED)—included those firms in which both dividend payments and earnings decreased.
2. Dividend Unchanged, Earnings Increases (DUC-EI)—included those firms which show no change in dividends, despite reporting earnings increase.
3. Dividend Unchanged, Earnings Decreases (DUC-ED)—included those firms which reported unchanged dividend payments, despite a fall in their earnings.

Following a number of other studies in the developing markets context (see, for example, Lonie et al.(1996), another important aspect included in this research is to investigate a case in which earnings announcements and news on dividend pay-out appear to conflict with each other, i.e., the DD-EI and DI-ED categories. According to Isa and Subramaniam (1992), none of the abnormal returns provided a significant effect when the dividend and earnings changes were in opposite direction.

To estimate abnormal returns, we employed the use of the Market-adjusted Abnormal Return Model (MAR) in order to avoid the need to estimate parameters outside the long 'event' window, which would occur if the more common risk adjusted models were to be used. MAR assumes that equilibrium expected returns exist where alpha is equal to zero and the average systematic risk is equal to one. Furthermore, this model also avoids the complications of a

small sample and infrequent trading associated with our stock prices (Brown and Warner, 1980). Market-adjusted abnormal returns are computed as follows:

$$A_{i,t} = R_{i,t} - R_{m,t} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

Where A_{it}, represents abnormal returns, R_{it} represents returns for stock $_i$ on event day t, and R_{mt} is market returns proxied by the Nigerian Stock Exchange (NSE) prices on event day t.
The daily return for each stock in the sample is computed using the following formula:

$$R_{i,t} = \frac{_{i,t} - P_{i,t-1})}{P_{i,\,t-1}} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(3)$$

Where RI, t is the return Pit indicates closing price for stock i at day t, and Pi (t – 1) is the closing price for stock i at day t–1. Similarly, we also compute the daily market returns (index returns) using series from Nigerian Stock Market closing prices.

The next step is to compute the daily cross-sectional Average Abnormal Return (AARt) for a specific event day, t, which is calculated, based on:

$$AAR_t = {}_{it} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (4)$$

Where AARt is the average abnormal returns on day t, ARit represents the abnormal return of each firm on day t (i = company 1... 120), and N denotes total number of firms in the sample for each day during the period under consideration.

A statistical significance test of ARit is then employed using one sample T-test to determine the standardized Average Abnormal Returns (AARt). Results of various empirical tests of information-content hypothesis (regarding dividend policy) (see, for example, Lonie et al.,1996) indicate that the shares of those companies in which their board of directors have announced dividend increases should, on an average, earn positive abnormal returns.

Besides computing the average abnormal returns, the cumulative daily abnormal returns for the securities were aggregated throughout the particular portfolio within the event window, i.e., day –10 to day +10, day –2 to day +2 and day –1 to day +1 relative to the event day (day 0). This event window is used to test how sensitive the price of a stock is towards the arrival of new relevant information. We compute the cumulative average abnormal returns through the event period as:

$$CAAR_m = {}_t \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (5)$$

Where: CAARm denotes cumulative average abnormal returns for the mth period and where AAR is calculated by using Equation (4).

In our attempt to investigate the capital market reaction to dividend and earnings announcements, we examine the hypothesis outlined above using the one-sample t-test. This test is formulated as follows:

$$t = CAAR_t\,/\,T \text{ and } s_t = \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (6)$$

Where: T indicates the trading days interval (1, 2… T). Statistics for average abnormal returns are also calculated in a similar manner. Following the standard statistical procedure, the null hypothesis is rejected when the calculated Tc value is greater than the theoretical tT

DATA ANALYSIS AND DISCUSSION

The data used for this study were extracted from Nigerian Stock Exchange Annual Reports, daily official lists, Nigerian Stock Exchange Fact Book (2006-2011). Other sources of data are Securities and Exchange Commission Annual Reports and publications, Federal Office of Statistics Reports and publications. The study covers all companies drawn from all sectors of the Nigerian Capital Market quoted on the first and second tier securities markets that continued to pay (either increases, reductions or no change) cash dividends and earnings from 2006-2011. However, for easy assimilation the data were arranged in the following criteria

1. Firms with Dividend Decreases, Earnings Decreases (DD-ED) included those firms in which both dividend payments and earnings decreased.
2. Firms with Dividend Unchanged, Earnings Increases (DUC-EI) represent those firms which show no change in dividends, despite reporting earnings increase.
3. Firms with Dividend Unchanged, Earnings Decreases (DUC-ED) included firms with dividend unchanged and decrease in earnings.

Table 1: Descriptive Statistics

		No. of Compani es	Mean/Average Price	Mean/Average Retur n	Skewness Price	Skewness Return	Kurtosis Price	Kurtosis Return	Std. Dev. Price	Std. Dev. Return	Variance Price	Variance Return
2006/2007	DD&E D	5	42.51	0.01	-0.34477	-0.21922	-1.04484	-0.39051	6.720072	0.01569	45.15937	0.000246
	DU&E I	6	34.5	0.01	0.38611	0.50236	0.425748	-0.000513	0.617364	0.011537	0.381138	0.000133
	DU&E D	3	40.65	0.01	-0.33494	0.144041	1.168943	-0.71711	5.196428	0.020399	27.00287	4.16E-04
2008/2009	DD&E D	8	33.31	0	0.112234	6.232671	1.92445	-44.57168	2.677212	0.024697	7.167464	0.00061
	DU&E I	8	10.09	0.01	1.267262	6.45798	0.225274	47.29409	0.53236	0.031907	0.283407	0.001018
	DU&E D	5	11.67	0	-0.21321	-2.76586	-0.35809	5.840508	0.251501	0.002955	0.063253	8.73E-06
2010/2011	DD&E D	2	3.18	0.01	0.911149	3.829574	1.224805	19.36655	0.362651	0.156574	0.131515	0.024515
	DU&E I	24	8.14	0	-0.39433	4.519867	0.34371	-22.17448	0.427049	0.031366	0.182371	0.000984
	DU&E D	6	1.6	0	-3.14164	3.595012	19.58945	25.27287	0.062889	0.031412	0.003955	9.87E-04

Source: Authors' Computation.

Table 1 shows the descriptive statistics of the data for the three different sampled periods namely: 2006/2007, 2008/2009 and 2010/2011. In 2006/2007 period which represent the pre-global financial crisis, the table shows that dividend increase/ earnings increase has the highest number of companies (19), while the dividend unchanged/earnings increase and dividend unchanged/earnings unchanged have 6 and 9 companies respectively. Furthermore, the highest mean is obtained in dividend increase/earnings increase with a figure of 54.01, closely followed by dividend decrease/earnings decrease with a figure of 42.51. On the other hand, dividends decrease/earnings increase has the lowest mean of 15.77. The skewness which describes the symmetry of the distribution are all negative, except for dividend unchanged and earnings increase and dividend decrease/earnings increase which have positive skewness.

This generally indicate a low skewed distribution (most of the distribution are negatively skewed). The kurtosis coefficients which measure the relative peakness or flatness of the distribution are all negative except for dividend unchanged/ earnings increase which has a positive figure of 0.425748. The means of the kurtosis coefficients are negative which indicate that the data is not peaked. Hence, it means that the data is relatively flatly distributed...

In the same vein, the 2008/2009 period which represents the global financial crisis, shows that dividend increase/ earnings and dividend decrease/earnings increase have the same high number of companies (11), while the dividend unchanged/earnings increase and dividend unchanged/ earnings unchanged have 8 and 4 companies respectively. Also, the highest mean is obtained in dividend increase/earnings increase with a figure of 53.53067, followed by dividend decrease/earnings decrease with a figure of 33.31 and the dividends increase/earning decrease has the lowest mean of 8.383631. The skewness of the distribution are all positive, except for dividend unchanged and earnings decrease and dividend unchanged/earnings unchanged. This indicates a highly skewed distribution (most of the distribution are positively skewed).

The kurtosis coefficients are all negative except for dividend unchanged/earnings unchanged, dividend unchanged/earnings increase and dividend increase/earnings increase which have positive figures of 36.94019, 0.225274 and 0.009343 respectively. The means of the kurtosis coefficients are negative which indicate that the data is not peaked. Hence, it means that the data has a relatively flat distribution.

Similarly, for the 2010/2011 period which represent the post-global financial crisis, the table shows that dividend unchanged/ earnings increase has the highest number of companies (24). Dividend increase/earnings decrease has only one company in this category. The highest mean is obtained in dividend increase/earnings increase with a figure of 41.01, followed by dividend decrease/earnings increase with a figure of 13.35. Dividend unchanged/earnings unchanged has the lowest figure of 1.56. The skewness of the distribution are all negative, except for dividend unchanged and earnings unchanged, dividend decrease/ earnings decrease and dividend increase/earnings decrease which have positive skewness. This generally indicate a low skewed distribution (that is most of the distribution are negatively skewed).

The kurtosis coefficients are all negative except for dividend unchanged/earnings unchanged, dividend unchanged/earnings decrease and dividend decrease/earnings decrease which have positive figures of 7.713797, 25.27287 and 19.36655 respectively. The means that the data distribution is not peaked but relatively flatly distributed.

Test of hypotheses

The three hypotheses earlier formulated were tested using appropriate statistical techniques. The tests followed the usual decision rule of rejecting Ho if the calculated t value is greater than the critical value or tabulated t-value and vice versa or reject Ho if p-value is less than the level of significance which is 5 percent . The hypotheses were tested based on three different periods namely the pre global financial crisis which is represented by year 2006/2007, the global financial crisis period which is represented by 2008/2009 and the post global financial crisis which represent the years 2010/2011.

Phase 1: Test for semi-strong Information Efficiency in the Nigerian Stock Market during the pre-global financial crisis. (2006- 2007)

Hypothesis One

   I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market. That is, market is semi-strong efficient.
   II.   H1:   There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market. That is, market is semi-strong inefficient.

The hypothesis was tested using the results presented in table 2. The decision rule for the test of hypothesis (1) under (2006/2007) is If p-value < the level of significance (0.05) reject Ho otherwise accept Ho.

Table 2: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000315398	0.4999	Not significant
CAAR (-20, +20)	3.36288E-07	0.5000	Not significant
CAAR (-10, +10)	6.71925E-06	0.4999	Not significant
CAAR (-5, +5)	0.007555214	0.4971	Not significant
CAAR (-3, +3)	0.005878768	0.4978	Not significant
CAAR (-2, +2)	0.029024643	0.4891	Not significant
CAAR (-1, +1)	0.047789613	0.4831	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 2, the tabulated t-values are greater than the calculated t-values in all the seven event windows, likewise, all the p-values are insignificant (less than 0.05). Therefore, we accept H0, meaning that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend decrease and earnings increase announcement in the Nigerian stock market which indicates that the Nigerian stock market is semi-strong information efficient.

Hypothesis Two

   I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns   (CAAR) pre and post dividend unchanged and earnings increase announcement in the   Nigerian stock market
   II.   H1:   There is no significant difference between the Cumulative Average Abnormal Returns   (CAAR) pre and post dividend unchanged and earnings increase announcement in the   Nigerian stock market

This hypothesis was tested using the results presented in table 3 with the same decision rule.

Table 3: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	8.25446E-05	0.4999	Not significant
CAAR (-20, +20)	0.012045753	0.4952	Not significant
CAAR (-10, +10)	0.002112473	0.4992	Not significant
CAAR (-5, +5)	0.007017713	0.4973	Not significant
CAAR (-3, +3)	0.008762886	0.4966	Not significant
CAAR (-2, +2)	0.013223223	0.4950	Not significant
CAAR (-1, +1)	0.024969683	0.4912	Not significant

N.B: Significant at α = 0.05 Source: Authors' computation.

From table 3 presented above, the tabulated t-values are greater than the calculated t-values in all the seven event windows. Similarly, all the p-values for the seven event windows are insignificant. Therefore, we accept HO, showing that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market

Hypothesis Three

I. Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market

II. H1: There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market

This hypothesis was tested with the results presented in table 4.

Table 4: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000510326	0.4998	Not significant
CAAR (-20, +20)	0.002742148	0.4989	Not significant
CAAR (-10, +10)	0.010881778	0.4957	Not significant
CAAR (-5, +5)	0.020439449	0.4923	Not significant
CAAR (-3, +3)	0.033287171	0.4973	Not significant
CAAR (-2, +2)	0.008535444	0.4968	Not significant
CAAR (-1, +1)	0.015612513	0.4945	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 4, the seven event windows show that the tabulated t-values are greater than the calculated t-values. Similarly, all the p-values for the seven event windows are insignificant. Therefore, we accept HO. This implies that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend unchanged and earnings increase announcement in the Nigerian stock market. Thus, the Nigerian stock market is semi-strong information efficient.

Phase 2: Test for semi-strong Information Efficiency in the Nigerian Stock Market during the global financial crisis. (2008- 2009)

Hypothesis One

I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market.

II. H1:   There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 5.

Table 5: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000420696	0.499833	Not significant
CAAR (-20, +20)	0.000385869	0.499847	Not significant
CAAR (-10, +10)	0.000591074	0.499767	Not significant
CAAR (-5, +5)	0.002836545	0.498896	Not significant
CAAR (-3, +3)	0.008655727	0.496687	Not significant
CAAR (-2, +2)	0.019711987	0.492609	Not significant
CAAR (-1, +1)	0.078312222	0.472355	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From Table 5, it can be seen that the tabulated t-values in the seven event windows are greater than the calculated t-values. Similarly, all the p-values for the seven event windows are insignificant. Therefore, we accept Ho, which means that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market. Thus, the Nigerian stock market is semi-strong information efficient.

Hypothesis Two

I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market.

II. H1:   There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 6.

Table 6: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.001228459	0.499512	Not significant
CAAR (-20, +20)	0.002124473	0.499158	Not significant
CAAR (-10, +10)	0.000347122	0.499863	Not significant
CAAR (-5, +5)	0.003964587	0.498457	Not significant
CAAR (-3, +3)	0.000274249	0.499895	Not significant
CAAR (-2, +2)	2.17138E-05	0.499992	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 6 presented above, the tabulated t-values are greater than the calculated t-values in all the seven event windows, also all the p-values are insignificant. Therefore, we accept Ho, meaning that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market. That is, the Nigerian stock market is semi-strong information efficient.

Hypothesis Three

I. Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market.
II. H1:   There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 7.

Table 7: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.001633994	0.499351	Not significant
CAAR (-20, +20)	0.000147463	0.499942	Not significant
CAAR (-10, +10)	0.000418526	0.499835	Not significant
CAAR (-5, +5)	0.007609407	0.497039	Not significant
CAAR (-3, +3)	0.006093389	0.497668	Not significant
CAAR (-2, +2)	0.004093778	0.498465	Not significant
CAAR (-1, +1)	0.005947938	0.497897	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 7 presented above, the tabulated t-values in the seven event windows are greater than the calculated t-values in all the seven event windows, likewise all the p-values are insignificant. Therefore, we accept thus, Ho, that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market. Again, the Nigerian stock market is semi-strong information efficient.

Phase 3: Test for semi-strong Information Efficiency in the Nigerian Stock Market during the post global financial crisis. (2010- 2011)

Hypothesis One

I. Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market.
II. H1:   There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend decrease and earnings increase announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 8.

Table 8: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000196011	0.499922	Not significant
CAAR (-20, +20)	0.018978817	0.492476	Not significant
CAAR (-10, +10)	0.001512025	0.499404	Not significant
CAAR (-5, +5)	0.017393088	0.493233	Not significant
CAAR (-3, +3)	0.05273853	0.479826	Not significant
CAAR (-2, +2)	0.060166121	0.477455	Not significant
CAAR (-1, +1)	0.141329544	0.45028	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 8, the tabulated t-values in the seven event windows are greater than the calculated t-values. Similarly, all the p-values for the seven event windows tested are insignificant. Therefore, we accept Ho meaning that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend decrease and earnings increase announcement in the Nigerian stock market. Thus, the Nigerian stock market is semi-strong information efficient.

Hypothesis Two

I.   Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market.

II. H1:   There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings increase announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 9.

Table 9: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000120063	0.499952	Not significant
CAAR (-20, +20)	0.007272175	0.497117	Not significant
CAAR (-10, +10)	0.000126976	0.49995	Not significant
CAAR (-5, +5)	0.0031806	0.498762	Not significant
CAAR (-3, +3)	0.009576369	0.496335	Not significant
CAAR (-2, +2)	0.013907805	0.494785	Not significant
CAAR (-1, +1)	0.025038815	0.491149	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 9, the tabulated t-values are greater than the calculated t-values in all the seven event windows, likewise all the p-values are insignificant. Therefore, we accept Ho, hence there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) before and after dividend unchanged and earnings increase announcement in the Nigerian stock market. The result again shows that the Nigerian stock market is semi-strong information efficient.

Hypothesis three

I. Ho: There is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market.

II. H1: There is significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market.

This hypothesis was tested with the results presented in table 10.

Table 10: Table showing the calculated t-values and p-values

Window	t-Value calculated	p-value	Remarks
CAAR (-30, +30)	0.000120198	0.499952	Not significant
CAAR (-20, +20)	0.000123685	0.499951	Not significant
CAAR (-10, +10)	4.69285E-05	0.499982	Not significant
CAAR (-5, +5)	0.000631094	0.499754	Not significant
CAAR (-3, +3)	0.154972144	0.440963	Not significant
CAAR (-2, +2)	0.057402905	0.478489	Not significant
CAAR (-1, +1)	0.002153669	0.499239	Not significant

N.B: Significant at α = 0.05: Source: Authors' computation.

From table 10, it is evident that the tabulated t-value are greater than the calculated t-value in all the seven event windows also all the p-values are insignificant. Therefore, we accept Ho, which means that there is no significant difference between the Cumulative Average Abnormal Returns (CAAR) pre and post dividend unchanged and earnings decrease announcement in the Nigerian stock market which means that the Nigerian stock market is semi-strong information efficient.

FINDINGS AND DISCUSSION

The study examined the semi-strong information efficiency in the Nigerian stock market for a six-year period divided into three different phases-the pre global financial crisis (2006/2007), the global financial crisis (2008/2009) and the post global financial crisis (2010/2011).

The study revealed that the Nigerian stock market is semi-strong information efficient in all of these three phases. This could be a reflection of the increasing high level of investor literacy, adoption of information and computer technology in the capital market, enhanced information dissemination as well as the dismantling of many bureaucratic bottlenecks in consummating transactions all of which are the fallouts of the various capital market reforms embarked upon by successive governments in Nigeria over the past two and a half decades.

The findings of our study find support in the works of Akbar and Baig (2010), Uddin and Chowdhury (2005) and Pettit (1972) who reported no significant abnormal average returns to earnings announcements in their various studies of semi-strong efficient markets. This is however in contrast to the findings of Adelegan (2003; 2009), Below and Johnson (1996) as well as Kong and Taghavi (2006) whose empirical results failed to find support for the semi-strong efficient market hypothesis in the various markets investigated.

On the whole therefore, it is apparent that the controversy is yet to be settled given the conflicting empirical findings emanating from various research efforts with respect to the EMH.

The findings of our study suggest that the Nigerian capital market is semi-strong efficient with respect to the various combinations of earnings and dividend announcements for the three different phases under study.

CONCLUSIONS AND RECOMMENDATIONS

Overall, the results from the study suggest that stock prices change in Nigeria with respect to dividend and earnings announcements. The seven different combinations of dividend and earnings announcements generated no significant abnormal average returns for all the event windows considered in all the three phases under study thus supporting the position that the Nigerian capital market is semi-strong form efficient. Based on these findings, it is recommended that the capital market regulatory authorities should intensify efforts geared towards sustaining the encouragement of capital inflows and proper dissemination of information to safeguard the market from insider abuse, further globalization of the stock market through cross–border listing as well as encouraging the development of more investment trusts, mutual funds and the derivatives market.

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Impact of Capital Market on the Development of the Nigerian Economy

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Abstract

This study attempts to investigate the performance of the Nigeria capital market and the growth of Nigerian economy from 1986-2005. Data on stocks were modeled to test for the relationship between market capitalization, the number of stock traded in the capital market and development in the economy (GDP). A multiple regression analysis involving the ordinary least squares estimation technique was employed to discover the composite effect of capital market indices such as government stocks, industrial stocks and equities on the development of the economy during the twenty years in review. The multiple correlation coefficients which measured the strength of association between the economic development and capital market performance was positive, indicating that there was a direct perfect relationship among the variables. The result also indicates that none of the variables (predictors) individually predicted GDP. In spite of the enormous opportunities provided by the on-going reforms and the booming economy, the capital market in Nigeria has performed below its potentials owing to a number of factors. Accordingly, it was recommended that there should be a strong need to put in place policy measures that would guarantee competitive participation and cause investors to stop the attitude of "buy and hold" of securities which will delay rapid development of Nigerian economy.

keywords: Capital market, Gross domestic product, debt securities, market capitalization etc

CHAPTER ONE - INTRODUCTION

Background to the study

Developing countries all over the world are researching on how to solve major economic problems of inadequacy of capital resources for the purpose of enhancing economic growth and development.

Capital is indeed needed to propel the engine of growth and thus, facilitating maximum output and real economic growth in an economy. An assessment of the entire economic system reveals that capital due to the nations are not properly harnessed in developing countries due to the presence of weak capital markets and inefficient infrastructure to mobilize available capital for economic and productive activities. (Nzotta, 2004)

A capital market is therefore a network of financial institutions that facilitate the mobilization and allocation of medium and long-term funds in an economy. The long term funds are used for financial assets issued by borrowers or traded by holder of outstanding eligible instruments. Therefore, it provides services that are essential to a modern economy, mainly by contributing to capital formation through financial intermediation, financial advisory services and managerial skill development.

Before the advent of the stock market, banks and other money market institutions in Nigeria provided short-term funds to businesses. Money market institutions traditionally lend short-term funds which are not suitable for the funding of long term projects with long gestation periods, such as industries, infrastructures, power generation and telecommunication. Power generation is known to require huge and long term fund which only the stock market is in a more convenient position to provide. A stock market thus, constitutes the hub and the accelerator of a rapidly industrializing economy. It affords an enterprise the opportunity to broaden economies of scale and skill and high fly international profile (Onoh, 2002).

The equity markets in developing countries until the mid 1980s generally suffered from the classical defects of bank-dominated economies, that is, shortage of equity capital, lack of liquidity, absence of foreign institutional investors, and lack of investors' confidence in the stock market. Since 1986, the stock markets of developing nations have witnessed appreciable development with financial liberalization and the easing of legislative and administrative barriers coupled with the adoption of tougher regulations to boost investors' confidence. With the beginning of financial liberalization in the developing countries, the flow of private foreign capital from the developed to the developing countries has increased significantly and such inflows of foreign capital have been mainly in the form of foreign direct and portfolio investment (World Bank, 1996 & Agarwal, 1997). The latter type of inflows has mainly been through the stock market.

In Nigeria, with the inception of the Structural Adjustment Programme in 1986, the financial sector has experienced tremendous change as privatization has is one of the basic tenets of the programme. No doubt, privatization has strengthened stock market development by increasing the quality and quantity of financial instruments traded in the market. By 1997, some efforts were made of minimize the risk of capital investment in the Nigerian economy by putting in place relevant institutions to minimize clearing, depository and settlement problems. Hence, the Central Securities and Clearing System (CSCS) came into being then. This, in conjunction with automated trading, has improved the performance of the market. Coincidentally, since the beginning of financial liberalization in 1986, Nigeria has made a remarkable turnaround with the GDP growth rising from negative of 0.3 percent in 1982, to 3.2 and 8.2 percent in 1986 and 1990 respectively. The growth rate of GDP, though declined to 1.3 percent in 1994, picked and rose smoothly to 3.4 percent in 1996.

Stock market facilitates efficient allocation of resources to the appropriate users. It also enhances higher productivity and better realization for macro-economic goals such as price stability, higher level of savings, greater export opportunities, more employment opportunities, and a higher standard of living for the populace.

The instruments traded in the market include government securities, corporate bonds, shares and mortgage loans (Anyanwu, et aI., 1997). Participants in the Nigerian stock market include the Nigerian Stock Exchange, (NSE) Discount Houses, Development Banks, Merchant banks, Stock Broking Firms, Insurance and Pension Organisations, quoted companies, Governments at all levels, individuals and the Nigerian Securities and Exchange Commission (NSEC).

Stock market consists of the primary market, which is concerned with the offering of new issues or the initial issuance and sale of securities. Previously, quoted companies could seek expansion of funds through the issuance of supplementary securities in this market while new companies were required to go public before they could issue securities to the public through the market. Types of instruments issued here include debt instruments comprising federal government development stocks (FOSs), and industrial loans and bonds issued by corporate bodies and equity capital (ordinary shares of corporate entities) which confer upon the holders some ownership rights to the business concerned.

The secondary market, thus, trades on securities that have already been listed on the stock exchange. It is often contended that the existence and allocative efficiency of the primary market is, however, dependent upon the existence and efficiency of the secondary market in all respects (Mbat, 2001).

Although, the stock market is neither a private nor public sector institution, it assists in the transmission of government policy to all the sectors of the economy, especially in economies, where the authorities consciously influence the direction of the economy.

Statement of the Problem
The Nigerian economy is going through a transformation process, aimed at achieving economic growth and development. The role of the capital market in this regard cannot be over emphasized for capital is a critical factor in any economic transaction. Thus, the ability of a nation to mobilize savings and transform such savings into investment depends on the type of capital market that exists at a particular point in time. Suffice, to say that an efficient capital market is one which incorporates all the indices that allow for free flow of capital investments. The Nigerian capital Market since its inception has various problems which include among others, poor economic environment, which hampers a conducive investment to sustain vibrant capital market to the Nigerian economy; the problem of buy and hold strategy, whereby stocks are bought and locked up in a custody without being traded on the stock market. This strategy does not help to deepen the stock market. Equally, there is the fear of insider's abuses which helps to favour few investors than majority to take advantage of stock price movement in the share market.

The aforementioned problems restrain a good number of prospective investors and participants from being active players on the Nigerian stock market resulting from the poor performance of the capital market and the development of the Nigerian economy.

The purpose of the Study
The era of the Structural Adjustment Programme (SAP) introduced is 1986 had brought about the shifting of emphasis from the money markets to the capital markets, as an alternative source of long term finance. Most of the financially strong and better managed businesses in Nigeria saw this as a cheaper means of diverting risk because of the high interest rate in the money market. The incidence of high cost of capital in the money market also led to a great intermediation in the capital market and disintermediation in the money market.

The objectives of this study are:

1. To investigate the factors affecting the efficient performance of the Nigerian capital Market.
2. To evaluate the impact of the Nigeria capital market in the development of the Nigeria economy from 1986-2005.

Research Hypothesis
For the purpose of this research study, the following null hypotheses would be tested.

1. Ho: There is no significant relationship between the performance of the Nigerian capital Market and the Development of the Nigerian Economy.
2. Ho: There is no significant relationship between the total number of stocks traded in the capital market and the development of the Nigerian economy between 1986 to 2005.

Significance of the Study
This study is significant in that it will serve as an attempt in assessing the relationship between growth and stock market development in Nigeria. The capital Market is an important institution for enhancing investments activities and achieving rapid development of the economy. A detail research on the demand and supplies of capital is sin-quo-non as most industrial nations of the world would not have achieved the feat without developing an efficient capital market. In order to facilitate the mobilization of savings and investments that guarantee economic growth and development, there is need to have stock market in which there is a reasonable level of efficiency which will act as impetus to investors. These assertions summarizes the significance of this study as follows:

i. To articulate the awareness on other alternative source of funds and purchase of shares
ii. To help provide facilities for the quotation and ready marketability of shares and stocks and opportunities to raise fresh capital economic development.
iii. To provide opportunities locally for lending and borrowing for long term purposes
iv. To create a market for the Nigerian Government to mobilize long-term capital for economic development.
v. The study will redefine the share price boundaries within the context of proper pricing
vi. This study intends to elucidate the most salient of feature of capital market operations in Nigeria.
vii. The work and its findings will provide policy makers economic planners and Enterprises who wishes to invest in Nigeria a tool of appraisal of implication of capital Market in Nigeria.
viii. The outcome of the study is therefore expected to provide a basis on which further improvement in the operations of the capital market can be anchored. It is also expected to provide further insight into the peculiarities of the Nigerian capital market as a guide to policy makers.

The limitation and Scope of the Study
The study is on the performance of the Nigerian capital Market between 1986 -2006 and the operations of the market which shall be and thus evaluating the activities of the capital markets and its contributions to the development of the Nigerian Economy.

This period is chosen because of the ever changing and dynamic nature of the Nigerian financial landscape in general and the operations of the Nigerian capital Market in particular. However, using the study or work the chosen sample is representative enough for valid generalization about the performance of the capital market in the development of Nigeria. The study will research on the operating instruments using some or all the following criteria:

i. Market capitalization showing the total value of all listed shares in the capital market
ii. Number of listed securities which shows the volume of securities in the capital market within the period
iii. All share price index which measures the performance of the market computer on daily basis.
iv. The Gross Domestic Product GDP

Organisation of the Study
This research study is basically structured into five chapters. Chapter one is the introduction and background of the study, statement of the problems, purpose of the study, research questions, research hypothesis, significance of the study, scope of study, organisation of study and definitions of terms.

Chapter two captures the literature review. It delves on the development and structure of the capital market, concept of the capital market, operators of the capital market and the functions of the capital market. This chapter ends with the problems and achievements of Nigerian capital market.

Chapter three covers research methodology. The research design, the source of data, method of data collection and techniques of data analysis.

Chapter four focused on data presentations, analysis and discussion of findings. In this chapter hypothesis formulated were also tested.

Chapter five summarizes the study, draws conclusions and makes necessary recommendations.

Definition of Concepts

- Market Capitalization: Market capitalization is the aggregate market prices of all of a company's shares. It refers to the value of a firm as determined by the market price of its unused and outstanding common stocks. It represents one of the ways to categorize stocks in the market. (Nzotta, 2004).
- Capital Market: This market is concerned with the mobilization and intermediation of long term funds. It provides a mechanism for lenders to provide long term funds in exchange for financial assets issued by borrowers or traded by holders of outstanding negotiable debt instruments (Nwankwo, 1980).
- Money Market: According to Onyido (1994), the money market is the market for short term funds and securities, with securities of less than one year the term is often used to describe or define the network of borrowers and lenders for short term funds. The money market primarily exists as a means of liquidity adjustments while the capital market provides the bridge by which the savings of surplus units may be transformed into medium and long-term investments in defiant units.
- Second-tier securities market (SSM): This is a market where shares of companies that are not fully listed are traded, but which is regulated by the stock exchange (Adetunji, 1977).
- Securitization: This is the process of converting assets into marketable securities. Documentation (Certificate) which shows ownership of a property (bonds stocks and shares) government security for money lent to it (Mbat, 2001:2)
- Capital Market: A forum through which medium to long-term loanable funds are obtained (Mbat, 2001:38).
- SEC: Securities and Exchange Commission
- NSE: Nigerian Stock Exchange
- Investment: The commitment of resources into a business with the aim of realization profits or returns.
- Common Stock Equity Securities: Officially issued to shareholders who have voting rights? Their rights may attract dividends resulting from profits of the public corporation (Mbat, 2001:94).
- FSM: First Tier Securities Market

- SSM: Second Securities Market
- Investment Portfolio: A set of investible securities chosen by an investor (Mbat, 2001)

CHAPTER TWO
LITERATURE REVIEW

Theoretical Framework

The capital market exists for the mobilization and intermediation of long term funds between areas of deficit and surplus economic units. Both lenders and borrowers of long term funds meet here to transact business (Babalola, 2001:3).

The capital market is the platform on which fortunes growth and development and serves as an indicator of the economy's liquidity and general performance (Osaze, 1997). It is also the market for other securities like corporate stocks and shares and bonds (Briston, 1969).

The instruments constitute the permanent financing of any company hence these long-term nature last longer than 3 to 5 years. It accommodates instruments such as government development stocks and bonds which are normally referred to as gilt-edge securities.

Giwa (1990) in his view perceived that the Capital Market is a market in which the government, banks, companies etc. can invest or borrow usually large sum of money on a long term basis. Capital Market are referred to as 'securities'

The capital market is a subset of the financial system that serves as the engine for growth in modem economies. It is that part of the financial system that is involved in providing long term fund for productive use. The capital market can also be looked at as a network of institutions and individuals made up of regulators and operators who together facilitates the smooth operations of the market (Okereke, 2000: 1). There are basically three major schools of thought:

- The efficient market hypothesis
- The fundamental theorist
- The technical analysis (Lumby, 1994:368).

Efficient Market Hypothesis

It is generally expected that financial markets should behave in accordance with the efficient market hypothesis. Technical and fundamental analyses fall short of this expectation and were believed to follow a random walk design. These issues attracted heavy criticism by the academics.

Empirical support for the view that share prices do not behave in a systematic manner but are more akin to random walk was initially put forward by Professor M.G. Kendall in the 1950s. Kendall (1953) in a study of the behaviour of share prices confirmed this situation. Fama (1970) equally supported this view and thus threw more light on the matter by defining random walk to mean "successive price changes that are independent of each other, that is, they are uncorrelated, hence, attempting to predict the next movement in a particular time series becomes impossible by a study of previous movements.

There has, as a consequence, been a degree of antagonism between chartists and academic supporters of the random walk idea (Levy, 1967).

The Efficient market hypothesis supplies a theoretical framework which lends support to the random walk character of share prices. But what exactly do we mean by an "efficient" market?

An efficient market is one where at any time prices take into account all available information, market participants are assumed to act in an intelligent, self-motivated manner and to assess and act upon available information about share prices when information about a specific share is not acted upon then an opportunity will arise for at least some market participants to use that information to their advantage by buying or selling the share. (Mbat et al, 2004).

Analysts classify market efficiency into three possible varieties:

- Weak form efficiency; in which all prices are said to reflect all past information;
- Semi-strong form efficiency; in which prices fully reflect all publicly available information;
- Strong form efficiency; where prices are said to embody all information, whether or not publicly available.

Weak efficiency market
In Lumby (1994:370) and Foley (1999:32), the weak form of efficiency market is a sufficient condition to undermine technical analysts claim to be able to generate consistently higher profits of making use of charts of past price movements.

As far as weak efficiency is concerned, empirical evidence show that share prices tend to follow a random walk. This term can be misleading, in that it gives the impression that share prices move at random, without any reason. In fact, random walk means almost the opposite of this common sense interpretation; if share prices follow a random walk, the implication is that share prices only move in response to the disclosure of new information that is relevant to their value. Such as the disclosure of the annual profits or the announcement of a major new customer. Random walk therefore implies that share prices move only when they have gotten good reasons to move. If there is any known reason of non-random movements in share prices, it implies that the market is inefficient because share prices are moving when they have not gotten good reason to do so.

If share prices do follow a random walk, it then follows that technical analysis is worthless, in that it cannot have any predictive power; which is by definition, anything which moves at random cannot be predicted.

Schiller's volatility test
There is one very interesting piece of evidence that does so against the idea of weak efficiency. This is known as Schiller's volatility tests. Schiller argues that in an efficient market, you would expect share prices to be too volatile to be truly random. In other words, Schiller is casting doubt on whether share price movements are always a justifiable response to the information that was being disclosed. However, Schiller is just about the only researcher to question whether the market is truly weakly efficient.

Semi-strong efficiency
The semi-strong form of the EMH takes us one step further by arguing that not only is part information taken into account so too is all publicly available information. There is considerable evidence that most of the major stock markets are efferent in the weak form of the hypothesis and some are consistent with semi-strong form (Lumby, 1994:371).

Strong efficiency
In the case of a market characterized by strong efficiency it would be impossible for an investor to take advantage of new information from whatever sources. This is because a market

operating at this level of efficiency already exploits all information relevant to the share. This in turn means that insider information will also have been included in determining the share price.

While the strong form of the market efficiency hypothesis has little empirical support, it may be influential in affecting perceptions of how markets should operate (Foley, 1999:32).

Anomalies of efficient market hypothesis (EMH)
A key feature of EMH is that an efficient market is not possible to make consistently higher returns except by holding a portfolio with a higher level of risk. However anomalies emerged because of the following reasons:

  i.   The small firm's effect or the smaller companies puzzle. Here, evidence is available on the existence of consistently higher returns from investing in the shares of smaller companies (Foley, 1999). In the United States and the United Kingdom, acknowledged to have the most informationally efficient stock markets in the world.
  ii. Seasonal Variation in Returns: the so-called January effect came to light in 1984 (Kein, 1984). This showed that in the US, nearly all the differential size effect occurs at the turn of the year that is during the early part of January. Similar seasonal effects have been identified in other markets.

This constitutes a further puzzle, the very thing which random walk theory seemed to dismiss; the existence of persistent and replicable market behaviour seems to have risen from the dead. It is right to argue that the seasonal patterns as they apply to segments of the market or to market patterns as they apply to segments of the market or to market indexes rather than individual share prices but it still leaves a fairly uncomfortable problem for proponents of the EMH. If the market is informationally efficient, why do seasonal regularities occur and why do market participate occur and why do market participants fail to exploit and thereby eliminate these seasonal effects? One possibility is that the abnormalities are there but are simply below an exploitable level. Share transactions are subject to dealing costs and hence if the disparities in returns are insufficiently large, then trading will not be able to take advantage of such effects. In this case, we would observe that existence of a variety of so-called irrational seasonal effects but these would be quite compatible with a slightly modified form of the EMH (Keane, 1989).

Fundamental Theory
According to Professor Uegene Fama of University of Chicago graduate School in 1960 states that, at any point in time an individual security has an intrinsic or true value, which is the present value of the future receipts accruing to the security holder. The theory also holds that, the intrinsic, value of the security depends on some essential factors affecting the company, the industry and the economy. The principal discussion variables in fundamental analysis are earning and dividends. Earning appends sales and costs, which are affected by several factors, internal and external to the firm's operating environment. Therefore, fundamentalist forecast stock prices on the basis of economic industry and company statistics. Fundamental analysis also attempts to identify factors influencing or likely to influence share prices, that is, the market reaction to information about the economy, industry and company. In assessing the company great reliance is placed on its published financial statement.

The other aspect of fundamental theory is that it tends to specialize in particular sectors of the stock market, about which they become extremely knowledgeable. They cast very wide information-capture net and then, on the basis of this information, and with the use of a share valuation model, determine what they think the shares and, if the analysis thinks the shares are

worth more than the current market price, "buy" advice is given. Conversely, if the analysts believe the shares to be over-valued on the market, "sell" advice is given.

They are called fundamental analysts, because they look at the fundamental factors that lie behind a share's value: the revenues the company can be expected to generate, the costs that the company is expected to incur in the generation of those revenues, the uncertainty surrounding both the future costs and revenues finally, the price (or return) of comparable investments approaches are based on different notions about how share prices are determined and derive their investment philosophies accordingly.

Technical analysis
According to Lumby (1994:368) and Foley (1999:28) technical analysis also referred to as Chartism, study charts of share price movements, with the intention of discovering particular patterns and trend of share price movements which appear to recur. Once these patterns have been identified, following the share price movements of a particular company, and if they see one of these patterns staring to develop, they believe that they are then able to predict.

The share's future course of movement and so give buy or sell investment advice. Technical analysts believe that they have discovered hundreds of these recurring patterns, and thus give such names as "double tops, double bottoms, head and shoulders etc."

Technical analysis is faulty in that it does have any basis, nor does it want to investigate to known why a particular share price is predicted to rise or fall. All that is important is that the movement is indicative of a rise or a fall.

Structure of the Capital Market in Nigeria
Traditionally, a Capital Market is structured into the stock and commodities markets Hananna (2004). It is where financial assets such as shares, bonds are raised and traded. According to Mbat (2001) the commodity market is the segments of the capital market where commodities are traded. The commodities in their raw forms range from agricultural products to oil products and precious metals. A commodity exchange market operates a trading floor where the market operators transact their business. Thus, commodity and their derivatives are exchanged for money. Another important feature of the commodity market according to Akpan (2004) is that the commodities are not physically traded in pits and as such different commodities are traded in different pits. However, the commodities market is not well developed in Nigeria.

According to Akamiokhor (1992) the stock market is divided into the primary and secondary markets. The primary market is the segment of the stock market, where funds are sourced directly by investors from individuals, corporate organization and specialized development finance institutions. The main characteristics of the primary market are; the market is not identifiable with any particular site; and the proceeds go to the investor sourcing of fund from this segment of the capital market can either be in form of equity participation and or listed or unlisted industrial loans, mortgage loans and government bonds/stocks.

Levin (1996) noticed that the secondary segment is where existing securities are traded. Holders of particular securities or instruments purchased from the primary market may decide to sell instruments. The proceeds of sale go to the holders of the instruments than the company. In Nigeria, the secondary segment of the market is made up of two broad categories namely: the Centralized Action Market and the Dealers Market. The Dealers market is

characterized by the absence of a centralized location for transacting business in securities. Thus, most securities not listed on the Nigerian Stock Exchange Account for the overwhelming majority of securities are traded in the dealers market. Other instruments traded in the dealers markets of the secondary segment of the capital are securities of unquoted companies primarily aimed at raising working capital. The Centralized Action Market is a stock exchange, which is an organized secondary market for buying and selling of securities. The hub of the Nigerian capital Market is the Stock Exchange. The Stock Exchange Operates two tiers, the first and second tier markets. Of the quoted equities in the market, are listed in the first tier market, 16 in the second tier and the remaining 4 in managed funds

Equities market

Mbat (2001) noticed that the market for equities in the Nigerian Stock Exchange consists of the first-tier and the second-tier equities. One important feature of the equities market is that subscription must be fully paid up before allotments are given to an individual investor. Other features of the equities market are part ownership by the subscribers immediately after allotment of the shares. Thus, holders of the instrument are entitled to attend the Annual General Meetings and can vote to elect the management. The return on equities is by way of dividend or price appreciation or scrip's issue. Unlike a debt instrument, repayment of the principal occurs only if the instrument is traded through the secondary market. The growth in total number of listed equities has not been impressive given the number of incorporated companies. From 153 in 1992, the number of listed ordinary shares peaked at 195 in 2002. (NSE, 2002). This development has been attributed largely, to the fact that an average Nigerian entrepreneur has an aversion to ownership dilution of his business, although this is a common phenomenon in all emerging stock market and developing economies.

First tier securities market

According to Anyanwu (1998) the first tier securities market deals with issues of quoted companies. The essential difference between the two tiers lies in their listing requirements. The listing requirements for the first tier market are:

1. The company must be registered as a public limited liability company under the provision of the companies and Allied Matters Act (1990) as amended;
2. At least 25 percent of the nominal value of share capital must be offered to the public.
3. The date of the last audited accounts must not be more than nine (9) months;
4. The company must submit to the exchange its financial statement and business records for the past five years.
5. The annual quoted fee payable by the companies in this market is based on a percentage of its total market capitalization.
6. After listing, the company must submit quarterly, half-yearly and annual accounts to the exchange.
7. At the time of listing, the number of shareholders in the company must not be less than 300; and
8. The securities must be fully paid at the time of allocation. (p 46).

A benefit that accrues to members of the first tier markets is that the amount of money that the firm can raise in the market is unlimited. This however depends on the borrowing capacity of the company.

Second tier securities market

The second tier securities market (SSM) as asserted by Akpan (2004) was introduced on 30th April, 1985, primarily to attend to the needs of small and medium size enterprises, which cannot meet the strict listing requirements of the first tier market. In effect, it provides an

avenue for smaller companies to access public issues for expansion. The first company to raise capital from this segment of the second tier market was Juli Pharmacy and the number of companies covered by the scheme has grown from zero in 1985 to 16 in 2003.

The listing requirements according to Akpan (2004) in this market include:

1. That at least 10 percent of the nominal share capital must be offered to the public.
2. At the point of listing the number of shareholders must not be less than 100;
3. The quotation fee for companies in this market is a flat rate of N30, 000 per annum;
4. The amount that can be raised may not exceed N100 million.

These operators include Brokers/Dealers, Issuing Houses, Registrars, Underwriters, Trustees and Portfolio/fund managers, which provide various services for the investors and borrowers in the capital market.

Stockbrokers / dealers

According to Asika (2004) a stockbroker is a licensed member of the stock exchange, who has the responsibility of maintaining a fair and orderly succession of prices for a specific securities traded on the exchange. They, among others functions, act as agents for the public, receiving and executing buy or sell orders for share according to the instructions of their clients. Mbat (2001) noted that the stock brokerage firm is a limited liability company, a facilitator and one of the principal agents of the stock exchange. It is a dealing member and acts as an intermediary. It is licensed to represent and trade in securities on the market on behalf of investors for a commission, i.e. brokerage fee. The; Nigerian Stock Exchange (NSE) regulates the activities of the brokers/dealers. Since the tight coupling of the Automated Trading System (ATS) and the central securities clearing system (CSCS) servers in 2000, the stock brokerage firms are responsible for the allotment of traded shares in the system and are also involved in the trading of unlisted securities.

Stockbrokerages also provided advisory services by giving professional advice on choice and management of investments and assisting project sponsors raise funds. Basically, they trade in secondary market.

Issuing houses

An issuing house as asserted by Adetunji (1997) is a financial institution, a non dealing member of the NSE that prepares prospectus to sell new securities offered to the public by companies and governments. In addition to preparing and managing issues, it underwrites and advises on pricing for successful floatation. Since it handles new issues of securities, it is primary market intermediary of the Nigerian capital market (NCM). The activities of an issuing house according to Adetunji (1997) cover: offers for subscription, right issues, offers for sale, private placements, etc. They also serve as financial advisers and coordinators of capital rising exercise on mergers, acquisitions and takeovers. The stipulated minimum paid-up capital of an issuing house is N40 million. Applications to raise funds in the capital market pass through issuing houses. Generally, issuers of securities have a period of three months after SEC approves an issue for the completion of the process. The incorporation of the Central Securities Clearing System (CSCS) has benefited the activities of issuing houses. Prior to it, cancellation and frequent re-issuance of certificates complicated stock market delivery and settlement processes. The CSCS coupled with the e-business platform and internet portal has, in addition, impacted positively by enhancing corporate visibility, affording real time access to information on transaction in company securities and online access to general information on market activities.

The Nigerian stock exchange (NSE)

The NSE is a self-regulatory organization and supervises the operations of the format capital market. It provides a mechanism for mobilizing private and public savings, and making them available for productive purposes. Moot (2001) opine that the NSE provides a means for trading in new and existing securities and encourages enterprises of different scales to gain access to public listing. It also regulates the market and protects the investors. It operates the main exchange for relatively large enterprises and the Second Tier Securities Market (SSM) for small and medium scale enterprises. Since inception, the securities listed have grown from 18 in 1986 to nearly 460 in 2006 consisting of government stocks. Bonds, industrial loans (debenture) preference stocks and Equity/Ordinary Shares of companies.

According to Nzota (2004) the stock exchange is a membership institution, with 296 dealing and non-dealing members as at end 2004. The dealing members are stockbrokerage firms, while the non-dealing members are issuing houses, registrars etc as well as individuals who are distinguished in capital market activities. The NSE is governed by a council, which is presided over by a president. The members of the council are elected at the NSE's Annual General Meeting. The functions of the council include the following; granting of the quotation and listing of securities; formulating rules and regulations for the stock market; enforcement of discipline among members of the Exchange, dealing with complaints about and amongst brokers and the investors, and protecting of investors interest.

Akpan (2004) noticed that the exchange witnessed tremendous growth since inception with the Lagos Stock Exchange (LSE) alone having about three million individual investors and hundreds of institutional investors, including foreign based companies that constituted approximately 47 percent of the quoted companies. As at 2002, 7 branches have been established: Kaduna 1978; Port Harcourt, 1979; Kano, 1989; Onitsha 1990; Ibadan, 1990; Abuja, 1999 and Yola, 2002 with Lagos as the head office. Most of the branches are connected online to the trading engine in Lagos. The exchange trades via the Automated Trading System (ATS), which replaced the call over system in April 1999. Prices of new issues are determined by issuing houses / stockbrokers, while on the secondary market, stockbrokers determine the prices through their bids/quotations. The market / quoted prices, along with All-share Index, are published daily. Clearing, settlement and delivery of transactions on the NSE are done electronically through the Central Securities Clearing System (CSCS), a subsidiary of the exchange. The CSCS limited also referred to as the "Clearing House" was Incorporated in 1997, as part of the effort to make the Nigerian stock market efficient and investor friendly. In addition to clearing, settlement and delivery, the CSCS offers custodian services.

Trustees

According to Nnanna (2004), with the growth and expansion of the capital market to include unit trust schemes and increased recourse to debt securities by corporate bodies, the trustee assumes more vital roles. A trustee holds and manages assets. Trust or pension funds, and debt securities on behalf of individual or institutional investors. He thus protects their interest by ensuring adherence to the rules governing the instrument. Under the unit trust scheme, the fund manager appoints an independent trustee on behalf of the unit holders as a custodian of the underlying assets of the funds.

Underwriters

According Ekpenyong (1994) underwriting in the securities market is aimed at facilitating the success of the offer. Thus, the underwriter of a security is an institution that performs some functions that could induce the success of the securities on offers (issues). This is a form of

hedging against the failure of the securities offered. Therefore, the underwriter at the time of subscription makes a promise to make money available in the event of under subscription. Underwriters know this as a stand. The payment to a stand by underwriter is a commission that is determined at the point of agreement.

Ekineh (2000) noticed that the Nigerian capital market has witnessed very few firms underwriting offers. The major underwriters of public offers are the deposit money banks and insurance companies. Also, a well-developed pension fund has the potential of becoming a veritable source of underwriting public offers.

Regulators in the market

Edogi (2006) explained that the regulatory bodies of the Nigerian Stock Market consist of the securities and Exchange Commissions, Nigerian Stock Exchange, Central Bank of Nigerian and Federal Ministry of Finance. On the basis of their experiences, different countries evolve different status for stock market operations. In Nigerian, there are several status that have provisions for guiding the operations of the stock market. The statutes are:

1. The Lagos Stock Exchange Act, 1961;
2. Trustee Investment Act, 1962
3. Companies and Allied Matters Decree (CAMD), 1990
4. Banks and Other Financial Institutions Decree, 1991;
5. Nigerian Promotion Investment Decree, 1995;
6. Foreign Exchange (Miscellaneous Provisions Decree, 1995;
7. Securities and Exchange Commission Decree, 1999;
8. Investment and Securities Act, 1999

Securities and exchange commission

The apex regulatory body in the capital market is the Securities and Exchange Commission (SEC). It empowered by the Securities and Exchange Commission Decree, 1999 amongst others to:

1. Register and approve all securities for subscription or sale to the public, while ensuring that full disclosure is given in the prospectus and other issue documentation in the case of a public offer.
2. Ensure fairly, orderly and equitable dealings in securities.
3. Register commodity and stock exchange, investment advisers and all market operators with a view to maintaining an enviable standard of conduct and professionalism in the stock market.
4. Review, approve and regulate mergers and acquisitions;
5. Perform market oversight functions through surveillance, monitoring and on/off site inspection with a view to assuring fair play and equitable dealings on the Exchange; and
6. Promote investors education and all categories of intermediaries in securities market.

Thus, the SEC regulates the issue of securities and the conduct of operates/players in the market, as well as sales practices. In addition to its administrative and regulatory roles, the SEC is also vested with the power to suspend or revoke the registration of any person/body involved in price manipulations, unjust or inequitable practices, after an opportunity for hearing has been given. The commission may annual such a transaction and further prescribes appropriate measures to rectify such irregularities. The SEC is also expected to relate with some international securities market organizations, stock exchanges, the internationals finance corporate. It became a member of the International Organisation of Securities Commission (IOSCO) in 1985). The commission has also sustained its membership with the Emerging Market Committee (EMC) and the Africa and -Middle East Regional Committee (AMERC),

among others. The membership provides a platform for SEC to showcase the Commission to the external world, thereby, inducing foreign investment.

Central Bank of Nigeria

According to Nnanna (2004), the Central Bank of Nigeria is a major player in the capital market. First, it is the apex regulatory authority for both banking and non bank financial institutions. Also, it has underwritten Federal Government debt issues, by absorbing all unsubscribe positions. This it does by laying down terms and conditions for the issuance of Federal Government. Stock, thereby imparting resilience and stability in the market by purchasing all government stocks on issues that are not taken up by other purchasers and then subsequently selling them to the market as the need arises. Besides, the Central Bank of Nigeria participated actively in setting up the development finance institutions, by subscribing to their capital. Because of the important role of an efficient and well, functioning payments system in the transmission of monetary policy, the financial sector become viable, the CBN is also at the forefront in enhancing the payments and settlement system (Nnanna 2004).

CHAPTER THREE
RESEARCH METHODOLOGY

This chapter describes the procedure and strategies employed for data collection for this study. It is the road map to the findings of the proceeding chapters. It focuses on the research design, method of data collection, model specification and method of data analysis

Research design

Research design denotes the structuring of a study, and strategy of investigation concerned so as to obtain answers to research questions and to control variance (Etuk, 2003). Put another way a research design is the structuring of a study aimed at identifying variables and their relationship to one another. This is used for the purpose of obtaining data to enable the researcher test hypotheses or answer research questions (Asika, 1991).

Arising from the above statements, the study adopts exploratory survey of the performance of the Nigerian Capital market between 1986 and 2005 covering a period of 20years.

Sources of data and method of collection

Data for the study were generated from secondary sources. The bulk of the data were extracted from the Nigeria Stock Exchange Annual Reports. Daily Nigerian Business Investment lists, list of current capital market operators central Bank of Nigeria Annual Reports, and publications from Security and Exchange Commission Annual Reports and Publications, Federa\ Office of Statistics. Collation of data from the internet on Discuss and share ideas with selected investment companies in Nigeria and fact book

Techniques of data analysis

The data generated from the various publications were summarized and tabulated. The multiple regression model would be used to analysis the data in line with the hypothesis of the study. This technique should bring out whether the Nigerian capital market contributed significantly to economic development of Nigeria or otherwise

Model specification

Based on our purpose of the study, and the statement of our problem, it was observed that Economy (GDP), Market capitalization, value of stocks, value index of equities and listed securities aided in capital market performances. A model for capital market performance is built in line with the hypothesis to help analyze the study better as shown below:

GDP = a + Mkcap + Vsts + Vide + Lsts + r
Where:

GDP	=	the economy
a	=	constant
Mkcap	=	market capitalisation
Vsts	=	value of stocks
Vide	=	value index of equities
Lsts	=	Listed securities
r	=	error estimate

Estimation and validation

The ordinary least squares will be our estimated technique. The OLS is used to estimate the models because it exhibits the characteristics of the best linear unbiased estimator. It also expected to have a minimum variance. The validation of our estimated parameters will be conducted based on three criteria. These include:

Economic (a priori) criterion: the coefficients of the parameters estimated shall be validated on theoretical a priori criteria. That is the sign and sizes of magnitudes of the estimated parameters will be judged based on what economic says should be their sign and magnitudes.

Although in some cases, their sign and magnitude are not clear as predicted by the econometric a priori theoretical expectation. In these cases, we are going to make use of previous studies in this area.

Our economic a priori expectation, as previously stated indicate the signs that should characterize the parameters to be able to make negative impact on the endogenous variable.

Statistical criteria: The Statistical criteria are more or less an outcome of the estimated parameters of the equations. Among which include the correlation coefficient of the adjusted (R2), standard error (SR), and standard deviation of the estimates, student's t-test and f-statistics. It should be noted that the R2 gives us the insight or measure of the extent or degree to which the explanatory variable are responsible for the change in the dependent variables (endogenous variable).

The standard deviation, as the name implies measures the rate of dispersion of the estimates around the true parameters because the higher the standard deviation (standard error) of the parameter, the less reliable it is, and vise versa.

The t-test is an offshoot of the standard error test. The t-test estimates the sample value of the t by determining the critical region in a two tail test n-k degree of freedom. If our t-falls into the critical region we reject the null hypothesis, otherwise we accept.

F-test is employed for joint test of significant of the estimates in the equation. We also compare the observed F ratio with the theoretical value at 5 percent level from F-table where VI = K-l and V2 = N-K degree of freedom, where k is the number of estimated parameters, n is the sample size Here, the theoretical value of F defines the critical region of the test at these levels of significance. If Ho calculated is greater than the table value of Ho, we reject our null hypothesis and draw a conclusion in favour of our H1.

Econometric criteria: We made use of economic criteria (second order test). Economic criteria determine the reliability of the first order test and the standard errors of the estimates. These help us to determine whether our estimates have the desirable properties of best linear unbiased estimates (BLUE). We firstly assumed that there is no autocorrelation or serial correlation of the random variables. If this is violated, the standard errors of the parameters cease to be useful criteria for the valuation of the statistical significance of the coefficient. To test the validity of the assumption of non auto correlated disturbances, we compute the Durbin Watson statistics.

In the Durbin Watson test, we compare the empirical d; value calculated from the regression residuals with the d, and du in the Durbin Watson table and with their transformation 4-d) and (4-du). If d<di, we reject the null hypothesis of the no auto correlation and accept that there is a positive auto-correlation of the first order.

If du<d (4-du), we accept the null hypothesis of no auto-correlation and if d<du or if 4-du < 4-d1, the test is inconclusive.

CHAPTER FOUR
DATA PRESENTATION ANALYSIS AND DISCUSSION OF FINDINGS
Data presentation

In this chapter, data collection with respect to the performance of the Nigerian stock market are presented, analyzed and interpreted in order to have informed judgment about the level of performance in the stock exchange.

The data relevant to the study are presented in tables. They are mainly secondary data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin Nigerian Stock Exchange Annual Reports and publications others are from securities and exchange commission annual reports and publications, Federal office of statistics reports and publication, World Bank publications, Federal Ministry of Finance panel on Review of the Nigerian capital market covering a period of twenty (20) years (1986 2005). The data generated are presented in the following tables a review of the performance of the Nigerian Capital market statistically reveals in Table 4.1 shows the relationship between market capitalization and various stocks performances in the market. The market capitalization was increasing progressively for the twenty years under review. 1986 to 1987 recorded an increase of 25.02% while 1988 to 1999 stood at 35.84 Ok. From 2001 to 2006 the market capitalization recorded a percentage increase of 10.194, 8.67757, 12.3315, 2.71891, and 7.2353 respectively. Government stocks recorded a decrease from 1986 to 1998 picked up from 1999 to 2000, then fall again in 2001 and maintained an increase in 2000 to 2005 with a percentage change which stood at 11.12195, 66.1716, 1.38696, 53.8227, 7.6512, and 0.06596 respectively. Industrial stocks had a noticeable increases of 1.96078, 8.10811, 15.2672, 7.74648, 7.18954, 12.069, 1.69492, 2.20994, 1.0929, 0.549451, 2.15054, 5.10204, 0.51282, 0.75441, 0.51282, 68.53, 3.15 4.31, 1.48 and 0.515464 respectively from 1986-2005. Equity recorded a differential percentage increases of 95.5976, 8.92808, 21.886.3565.34, 11.71 respectively. From 2000 to 2005 there was a tremendous increase in equity traded in the Nigerian stock exchange. While market capitalization picked up from 1996 to the present date. Government stocks and industrial stocks needed to be encouraged by revisiting of its trading policy for the public interest.

Table 4.2 shows the influence of capital market performance on the economy. The economy, represented by the Gross Domestic Products (GDP); shows an increase of 36.35, 79.56, 35.84, 63.37, 225.80, 146.18, 215.01, 1,049.69, 788.77, 85.55, -69.34, 428.00, 1,648.52, 645.80, 192.09, 644.821, 601.00, 974.20, and 220.00 respectively from 1986-2005.

TABLE 4.1: The relationship between market capitalization and stocks performances

Years	Marker capitalization	% Change	Govt. stocks	% Change	Industrial stock	% Change	Equities	% change
1986	108.89	25.0275	54	5.882353	100	1.96078	185	1.59574
1987	145.24	35.3915	51	8.510638	102	8.10811	188	5.05051
1988	224.8	13.7508	47	9.302326	111	15.2672	198	8.75576
1989	260.64	19.558	43	7.5	131	7.74648	217	9.20502
1990	324.01	41.0687	40	53.2567	142	7.18954	239	4.78088
1991	549.81	21.0032	26.1	18.4375	153	12.069	251	7.72059
1992	695.99	23.6015	32	9.965636	174	1.69492	272	1.44928
1993	911	53.5368	29.1	3.558719	177	2.20994	276	0
1994	1960.69	28.6882	28.1	16.59751	181	1.0929	276	0
1995	2749.46	3.01763	24.1	9.049774	183	0.549451	276	0
1996	2835.01	2.50718	22.1	15.70681	182	2.15054	276	4.545455
1997	2765.67	13.4015	19.1	26.49007	186	5.10204	264	0
1998	3193.67	34.0449	15.1	88.2031	196	0.512821	264	1.538462
1999	4842.19	11.7675	128	12.37928	195	0.515464	260	10.6529
2000	5487.99	3.38182	113.9	11.12195	194	0.51282	291	95.5976
2001	5680.08	10.1949	102.5	66.1716	195	68.5179	6610	8.92808
2002	6324.9	8.67757	303	0.06596	619.4	3.147377	7258	21.8814
2003	6925.9	12.3315	303.2	53.8227	600.5	4.30279	9291	635.1056
2004	7900.1	2.71891	656.6	7.6512	627.5	1.487951	1263.9	65.3631
2005	8120.9	7.2353	711	1.38696	618.3	0.75441	3649	11.79534

Source: CBN Annual Reports and Statement of Accounts 2002-2005

GDP   =   GsK + Isk + Eties + r

TABLE 4.2: Capital market performance on the economy

Years	GDP	Market capitalization	Volume of stocks	Value index of equities	Listed securities
1986	108.89	60.04	35.15	40.11	30.0
1987	145.24	69.38	39.13	40.11	30.30
1988	224.80	99.98	40.0	51.99	60.70
1989	260.64	120.20	40.15	50.08	77.12
1990	324.01	244.02	40.15	51.12	80.15
1991	549.81	350.0	42.15	100.0	82.11
1992	695.99	396.89	48.17	101.15	86.90
1993	911.0	519.02	48.17	138.11	90.0
1994	1,960.69	660.60	50.0	138.11	92.30
1995	2,749.46	951.60	50.0	140.0	98.20
1996	2,835.01	966.16	50.12	100.0	99.80
1997	2,765.67	996.58	50.12	100.0	99.90
1998	3,193.67	1861.6	50.12	300.0	99.90
1999	4,842.19	2,721.9	55.5	311.10	202.09
2000	5,487.99	3,681.10	59.4	107.0	219.07
2001	5,680.08	3,573.60	59.4	107.0	258.05
2002	6,324.90	3,734.90	120.4	165.80	265.03
2003	6,925.90	3,925.90	225.8	118.50	277.01
2004	7,900.10	5,000.01	262.9	100.0	288.0
2005	8,120.90	5,120.90	470.3	138.50	288.0

Sources: International Journal of Business studies, 2000. CBN Annual Report and Statement of Accounts for 2001-2006.

GDP = Mk+cap + Vsts + Vide + Lsts + r

The growth of the economy was not steady as revealed in the analysis. Market capitalization was noticed to pick up from 1998 to 2005 with the following differential increases of 860.30, 959.20, -107.50, 161.30, 191.00, 1,674.11 and 120.89. Value of stocks record a little increases

of 3.98, 0.87, 0.15, 0.00, 2.00, 6.02, 0.00, 1.83, 8.00, 0.12, 0.00, 0.00, 5.38, 3.90, 0.00, 61.00, 105.40, 37.10, and 207.40 from 1986-2005.

Value index of equities was not stable as it rises and falls, the table revealed that early 1990, 1993, 1995, 1998-1999 and 2005 maintained a reasonable figures of 138.50 respectively. The listed securities in the capital market keeps on a little steady increases from 1986 to 1997. An improved increase of 102.19, 16.98, 38.98, 6.98, 11.98 and 10.99 was noticed from the year 1999 to 2005.

Table 4.3 revealed the relationship between capital market performance and stock traded. The table revealed a steady growth differential of 2.10, 1.00, 3.00, 11.90, 5.60, 14.40 and 17.60 for 1986 to 1993. While 1994 to 2005 stood at 106.60, 114.50, 6.40, -28.70, - 63.40, 42.80 and 7.20 respectively. The vas (Volume of Stock) recorded a rise from 1986 to 1991, failed 1992 to 1993; and gotten a steady figures of 49,560,000 to 49,515,000 respectively. A tremendous growth was recorded from 1996 to 2005.

TABLE 4.3: Market performance and stock traded

Years	MPS(N)	VOS ₦m)	VAS (₦m)	LNR%
1986	8.9	20525	382.4	14.0
1987	11.0	21560	850.3	16.3
1988	12.0	33444	610.3	25.5
1989	15.0	39270	225.4	26.0
1990	26.9	41770	242.1	20.2
1991	32.5	49029	491.7	31.2
1992	46.9	40398	804.4	36.1
1993	64.5	42074	985.9	20.2
1994	171.1	49564	1838.8	20.2
1995	285.6	49515	6979.6	20.4
1996	292.0	78089	10330.5	18.4
1997	263.3	84935	13571.1	18.3
1998	199.9	123508	14072.0	22.5
1999	175.6	256523	28153.1	21.3
2000	662.9	426163	57683.8	26.0
2001	763.9	451850	59406.7	20.6
2002	795.3	621717	120402.6	19.6
2003	1356.6	973526	225820.0	19.5
2004	1399.4	1021966	262935.8	17.8
2005	1406.6	4025079	454262839.33	17.3

Sources: World Bank and Nigerian Stock Exchange CBN Facts Book
Ps = VOS + VAS + LNR
MPs = a + vas + VAS + LNR
MPs = a + b1VOS + b2VAS + b3LNR + j

2005 recorded the greatest differential increase of 3.003, 113.00 naira. The VAS (Value of Stocks) stood at 382.859.3, 610.3, 225.4, 242.1, 491.7, 804.4, 985.0, 1,838.8, and 6,979.6 for the year 1986 to 1995. 1996 to 2005 recorded 10,330.5, 13,571.1, 14,072.0, 28,153.1, 57,683.8, 58,406.7, 120,402.6, 225,820.0, 262,935.8, and 454,262 and 839.33. It shows a great improvement in the capital market, due to policies and programme in the stock exchange market. The LNR rate stood at a rise and fall rate of 14.0 18.3, 25.5, 26.0, 20.2, 31.2, 36.1 20.2, 19.6, 19.5, 17.8 and 17.3 presents for the year 1987 to 2006. The unsteadiness of the LNR was due to the prices of demand and supply of stocks traded in the capital market that implies a stormy relationship in the consideration of the various variables under review.

Table 4.5 revealed the Nigerian stock exchange all share price index, covering the month by month and values from 1986 to 2005, December, 31st. The table 4.4 revealed a great

improvement in the Nigerian stock exchanges all price index in January of 1986 to 2005 with the index positions of 168.90, 190.80, 239.00, 343.00, 528.70, 794.00, 1,113.40, 1,666.30, 2,285.33, 5,135.07, 7,668.28, 6,435.53, 5,495.00, 5752.90, 9,54.39, 1,031.95, 1,3210.11, 22,712.26, 22,775.10, and 23,679.40. While in December, 1986 to 2005 all index stood at 190.90, 233.6, 325.30, 513.80, 783.00, 1,107.60, 1,543.80, 2,205, 5,092.00, 6,992.00, 6,440.51, 5,672.70, 5,266.40, 8,11.00, 10,693.10, 10,663.10, 19,942.84, 23,844.9, 24,085.76 and 33,189.30. in comparing the all share price index of 161.17, 210.75, 273.81, 465.55, 671.45, 930.88, 1,229.68, 17,144.16, 364,422.75, 5,481.46, 7,838.58, 5,960.16, 5,225.87, 6,090.93, 10,390.38, 9,634.02, 15,639.14, 25,005.10, 22,866.43 and 28,101.58 for the year 1986 to 2005. The analyzed means introduction of new shares in the capital market, that such increases bring growth and development of the Nigerian capital market. It also means that Nigerian companies are utilizing the capital market functions and investors and the general public are now investing in Nigeria companies. The performances are also encoining and attracting foreign investor.

Table 4.6 revealed the aggregate financial indicator for listed companies in the Nigerian capital market. The financial indicators identified in the table are the turnover, profit before tax, and profit after tax, total dividend, average earning per share, and average dividend per share. The turnover was in the increase of 1,605.60, 1,308.80, - 2,392.90, 1,181.60, 317.00, 1,161.50, 2,093.50, 4,350.80, 8757.70, 9,127.10, 9,127.20, 17,934.40, 37,309.90, 56,773.60, 100, 245.40, 30,946.90, 87,821.80, 125,908.20, 81,175.30, 69,391.30, 91,664.60, 93,706.70, 90,271.20, 283,400.00, 1,131,345.00 and -425,250.00 from 1986-2006. The turnover was greatly encouraging while from 2003 to 2004 brought a sharp draw of -425,250.00. Profit before tax rises from 637.9 to 33,946.0 in the year 1979 to 1994 and show to 32,098.0 in, 1995. The profit before tax picked up again to 34,034.5 to 110,890.0 in the year 1996 to 2004 under reviewed. Meaning a favourable growth, and development in the operations of quoted companies in Nigeria.

TABLE 4.4: Data used for regression analysis (1986-2005)

Years	(Market capitalization) GDP	(VOS ₦m)	VAS (₦m)	LNR%
1986	71194.9	20525	382.4	14.0
1987	77733.2	21560	850.3	16.3
1988	83179.0	33444	610.3	25.5
1989	92238.5	39270	225.4	26.0
1990	94236.3	41770	242.1	20.2
1991	97019.9	42074	491.7	31.2
1992	99604.2	49029	804.4	36.1
1993	100936.7	40398	985.9	20.2
1994	103,078.6	42074	1838.8	20.2
1995	104,600.6	49564	6979.6	20.4
1996	109,972.6	78089	10330.5	18.4
1997	113,509.0	84935	13571.1	18.3
1998	116,655.6	123509	14072.0	22.5
1999	121,207.8	256523	28153.1	21.3
2000	126,323.8	426163	51683.8	26.0
2001	131,489.8	451850	59406.7	20.6
2002	136,470.0	621717	120402.6	19.6
2003	139,653.2	973526	225820.0	19.5
2004	141,616.8	10121966	262935.8	17.8
2005	143,200.6	4025076	454262839.3	17.3

Sources: (i)   CBN statistical bulletin Vol. 17 2006
(ii)   Securities and Exchange Commission

V = $f(X1\ X2\ X3)$ _____ (i)
GDP = $f\,(VOS,\ VAS,\ LNR)$ _____ (ii)

TABLE 4.5: The Nigerian stock exchange all-share index (month end values (1986-2005))

YEAR MONTH	1986 1	1987 2	1988 3	1989 4	1990 5	1991 6	1992 7	1993 8	1994 9	1995 10	1996 11
Jan	168.90	190.80	239.00	343.00	528.70	794.00	1113.40	1666.30	2285.33	5135.07	7668.28
Feb	166.20	191.40	251.00	349.30	557.00	810.70	1119.90	1715.30	2319.77	5182.36	7699.28
Mar	161.70	195.50	256.90	356.00	601.00	839.10	1131.10	1792.80	2551.13	5266.20	8561.38
Apr	157.50	200.10	257.50	362.00	625.00	844.00	1147.30	1845.80	2785.43	5412.35	8729.79
May	154.20	199.20	257.10	382.30	649.00	860.50	1186.20	1875.50	3100.79	5724.12	8592.32
June	196.10	206.00	259.20	417.40	651.80	870.80	1187.50	1956.10	3596.17	5798.72	8459.29
July	193.40	211.50	269.20	445.40	688.00	879.70	1188.80	1926.30	4314.27	5919.43	8148.80
Aug.	193.00	217.60	281.00	463.60	712.10	969.30	1195.50	1914.10	4664.61	6140.95	7681.99
Sept	194.90	224.00	279.90	468.20	737.30	1022.00	1217.30	1956.00	4858.06	6521.88	7130.79
Oct.	154.80	*218.50*	298.50	480.30	757.50	1076.90	1310.90	2023.40	5068.01	6634.78	6554.77
Nov.	193.40	231.40	311.20	502.60	769.00	1098.00	1414.50	2119.33	5095.16	6775.62	6395.76
Dec.	190.90	233.60	325.30	513.80	783.00	1107.60	1543.80	2205.00	5092.00	6992.00	6440.51

YEAR MONTH	1997 12	1998 13	1999 14	2000 15	2001 16	2002 17	2003 18	2004 19	2005 20
Jan	6435.62	5495.00	5752.90	9542.39	11031.95	13210.11	22712.28	22775.10	23679.4
Feb	6426.17	5376.50	5955.73	9180.53	10644.75	13623.36	25169.29	21953.50	23843.0
Mar	6298.50	5456.20	5966.24	954475	9544.75	13762.50	22965.97	20682.40	23336.6
Apr	6113.90	5336.50	5892.79	9591.58	*9591.58*	13390.09	26205.20	21961.70	23301.2
May	6033.90	4916.20	*6095.35*	10189.24	10189.24	14002.21	27.505.64	21862.80	24745.7
June	5892.08	4916.20	6466.72	11094.33	11094.33	14537.80	290.98.89	21364.80	26316.2
July	5817.03	5977.30	6900.73	10861.11	10861.11	13992.86	27.062.13	21911.00	27880.5
Aug.	5795.17	4964.30	7394.05	10529.62	10529.62	15813.07	25.07612	22935.40	33096.4
Sept	5697.67	4840.20	7298.88	10594.99	10594.99	16252.67	22739.68	24635.90	32554.6
Oct.	5671.00	5032.50	7415.34	11339.61	11339.61	18.874.12	23526.13	25873.80	32643.7
Nov.	5688.19	5133.20	7141.43	11253.31	11253.31	20.268.15	24155.43	24355.00	32632.5
Dec.	5672.70	5266.40	811.00	10693.10	10963.10	19942.84	23844.45	24085.76	33189.3

Source: www.sec.gov.ng

TABLE 4.6: Aggregate financial indicators for listed companies

Years	Turnover ₦ million	Profit Before tax ₦ m	Profit after Nm	Total Dividend ₦m
1986	9,794.4	1,291.3	837.5	351.4
1987	11,887.9	1,421.7	914.9	463.1
1988	16,238.7	1,772.4	1,076.4	562.5
1989	24,996.4	2,514.2	1,784.9	872.5
1990	34,123.5	3,044.7	1,996.9	1,081.8
1991	43,250.7	3,575.2	2,209.0	1,290.8
1992	61,185.1	6,427.4	4,586.6	1,701.8
1993	98,495.0	18,788.1	9,130.8	3,427.1
1994	155,268.6	28,005.9	18,842.3	8,437.7
1995	255,514.0	33,946.0	23,027.0	9,726.1
1996	286,460.9	32,098.9	25,200.9	9,857.4
1997	374,282.7	34,034.5	25,289.6	10,465.4
1998	500,190.9	46,101.4	34,445.4	10,923.6
1999	581,366.2	51,841.9	40,871.1	11,185.0
2000	650,755.5	63,941.8	52,891.1	11,621.1
2001	742,422.1	81,922.8	53,574.4	28,942.4
2002	838,128.8	101,026.3	72,782.3	36,619.2
2003	926,400.0BR	108,400.0	74,000.0	36,818.9
2004	1,209,800.0	126,900.0	85,500.0	42,112.1
2005	784,550.0	110,890.0	85,880.0	47,405.3

Sources: Securities and Exchange Commission

The various listed companies do not record any losses as indicated in the table. Profit after taxes increases from 837.5 to 1996.9m in 1986to 1987. 1991 to 1995 recorded increase of 20818m. A tremendous improvement was achieved in the year 1996 to 2005 with profit after tax of 25200.9m to 85,880.0m respectively. The table revealed that listed companies declared total dividend of 351.4 to 463.1, 562.5, 351.4, 463.1, 562.5 and 872.7m in the years between, 1986 to 1995 respectively. 1996 to 1996 stood at 1,081.8m 1,290.8m, 1,701.8m, 3,427.1, 8,437.7m, 9,726.1, and 9,857.4 respectively. From 1997 to 2005 recorded the greater total dividend declination of 10,465.4m, 10,923.6m, 11,185.0m, 11,621.1, 28,942.4, 112.1m, and 47,405.3m respectively. Average earning per share stood at 0.18, 0.20, from 1980, 1981, while 1982 ad 1983 stood at 0.18 and 0.19 for 1984. 0.26 was for 1985 and 1986 respectively. 1987 to 2005 stood at 0.28, 0.29, 0.36, 0.30, 0.28, 0.50, 0.68, 1.05, 1.01, 0.99, 1.52, 1.42, 1.54, 1.98, 1.89, 1.78, 1.28, 1.47 and 1.66 respectively. The average dividend per share for 1980 to 1981 stood at 0.10 respectively, while 1984 stood at 0.09. 1985 and 1986 recorded 0.11. 1987 to 2005 recorded average dividend per share of 0.14, 0.15, 0.18, 0.16, 0.17, 0.19, 0.24, 0.47, 0.40, 0.39, 0.65, 0.48, 0.47, 0.53, 0.81, 0.78, 0.72, 0.75 and 0.77 respectively.

TABLE 4.7: Performance of equities listed in the Nigeria stock exchange

Years	Trading volume (₦million)	Trading value (₦m)	Turnover ratio
1986	19.2	22.0	0.6
1987	23.5	27.2	0.7
1988	18.8	22.4	0.4
1989	19.5	22.9	0.3
1990	52.6	87.8	0.7
1991	47.2	90.0	0.5
1992	105.7	237.1	0.9
1993	186.7	286.6	0.7
1994	190.8	401.3	0.7
1995	346.1	1,788.1	1
1996	733.5	6,923.2	2.5
1997	1,160.0	10,923.2	3.9
1998	2,080.6	13,555.3	5.1
1999	3,913.6	14,026.6	4.8
2000	4,998.1	28,146.5	6
2001	56,890.8	57,612.6	8.9
2002	6,615.9	59,311.3	7.9
2003	13,242.1	113,886.6	8.6
2004	18,982.1	233,885.6	11.6
2005	26,493.7	254,707.8	10.1

Source: Securities and Exchange Commission

Table 4.7 shows the performance of equities listed on the Nigerian stock exchange. Considering 1986 and 1987, the trader volume was nil, while trading value stood at 8.6 and 6.1 respectively. 1983 to 1994 stood at 13.5 and 13.0, 16.2 and 12-8, 17.2 and 13.9, 19.2 and 22.0, 23.5 and 27.2, 18.8 and 22.4, 19.5 and 22.9, 52.6 and 87.8, 47.2 and 90.0, 105.7 and 237.1, 186.5 and 286.6, and 190.8 and 401.3 respectively. From 1995 to 2006, the trading volume and value stood at 346.1 and 1,788.1, 733.5 and 6,922.6, 1,160.0 on 10,925.2, 2,080.6 and 13,555.3, 3,913.6 and 14,026, 4,998.1 and 28,146.5, 5,890.8 and 57,612.6, 6,615.9 and 59, 311.3, 13,242.1 and 113,886.6, 18,982.1 and 233, 885.6, 24,493.7 and 254,707.8, and 36,661.2 and 468,588.4 while the turnover ratio for the various years stood at 0.5, 0.3, 0.9, 0.6, 0.5, 0.5, 0.6, 0.7, 0.4, 0.3, 0.7, 0.5, 0.9, 0.7, 0.7, 1.0, 2.5, 3.9, 5.1, 4.3, 6.0, 8.9, 7.9, 8.6, 11.6, 10.1 and 11.1 respectively. The table revealed a tremendous performance in term of trading volume and value with appropriate turnover ratios. Meaning that going into Nigeria stock exchange market will enhance companies' profitability, growth and development. Therefore, Nigerian

companies have patronized the capital market due to its policies and programmes, particularly in information disclosure.

Test of hypothesis
Hypothesis-by-hypothesis presentation of results.

Hypothesis One
Ho: There is no significant relationship between the performance of the Nigerian capital market and the development of the Nigerian economy between, 1986 to 2005.

Hi: There is significant relationship between the performance of the Nigerian capital market and the development of the Nigerian economy between 1986 and 2005.

The independent (predictor) variable (x) in this hypothesis capital market. In this study the predictor variable is sub-divided into three, namely; Government stock (Xi), industrial stock (X2) and Equities (X3). The dependent (criterion) variable (y) in the hypothesis is the development of the Nigerian economy. This brought the total number of variables considered to four, thus requiring a multiple consideration. To make the consideration possible, multiple regression analysis technique was applied. The technique required an examination of the relationship between the single criterion variable and the three predictor variables. In this study the criterion variable (development of the Nigerian economy) has been referred to as GDP (Gross Domestic Product) while the predictors, government stock, industrial stock and equities have been referred to as G5K, 15K and Eties respectively.

Hence the multiple regression equation
Y = b1 x1 + b2 X2 + b3 X3 + r
=   GDP = b(GSK) + b(ISK) + b(Eties) + r
Where: b = Regression coefficient directly associated with the Independent
        variables
r = Intercept or constant
The results of the analysis have been presented in Table 4.8

Results of analysis in Table 4.8 show that the calculated f-ratio of 16.23 is higher than the critical f-ratio of 3.00 at 0.5 level of significance with 16 and 3 degrees of freedom. These results imply that there is a composite effect of monetary indices such as in government stocks, industrial stock and equities on the development of the economy.

TABLE 4.8: Regression result of the relationship between performance of thee capital market and development of the economy

Variables	B	Standard error	Beta	t	Sig
Constant	733.724	728.640	-	1.007	.329
Government stock	5.118	3.943	0.375	1.293	.213
Industrial stock	5.235	5.140	0.363	1.018	.324
Equities	0.228	0.193	0.227	1.185	.253
Multiple R	*0.868*				
Multiple R2	*0.753*				
Standard Error of Estimate	*1518.1279*				
F-ratio	*16.23*				

Results in Table 4.8 are different especially as they are considered on individual capital market performance basis. The multiple correlation coefficients (R) which measured the strength of consideration between the economic development and capital market performance was 0.868. This correlation coefficient was positive (+) indicating that there was a direct perfect relationship among the variable. This implies that each time stocks and equities increased there was a corresponding increase in the Gross Domestic Product (economic development) .

The coefficient of determination (R2), from the result, was 0.753 and it measured the proportion of the variation in the GDP which is explained by the three indices that measured performance in the capital market. This figure implies that 75.3% of the development in the economy is accountable for by government stocks, industrial stocks and equities while the other 24.7% is accountable for by other variables extraneous to the study. The results also indicate that none of the variables (predictors) individually predicted GDP as shown in the t-values (Govt. stock: 1.298, industrial stock: 1.018 and equities: 1.185). None of these t-values was significant at .05 levels. The general result give a regression equation or decision rule as shown below.

GDP = 5.118GSK + 5.2351SK + 0.228Eties + 733.64

Hypothesis two:
Ho: There is no significant relationship between the total number of stocks traded in the capital market and the development of the Nigerian economy between 1986 to 2006.

H1:   There is significant relationship between the total number of stocks traded in the capital market and the development of the Nigerian economy between 1986 to 2005.

The independent variable in (predictor) in this hypothesis is the total number of stocks traded in the capital market. The predictor variable is in this hypothesis sub-divided into four, namely; market capitalization (MPS), total volume of stock (VOS), value index of equities (VAS) and listed securities (LNR). The dependent (criterion) variable remained development of the Nigerian economy measured in terms of the Gross Domestic Product (GDP). The variable (y) and four independent (XL, X2, X3 and X4). To test for Significance, the multiple regression analysis technique was adopted to obtain a regression equation that explained the prediction power of the independent variables on the dependent variable.

The prediction equation is given as:
Y = bl Xl + b2 X2 + b3 X3 + r
=   GDP = b(MPS) + b(VOS) + b(VAS) + b(LNR) + r
Where as usual
b = Regression coefficient directly associated with the Independent variables
r = Intercept or constant
The results of the analysis have been presented in Table 4.9

Results on Table 4.9 are different. The individual consideration of the independent variables show clearly that none of the variables was a single good predictor of economic development. The multiple correlation coefficient (R) which measured the strength of association between total number of stock and economic development was 0.934. This correlation coefficient was positive indicating that there was a direct perfect relationship among the variables. That is, the higher the number of stock the higher was economic development.

TABLE 4.9: Multiple regression result of the relationship between the total number of stocks traded and economic development.

Variables	B	Standard error	Beta	T	Sig
Constant	1116.738	1257.636	-	0.888	.389
Market capitalization	4.719	2.812	0.828	1.678	.114
Volume of stock	0.00097	0.004	0.314	0.252	.804
Value index of Equities	0.0000076	0.000	0.275	-0275	.775
Listed securities	-6.503	52.837	0.012	-0.012	.904

Multiple R	*0.934*
Multiple R2	*0.873*
Standard Error of Estimate	*1124.860*
F-ratio	*25.705**

The coefficient of determination (R2) was 0.873 and it measured the proportion of the variation in GDP (economic development) which is resulting from the four indices of total stock. This figure implies that 87.3% of the development in the economy Resulted from increase in total stock. The other 12.7% is accountable for therefore by other factors not included in the study. The f-value of 25.705 significant at 0.05 level of significance go to confirm the relationship between the dependent and the independent variable.

The regression equation derived from the results is therefore given or follows:
GDP = 4.719MPS + 0.00097VOS - 0.0000076VAS - 6.503LNR +1116.738.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter is designed to present the summary of findings and conclusion based on the analysis of the hypotheses that directs the study. Recommendations will also presented in this chapter

Summary of findings

The main objective of this research was to examine the performance of the Nigerian capital market in the development of the Nigerian economy from 1986 to 2005. Data collected and analyzed indicated that:

i.   The listed securities in the capital market maintained a steady increase as was observed from 2000 to 2005 respectively which also shows that the price changes in the Nigerian stock market are more systematic than random in movement over time.

ii. The Nigerian capital market operations was efficient with the context of the performance of the capital market hypothesis which implies that each time stocks and equities increased there will be a corresponding increase in the development of the economy (GDP).

iii. The introduction of new shares in the capital market has brought growth and development of the Nigerian capital market. This development has gingered the utilization of the Nigerian capital markets functions by Nigerian companies as well as individual investors.

From the study it has been established that the Nigerian capital market through the stock exchange established in the states has fulfilled its functions of providing facilities for dealing in listed securities, overseeing the trading of those securities and ensuring four pricing of securities, establish rules regulating transfer of shares and initiating measures of encourage savings and issuance of securities by government and other organizations.

CONCLUSIONS

In conclusion, the capital market specifically provides funds to industries and governments to meet their long-term capital requirements for fixed investment like buildings, plants and machinery and other public infrastructures.

Empirical research however, indicates that the role of the Nigerian capital is limited. This is shown by its low contribution to the level of capital mobilization and investment as evidenced by the low market capitalization over the sphere in review. Although the federal government had complemented the role of the Nigerian stock exchange through the establishment of some key development finances institutions to provide specialized long-term capital for sectoral growth and development the impact has not been fully felt.

With the recent reforms in the economy, particularly in the banking sector, there is need for the capital market to develop the required resilience towards evolving a financial infrastructure that would engender economic growth and transformation in the economy.

Finally, there is an obvious challenge to urgently develop a vibrant bond market to allow the private sector access to a larger number of best instruments in order to enhance the management of their liabilities.

However, in real world conditions for maximum efficiency in performances are unlikely to exist. Yet even though this conditions may not be fulfilled, in practice with the reforms and globalization performances will be enhanced and realizable if sufficient participants have equal access to adequate stock information.

Given the position the Nigerian capital market cannot be said to have perform excellently as the need for further review becomes apparent when compared to other countries of the world.

RECOMMENDATIONS

In the study an attempt has been made to provide a theoretical and empirical analysis of the performance of the Nigerian capital market. Results indicate that performance of the Nigerian capital market to a large extent has contributed to the development of the Nigerian economy and has provided the opportunity for a given class of investors to finance and expand their business. This feat notwithstanding it is obvious that the capital market is still faced with more challenges which requires the following recommendations:

There is need to evolve comprehensive measures to strengthen, broaden and deepen the market to enhance its intermediary role in financing economic activities. The accelerated upgrade of systems need to be sustained while the regulatory and prudential framework should continuously be reviewed to facilitate better disclosure standards and transparency for transactions.

i.   There is need to open up the capital market and promote free flow of information in its operations as it is the case in other countries: firms listed on the stock exchange should be published quarterly and half-yearly reports in addition to annual reports on their operations with detailed explanations on the drivers of the performances.

ii. The challenges of low awareness about the operations and benefits of the capital market in the economy should be looked into. The level of awareness of the populace about the capital market and the opportunities available in it would enhance the level of their participation in the market.

iii. The capital market should be at the forefront of ensuring financial integrity in order to minimize the potential effects of the risk of contagion as well as reduce systemic risks. Thus, there is the compelling need to strengthen the enforcement of the corporate governance code among listed companies which is essential for promoting investor confidence and inducing sustained long-term growth of the capital market. In this regard, the proactive stance of the management of the Nigerian stock exchange and the Securities and Exchange Commission in their respective efforts at raising the standards of capital market operators should be sustained.

iv. There is need to take the capital market window to more towns and cities in Nigeria for greater width and enhanced growth. Improvement in the availability of social infrastructure such as electricity and media equipment in homes would boost nationwide information dissemination.

v. There is need to canvass for self-regulation in the institutions of the capital markets as well as the cooperation and full commitment of operators towards a high level of professionalism and high ethical standards. In this regard, the imposition and enforcement by the regulatory authorities would be a welcome development. The years ahead would be increasingly demanding and competitive, and only the adoption of good corporate governance by institutions, market participants   and intermediaries can guarantee sustainability.

vi. The issue of investors' perception is very important. The decision to invest in a financial instrument or indeed in the securities market or a particular company is usually influenced by perception. A good perception of a company, a country or region attracts investment into it, while poor perception would undoubtedly impact negatively on the level of investment. International perception of a country's political and economic environments is often a strong influence on the response of foreign investors to its security offering. With the return of democratic rule and the reforms in the economy, particularly in the banking sector, coupled with the establishment of the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC), the confidence of both local and foreign investors in the economy is gradually returning. There is therefore a compelling need to sustain these reforms.

vii. There is need to review the regulatory framework in line with international best practices to entrench market rules and principles that would enhance good corporate governance in system. The existence of such market rules attracts public confidence for the market.

viii. The regulators of the capital market should encourage more derived financial products such as pension funds and mutual funds, which could serve as vehicles for mobilizing funds for investments on the stock market.

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Interest Rate: A Key Variable in Deposit Money Banks' Lending Behaviour in Nigeria

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Abstract
This study examines the relationship between interest rate and bank loans in Nigeria from the periods 1981 to 2013. The specific objectives were to assess the extent to which monetary policy rate, lending rate, deposit rate and Treasury bill rate relates with the loans and advances granted by banks in Nigeria. To achieve the above objectives, relevant literatures were reviewed. An ex-post facto research design was used for the study. The time series data used were sourced principally from the CBN statistical Bulletin and tabulated using the desk survey. The data were analyzed using the ordinary least square multiple regression statistical technique at 5% level of significance. Result from the analyses reveal that increase in monetary policy rate reduces the capacity of banks to lend; deposit rate and Treasury bill rate have an inverse but significant relationship with bank loans and advances; lending rate had a positive and significant relationship with bank loan and advances in Nigeria. Based on these findings, it is recommended that effort should be made to reduce the lending rate or strengthen the regulatory framework of commercial banks lending rate. Also the spread between lending rate and deposit rates should be narrowed as this will encourage more deposit mobilization and efficient bank intermediation which will enhance bank profitability and economic growth in the long run.

Key words: Loans and advances, Lending rate, Deposit rate, monetary policy rate, treasury bills rate, lending behaviour.

INTRODUCTION
Most developing nations' financial systems have witnessed stress as a result of the economic shocks of the 1980s. The economic shocks which manifested through indiscriminate distortions of financial prices including interest rates, has resulted in the reduction of the real growth rate and the real size of the financial system relative to nonfinancial magnitudes (Davidson & Gabriel, 2009). Udoka and Roland (2012) stated that the Nigerian economy has at different times witnessed enormous interest rate swings in different sectors of the economy since the 1970s and mid 1980s under the regulated regime.

The regulated regime set out preferential interest rates. These interest rates were based on the known fact that the market rate, if universally applied, would exclude some of the priority sectors. Interest rates were, therefore, adjusted periodically with 'visible hands' to promote increase in the level of investment in the different sectors of the economy. Noticeable among the preferred sectors were the agricultural, manufacturing and solid mineral sectors which were given priority and deposit money banks were directed to charge preferential interest rates on all loans to encourage the upsurge of small-scale industrialization which is a catalyst for economic development (see Udoka, 2000 and Okoye & Eze, 2013).

Since 1986, the inception of interest rates deregulation, the government of Nigeria has been pursuing a market determined interest rates regime, which does not permit a direct state intervention in the economy but allows the demand and supply for loanable funds to set the rate of interest charged on lenders and paid to depositors (Nyong, 2007). Lending which may be on short, medium or long-term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a country in general (Olokoyo, 2011).

Deposit money banks perform many functions- encouragement of savings, provision of capital needed for development, encouragement of trading activities through the use of cheques, encouragement of investment, provision of managerial advice to industrialists who do not engage the services of specialists and rendering financial advice (Ogar, Enya & Arikpo, 2015). Consequently, these roles make them an important phenomenon in economic growth and development (Akinyomi, 2014). Therefore, no matter the sources of the generation of income or the economic policies of the country, deposit money banks would be interested in giving out loans and advances to their numerous customers bearing in mind, the three principles guiding their operations which are, profitability, liquidity and solvency (Adolphus, 2011). However, the prevailing interest rate, the volume of deposits, the level of banks domestic and foreign investment, banks liquidity ratio and the public reputation are some of the measure determinants of bank loans

Lending practices are informed by situational factors such as captains of industry are unable to meet up with the sudden upturn in their businesses financial requirements and therefore, necessarily, have to turn to the banks for assistance (Ezirim, 2005). For instance, the lending practices of the then colonial banks were biased and discriminatory as only the expatriates or expatriate-directed businesses were preferred for loans and advances. This has since changed following the establishment of indigenous banks and the implementation of Structural Adjustment Programme (SAP) in Nigeria.

With the deregulation of the interest rate in 1986, following the adoption of the structural adjustment programme, the forces of demand and supply now determine the cost of borrowing. Since this development, interest rate swings in the direction of the movement of these forces. The high fluctuations in interest rate between these periods have been known to alter banks' loans. What is not known however is the extent to which interest rate fluctuations affect bank loans in Nigeria. This study is therefore conceived to answer the question to what extent does interest rate swings affect the lending behaviour of banks in Nigeria.

OBJECTIVES OF THE STUDY

The broad objective of this study is to examine the fluctuation in interest rate on back loans in Nigeria. The specific objectives of this study include:

- To assess the effect of lending rate on the total loans and advances of deposit money banks in Nigeria
- To ascertain the impact of deposit rate on the total loans and advances of deposit money banks in Nigeria
- To examine whether the CBN's influence of monetary policy rate significantly influences the total loans and advances of deposit money banks in Nigeria
- To examine whether there is significant relationship between Treasury bill and total loans and advances of deposit money banks in Nigeria
- Research hypotheses

On the basis of the above stated objectives, the following research hypotheses were formulated and tested in this study:

- HO: Lending rate does not significantly affect the total loans and advances of deposit money banks in Nigeria.
- HO: Deposit rate does not significantly impact the total loans and advances of deposit money banks in Nigeria.
- HO: monetary policy rate does not significantly affect the total loans and advances of deposit money banks in Nigeria
- HO: Treasury bill does not significantly impact the total loans and advances of deposit money banks in Nigeria

LITERATURE REVIEW AND THEORETICAL FRAMEWORK.

Theoretical framework

This study is anchored on the loan pricing and credit market theories. The loan pricing theory holds that Banks cannot always set high interest rates, e.g. trying to earn maximum interest income. Banks should consider the Problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz & Weiss, 1981). If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behaviour or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz & Weiss (1981), it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

The credit market theory on the other hand is a neoclassical credit market model that believes that the terms of credits clear the market. If collateral and other restrictions (covenants) remain constant, the interest rate is the only price mechanism which determines lending. With an increasing demand for credit and a given customer supply, the interest rate rises, and vice versa. It is thus believed that the higher the interest premium, the higher the failure risks of the borrower (Ewert, Szezesmy & Schenk, 2000).

Empirical review

A lot has been reviewed in terms of lending activities of various deposit money banks. Some opinions deliberated on the factor responsible for banks willingness to extend much credit to some sector of the economy, while some discussed effect of such extension of credits on productivity and output.

Ojong, Arikpo & Ogar (2015) investigated the role of deposit money banks on the growth of SME in Cross River State, using the Pearson product moment correlation tool on deposit money banks credit, multiple taxation and government policies found that all variables related significantly with SMEs output.

Khat & Bathia (1993) used non-parametric method to study the relationship between interest rates and other macro-economic variables, including savings and investment. In their study they grouped (64) Sixty-Four developing countries including Nigeria into three based on the level of their real interest rate. He then computed economic rate among which were gross savings, income and investment for countries. Applying the Mann - Whitney test, they found that the impact of real interest was not significant for the three groups.

Adofu & Audu (2010) used ordinary least squares method to ascertain the assessment of the effects of interest rate deregulation in enhancing agricultural productivity in Nigeria. The study found out that interest rate play a significant role in enhancing economic activities and as such, monetary authorities should ensure appropriate determination of interest rate level that will break the double - edge effect of interest rate on savers and local investors.

Rasheed (2010) used error correction model (ECM) to investigate interest rates determination in Nigeria. The study found out that as the Nigerian financial sector integrates more with global markets, returns on foreign assets will play a significant role in the determination of domestic interest rates.

Amidu (2006) examined whether bank lending is constrained by monetary policy in Ghana. The study revealed that Ghanaian banks' lending behaviours are affected significantly by the country's economic activities and changes in money supply, supporting previous studies that the Ghanaian Central Bank's prime rate and inflation rate negatively but statistically insignificantly affect bank lending.

Shelile (2006) examined the predictive ability of the term structure of interest rates on economic activity, and the effects of different monetary policy regimes on the predictive ability of the term spread. Results of the study established that the term structure successfully predicted real economic activity during the entire research period with the exception of the last sub-period (2000-2004) when using the multivariate model. In the periods of financial market liberalization and interest rates deregulation, the term structure was to be a better predictor of economic activity in South Africa.

Nnamdi (2007) attempted to evaluate the dynamic impacts and relationships between deposit structure, lending rates and risk assets created in the Nigerian banking system. The results indicated a significant multiple correlation between risk assets and a combination of the independent variables savings deposit, time deposit, demand deposits and lending rate.

Emery (1971), studied the use of interest rate policies as stimulus of economic growth. Using the OLS technique, He submitted that government of few less developed countries were beginning to view interest rate policy as one of their major discretionary policy variables – along with monetary and fiscal policy - in their efforts to stimulate economic growth and – when appropriate – to reduce inflationary pressure. According to him "this change in attitude has been caused in part by the experience of Taiwan, Korea and Indonesia following the introduction of substantial change in the interest rate structure, particularly for time and savings deposits.

Research methodology
The ex-post factor research design is used for this study and is adjudged to be appropriate as the event under study had already taken place. Unlike the experimental design, statistical techniques will be applied in the treatment of the events under study. Time series data were

collected, using the desk survey method, for the period between 1980 and 2013 on the Loan and Advances, Lending Rate, Deposit Rates, Monetary Policy Rate and Treasury Bills Rate.

Techniques of data analysis and model specification
The ordinary least squares multiple regression analytical technique is used, justified by it feature as the best linear unbiased estimator with built-in validation criteria used in establishing relationships among variables.

For the purpose of this study, the following econometric model will be specified.
LOAD=f(LR,DR,MPR,TBR)
From where the ordinary least square model was obtained thus:
LOAD = a0 + b1LR + b2DR + b3 MPR + b4TBR + ET
 Where:
LOAD=   Loans and Advances
LR   =   Lending Rate
DR   =   Deposit Rate
MPR   =   Monetary Policy Rate
TBR   =   Treasury Bills Rate
ET   =   Stochastic Error Term.
A priori condition: a0, b1, b2, b3 & b4> 0

ESTIMATION AND VALIDATION TECHNIQUE

In view of the important nature of the study, an econometric equation was formulated on the basis of which the relationship between the variables (dependent and independent) was determined. The regression of the independent variables of Lending Rate, Deposit Rates, Monetary Policy Rate and Treasury Bills Rate on the dependent variable of Loan and Advance were estimated using the ordinary least square (OLS) method due to its characteristics of being the best linear unbiased estimator (Katsoyiannis, 2006).

On an a priori basis, we expect Lending Rate (LR) to be positive (+), Deposit Rate (DR) to be negative (-), Monetary Policy Rate (MPR) to be negative (-) and Treasury Bills Rate (TBR) to be negative (-). The result will also be evaluated using statistical criteria. This will include the R^2, t-statistics and f-statistics. R^2 will be use to test the explanatory power of the model and is expected to assume the value ($0 < R^2 < 1$). The closer the R^2 value to one the higher the fit of the model. The t-statistics will be used to evaluate the individual statistical significance of the respective parameters at 5% level. We expect that tcal > ttab for all parameters. F-statistics will be applied to test the overall significance of the model. The higher the F-statistics value, the greater the explanatory power of the model.

Finally, we will evaluate the result on econometric basis using the d-w statistics. We expect the calculated d-w value to fall within the no autocorrelation region.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS
Analysis of Data
The beginning step in the estimation of a linear relationship is the testing procedure to find out the characteristics of the time series data. This procedure and the regression results will now be presented and analysed below: Table 4.1:
Table 4.1 showed that both monetary policy rate (MPR) and lending rate (LR) have positive relationships with bank loans and advances in Nigeria. This is seen, as the parameters entered the model with positive signs. Implying that one percent increase in monetary policy rate

(MPR) and Lending Rate (LR) resulted in 0.9247 and 3.8091 increases in bank loans and advances respectively.

Furthermore, the result showed that deposit rate and treasury rate related negatively with bank loans and advances. Stated somewhat differently, one percent increase in deposit rate and treasury bills rate resulted in a decrease in bank loans to the turn of 3.0826 and 1.1360 respectively.

The goodness of fit of the model as indicated by the adjusted R2 value of 0.9229 or 92.29 percent indicated that the model fits the data well, the total variation in the observed behaviour of Bank Loans and Advances is jointly explained by the variation in monetary policy rate (MPR), Lending Rate (LR), Deposit Rate (DR) and Treasury Bill Rate (TBR) up to 92.29%. The remaining 7.71 percent is accounted for by the stochastic error term. The overall significance of the model was also tested using the ANOVA or F-statistics. Here, the high significance of the F-statistics value of 83.7499 confirms that the high predictability of the model did not occur by chance; it actually confirmed that the model fitted the data well.

We also tested for the presence of autocorrelation in the residual of the model using the d-w statistics, the test revealed that the calculated d-w value of 1.3693 fell within the inconclusive region of the d-w table. Hence no conclusion was drawn as to whether the model is free from autocorrelation.

TEST OF HYPOTHESES

Hypothesis one

- HO: There is no significant relationship between monetary policy rate and bank loans and advances.
- H1:   There is a significant relationship between monetary policy rate and bank loans and advances.

Decision rule:
Accept Ho: If calculated t-statistics < table t-statistics
Reject Ho: If calculated t-statistics > table t-statistics.
From the data analysis,
Calculated t-statistics = 1.2572
Table t-statistics = 2.035.

Since the calculated t-statistics value of 1.2572 is less than the table t-statistics value of 2.035 at 5% level of significance, we accept the null hypothesis and reject the alternative hypothesis. This implies that there is no significant relationship between monetary policy rate and bank loans and advances

Hypothesis two

- HO: There is no significant relationship between lending rates and bank loans and advances in Nigeria.
- Hi: There is no significant relationship between lending rates and bank loans and advances in Nigeria.

Decision rule:
Accept Ho: If calculated t-statistics value < table t-statistics value.
Reject Ho: If calculated t-statistics table t-statistics value
From the analysis

Calculated t-statistics value = 6.1690
Table t-statistics value = 2.035

Since the calculated t-statistics value of 6.1690 is greater than the table t-statistics value of 2.035 at 5% level of significance, we reject the null hypothesis and accept the alternative hypothesis. It therefore implies that there exist a significant relationship between lending rate and bank loans and advances in Nigeria.

Hypothesis three

- HO: There is no significant relationship between deposit rate and bank loans and advances in Nigeria
- H1:   There is a significant relationship between deposit rate and Bank loans and advance in Nigeria.

Decision rule:
Accept Ho: If calculated t-statistics value < table t-statistics value
Reject Ho: If calculated t-statistics value >table t-statistics value.
    From the analysis;
Calculated t-statistics value = 15.4169
Table t-statistics value = 2.035

Since the calculated t-statistics value of 15.4169 is greater than the table t-statistics value of 2.035 at 5% level of significance, we reject the null hypothesis and accept the alternative hypothesis. It therefore implies that there exist a significant relationship between deposit rate and bank loans and advances in Nigeria.

Hypothesis four

- HO: There is no significant relationship between Treasury bill rate and bank loans and advances in Nigeria
- H1:   There is a significant relationship between Treasury bill rate and Bank loans and advance in Nigeria.

Decision rule:
Accept Ho: If calculated t-statistics value < table t-statistics value
Reject Ho: If calculated t-statistics value >table t-statistics value.
    From the analysis;
Calculated t-statistics value = 2.2518
Table t-statistics value = 2.035

Since the calculated t-statistics value of 2.2518 is greater than the table t-statistics value of 2.035 at 5% level of significance, we reject the null hypothesis and accept the alternative hypothesis. It therefore implies that there exist a significant relationship between Treasury bill rate and bank loans and advances in Nigeria.

DISCUSSION OF FINDINGS

From the above analysis, it was discovered that there exist a positive but insignificant relationship between monetary policy rate and the bank loans and advances. This is to say that as monetary policy rate increases, the bank's loans and advances increase accordingly, but such increase is marginal. This finding is in agreement with Amidu (2006), who in his findings posited that the monetary policy rate is a potent instrument through which the CBN control the

lending behaviour of deposit money banks in Nigeria. This finding is also in agreement with Adebiyi & Babatope-Obasa (2004), who in a similar study held that an increase in monetary policy rate reduces the ability of banks to lend to investors. Hence, an increase in minimum rediscount rate reduces the capacity of banks to lend.

The study also revealed a positive and significant relationship between lending rate and bank loans and advances in Nigeria. Stated differently, the study proved that as lending rate increases, banks increase their loans and advances to the public. This finding is in tandem with Nnamdi (2007), who investigated the dynamic impacts and relationships between deposit structure, lending rates and risk assets created in the Nigerian banking system. Using the OLS analytical technique, the study revealed a significant relationship between deposits rate, lending rates, and the risk assets created by commercial banks.

The stud finally revealed an inverse but significant relationship between deposit rate, treasury bills rates and bank loans and advances. Supporting these findings is Nnamdi (2007) who revealed a positive relationship between deposit rates and bank loans and advances in Nigeria.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION
Summary of findings and conclusion
This research study was carried out to evaluate the impact of interest rate on commercial banks credit in Nigeria. In order to validate the work theoretical and empirical literature relevant to the subject matter were reviewed. The Ordinary Least Square (OLS) was adopted to examine the performance of interest rate indices on bank loans and advances in Nigeria. Consequently, the following findings were made: There is a positive and significant relationship between lending rates and banks loans and advances in Nigeria. Deposit rates and Treasury bill rate have inverse but significant relationship with bank loans and advances. Increase in monetary policy rate does not deter bank loans and advances; it only reduces the capacity of banks to lend to the public. . Based on these findings, it was concluded that interest rate is one of the major determinants of bank lending behaviour in Nigeria.

RECOMMENDATIONS
Based on the findings of this study, the following recommendations were made:
Efforts should be made to moderate lending rates or strengthen the regulatory framework of commercial banks lending rate determination, to encourage effective and efficient allocation of funds to the productive sector of the economy.

Bank managers should ensure that loan offer rates are painstakingly set to reduce the problem of loan default and adverse selection. This will reduce the level of nonperforming loan held by banks in Nigeria.

Sustain the current regime of interest rates management but with greater transparency and accountability to ensure that interest rate paid and charged by deposit money banks are stable and enterprise-inducing.

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The European Economic Crisis in a Global Context and its Originator

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Abstract

In this paper, the European economic crisis is discussed by examining chronologically the events that started in the U.S. (the originator) in August 2007 and due to globalization they continued in the highly indebted Euro-zone members. The common public policy and the common currency in Euro-area do not help the member-nations to improve their economies and overcome the recession because these countries are different and need each one its own policy and target interest rate. There were too many mistakes that led us to the latest financial crisis and authorities have to prevent these crises. The enormous debts in the U.S. and in the EU member-nations are unsustainable and new mixed public policies and regulations are needed to avoid similar negative effects in the future. Austerities and contractionary policies, during periods of recession (with negative growth of the real GDP and extremely high unemployment), are exactly the opposite of what the economies want and these anti-social policies are very suspicious for any thinking person. We have to go back to a value oriented socio-economic system, where humans will be in its center and core.

Key Words: Consumption, Saving, Interest Rates, Monetary Policy, Fiscal Policy

INTRODUCTION

The purpose of this work is to discuss the elements that caused the latest and current problems in the European economies, which started from the capitalistic U.S. and consequently was expanded to all economies of the world, due to the systemic risk that globalization has induced to the developed and controlled nations. Thus, this crisis is a crisis of capitalism (a man-made inferior philosophical system). A recent historical retrospect is used to consider the evolution of events in the EU and the EMU before the crisis. The global uncertainty had increased the price of gold (decreased the value of the dollar) and the U.S. debts and deficits had caused a depreciation of the dollar, which with the help of speculators had heightened the price of oil until the fall of 2014 and had created a commodity bubble. The deregulation in financial markets and institutions and the easy money policy by the Fed had increased lending, corruption, speculation, prices in financial and real assets (even in food) and had caused an enormous bubble, which some people (the world planners) burst in 2008 and created the worst financial crisis, followed by the latest most severe recession in modern economic history. The enslaved EU is copying the U.S. and fell in the same trap, which caused the European Economic crisis.

The moral, ethical, and political crisis in the western free-market (value-free) economies led them in deep recessions, enormous unemployment, annihilation of their wealth, complete distrust for the financial markets, a new cold war, an elevation of terrorism, and the millions of

illegal immigrants and refugees that the West's foreign policy generated in Middle East and North Africa. We describe the sequence of events first and then the benefits (gains) and costs (losses) to society by considering some actions and policies, which affected the objective macroeconomic variables and caused them to deviate from the target ones. Then, we determine the factors affecting the objective variables of the economy (unemployment, prices, and real GDP) by taking into consideration policy variables (i.e., the overnight deposit rate, federal funds rate, taxes, government spending, austerities, Troika, etc.). European nations and their people face an absolutely uncertain future because they have lost their national currency, their central bank, their public policies, and their freedom of speech, their educational system, their objective history, their indigenous values, and their sovereignty. The powerless world governments and regulators are just inactively watching the events that we are all part and responsible (especially, the academic environment) for this irrational, interdependent, and complex world, which was designed and created for the control of the future generations.

The literature on the European economic crisis is huge. All academics, politicians, and media are talking and trying to analyze this unique phenomenon in economic history and to explain the anti-growth policies that authorities are using to perpetuate the crisis. Stiglitz [9] is criticizing the globalization due to the problems that is causing to the advanced economies. Kallianiotis [3] and [4] analysis the factors that have caused the overvaluation of the euro and its negative effects on the Euro-zone member-nations. Bullard, neely, and Wheelock [1] discuss the financial crisis and the new systemic risk that has affected the global economic system. Wessel [10] gives a very good chronological presentation of the global financial crisis. Kallianiotis [2] mentions that the common currency is worse than the fixed exchange rate for the countries that have adopted it. Rickards [5] is talking about the future collapse of the international monetary system. Sposi and Grossman [8] are referring to deindustrialization of the western nations and the redeployment of workers to low pay jobs. Williamson [11] criticizes the new monetary policy that is pursued by the U.S. Fed.

RECENT HISTORICAL RETROSPECT

Humanity has gone a long way for thousands of years and had reached a high point of social development, moral ethics, philosophy, democracy, civilization, and even was waiting for the "True God", who came five centuries later. Then, with the revealed Truth new hope appeared for the people, especially in the Eastern Roman (Byzantine, Medieval Greek) Empire and the entire Europe, the "Christendom". The development in Europe was enormous after the adoption of the ancient Greek moral philosophy, civilization, and reaching the industrial revolution; but, behind every good effort there are other powers with suspicious objectives. One of these objectives, the top one, is globalization (global control of all the nations), which started with the integration of the European nations, and because it succeeded (artificially) with the European Union, there will be no objections and oppositions from any other developing or underdeveloped nation. Of course, the plan is the opponents to be crashed to prevent "contagion" to other nations.

The EEC started in January 1, 1958 (with the Treaty of Rome signed on March 25, 1957) and continued with the EU in 1993, with the EMU in 1999, its central bank (ECB, in Frankfurt, Germany) in 1998, its institutions, its regulations and directives, its constitution (Treaty of Lisbon) without referenda in 2009, which was imposed undemocratically to poor Europeans with pressure on the controlled politicians of the 28 member-nations (they call them "states"). The fixed exchange rate was abandoned in March 1973 because it did not work and the EU chose something worse than the fixed exchange rate, the common currency in 2002 (the euro) for its completely different nations that was imposed forcefully (without the nations satisfying the Maastricht criteria) to 19 poor nations and their citizens, which caused the loss of

competitiveness of these economies and they have to do "internal devaluations" to compete with the rest of the world. What a deceit, treason, and criminal decision by the Brussels and the politicians of the member-nations! The Euro-zone nations are and will be in trouble in the future, too, because they lost their central bank, their domestic currency, their public policies, their independence, their sovereignty, and their indigenous culture, values, and freedom. These nations became colonies of Brussels (actually, German protectorates).

Of course, if a nation is not independent, self-sufficient, free, democratic, and negotiates with its partners by compromising its values and paideia, soon will be in crisis and the crisis had started with its accession to EU, which appears as an economic crisis in 2008 developed in the U.S., another union of 50 states that is in trouble, as the 28 states in EU. But, the U.S. dollar, at the moment, as an international reserve currency and the Fed supplying these greenbacks (Fed's liabilities backed by government debt) in trillions to finance the government and private debts, the country was "saved" with an unemployment over 23% and a recession that is still going on. The financial market collapsed in the U.S. and this contagion effect was spread to all the financial markets in EU member-nations. The peak of this stock market bubble was on October 9, 2007 (DJIA was 14,164.53) and its trough on March 9, 2009 (DJIA was 6,547.05), a decline of -7,617.48 points or by the percentage of -53.78%, and with calendar days to bottom 517. Investors lost $18 trillion from their wealth; it was distributed from the naïve investors to the hawk speculators. This is today's stock market; a casino that can destroy the entire real economy.

The U.S. economy had long been characterized by international imbalances in its current and capital accounts and enormous public and private debts that have to be financed heavily by foreign capital and by money printing (Fed's reserves). The quantitative easing of the Fed is something that we see for the first time in Economic history. The monetary base from $874.826 billion (9/10/2008) reached $4,139.322 billion (1/21/2015). Lately, the Fed signaled that it would keep rates near zero until the midyear 2015; but, they continue to postpone an increase in federal funds rate because there is no improvement in the economy. At the same time the country lost its agriculture and manufacturing and became a pure service economy that is very vulnerable to business cycles and has caused enormous unemployment, reduction in income, and destruction of the small cities, towns, and country side of the nation. Some strange economists believe that this ruin of the domestic main sectors of the economy (agricultural and industrial) is normal and they call this detrimental process as "structural transformation". This is exactly what some ignorant politicians (betrayers) imposed on Greece and made the country dependent on Germans. The ECB did not increase the monetary base, which has contributed to the deep recessions. It was €899.514 billion (September 2008) and became €1,292.102 billion (January 2015). This current European crisis proved that countries must have their own central bank and their own national currency, otherwise, the crisis will become permanent.

On October 3, 2008, a bailout package passed by the U.S. government, which provided $700 billion to restore confidence in the economy. But the deregulated banks had made too many bad loans, which have created big holes in their balance sheets. Treasury Secretary, Paul Paulson, was buying up the bad assets and putting the risk onto American taxpayers, hoping that banks would use this money to restart lending, but some of this money was paid as dividends to their shareholders and bonuses to their executives. The taxpayers are the losers in our corrupted financial system and its institutions. The U.S. economy had been sustained by excessive borrowing for many years (with a total government and private sector debt, including contingent liability as of January 1, 2009 of over $174.1 trillion, $564,749 per capita, 1,213% of GNP).   Also, unemployment was increasing and personal income and consumption

were falling. Exports were declining and the revenue for state, local, and federal government was diminishing. The confidence level of consumers and investors had reached the lowest level since the introduction of these indexes. All these contingencies were negatively affecting the financial sector of the economy, which is the only sector left to sustain production, growth, and employment for the U.S. economy. The number of jobs lost in EU28 were 25.91 million in 2013. Greece lost 1.364 million jobs, which became the biggest humanitarian crisis for the country. The worst crisis for a person is to be unemployed, for this reason we had thousands of suicides. The objective of the government, central bank, and the other authorities must be to prevent crises and maximize social welfare, but these policy makers and regulators have no power and consequently, have lost control of the market and of the entire socio-political-economic system.

The "irrational exuberance" that Euro-subsidies and low interest rate loans gave to Europeans, is over after three decades of wastefulness, greediness, briberies, frauds, lies, and corruption. But this was expected because the EU economies and their markets were too good to be true. We were living a big delusion and this deceit is over. The economic and social indicators reveal that even the U.S. from a moral, ethical, and just superpower is becoming less and less competitive and less friendly with the rest of the world. The European Union (the forced integration of 28 nations, without referenda), with its debt crises and the common currency, is the worst "innovation" in human history. It is a mixture of twenty eight nations without domestic public policies, without self-determination, without sovereignty, and of course, without any future. All these strange evolutions have increased the global uncertainty, have caused unemployment in EU and the U.S., have reduced competitiveness, and have augmented poverty, anxiety, and health problems (mental and physical) to their citizens. The free-market system with its new innovation, the globalization through integration of the nations, has failed and needs more government regulation, more independence and self-determination for the nations, and better corporate governance for the MNCs that led domestic firms to bankruptcy and people to permanent unemployment (misery). Governments had to bailout a corrupted financial system, even when the deficits and the national debts are astronomical. But, they had no other option, except to "rob responsible Americans [and Europeans] and pay the robbers of the financial market". Then, what are the social benefits? Why we need these global changes and "evolutions", which are against humanity? The latest financial crisis (with a combination of large failures, costly bailouts, deep recessions, and destruction of entire countries) might be able to change the perception of the social welfare effects of the thirty years of deregulation and the fifty years of European integration. The Fed was instructed by Congress in 1977 to aim at "maximum employment" and "stable prices", but it cares for price stability (Bernanke considers inflation target). The ECB does not have employment as its mandate. Even though, we have to continue to hope.

But, a question remains even today. Who is to blame for the latest financial crisis, the peculiar recession that it caused, and the continuation of the humanitarian crisis? The responsible parties must be the following:

1. Politicians, who joined the Euro-zone without a referendum.
2. Corrupted politicians, executives, lobbyists, governments, institutions, rating firms, etc., which acted against social interest.
3. Countries, who consume beyond their production ( ).
4. The U.S. and EU households, who have spent way beyond their means in recent years; they have to start saving.
5. The banks, who took the upside and left the downside to the taxpayers.
6. The monetary and fiscal authorities, who did not intervene in the markets.
7. The regulators, who extended homeownership to even those who could not afford it.
8. The market and the tax system, who tolerate and encourage high leverage.

9. The rating firms with their subjective ratings.
10. The involvement of IMF in Euro-zone debt crisis and bailouts.
11. The ECB's low liquidity towards the member-nations.
12. The European integration that imposes the same policy on completely different nations.
13. The anti-growth austerity policies in periods of recession.
14. The EMU that restricted the public policy and sovereignty of the member-nations.
15. The globalization and the pseudo-leaders, who follow this new age inhumane servitude.

The wealth must be created through saving, ingenuity, entrepreneurship, hard work, a fair tax system, and moderation in spending (waste). Of course, many try to create wealth by extracting wealth from others through inflation, overpricing their products and services, due to inelastic demands, inside information, and market manipulation. This is not wealth creation, but wealth redistribution from the naïve citizens to the greedy and shrewd opportunists. For these reasons, markets have to be regulated. The global financial system is so complex that with each financial collapse the systemic risk is growing exponentially. The global system with all these derivatives ($691 trillion with June 2014), which are a surprise to bankers and regulators, is on the knife-edge of collapse. If a catastrophe unfolds, it is too late to stop. Crises have to be prevented through regulations. It is a pity for a country as large and powerful as the United States to have lost its sovereignty and to have this enormous dependency on the corrupted markets and for the Euro-zone member-nations to have become protectorates of Brussels (Germany). The first priority of any sovereign, democratic, and advanced nation is the welfare of its citizens and not to satisfy the demands of the corrupted and inhumane markets and their institutions and those of the EU and the lenders (that must know the risk of lending). We are enslaved by the corrupted markets and this cannot continue because our well-being is in trouble.

The conflicting forces of our time are: East versus West, gold versus paper, state (nation) versus markets, peoples' dignity versus complete indifference, truth versus lie, citizens versus allies, nation versus the world, spiritual world versus secular world, knowledge versus ignorance, patriotism versus globalism, individuals versus businesses, justice versus injustice, wealthy versus poor, democracy versus tyranny, liberty versus slavery, values versus distain, respect of life versus refusal of life, respect versus disrespect, liberalism versus conservatism, capitalism versus socialism, agreement versus abruption, integration versus independence, and many other conflicts. But, the objective of any knowledgeable society (nation) today must be the welfare of the country and the perfection of its people, all the other goals are inferior and worthless.

The latest financial crisis had its origin at the corruption in governments and businesses, which affected the financial and the housing markets. And this anticipated financial crisis together with the high debts and prices of energy and food (due to our lack of production and dependency on imports) brought the economy to a deep recession. The failure of the unregulated large financial institutions increased the systematic (market) risk and harmed other financial firms and finally, the real sector of the economy and due to high positive correlation of the world economies from the globalization, the risk became global (systemic). Another important type of risk to the Euro-zone member-nations is the lack of public policy, lack of national currency to exercise trade policy, lack of public central bank to absorb the national debt and provide the liquidity to the banks, and the loss of national sovereignty.

The lack of liquidity has negative, especially, for Greece (where is used as a weapon of coercion and acceptance of the wrong policies imposed by the Troika), but rarely positive effects. One of the positive effects was that speculators using borrowed money were being forced out of the market. The problem with our speculators has been created with the margin requirements,

which is only 50%. To avoid this tremendous market risk, the margin requirements must be 100%. Regulation T of the Federal Reserve Board has to be revised. Also, the SEC must prohibit the short-selling. The anti-trust laws must be imposed on every firm and industry. They cannot become giants and then, the Treasuries and the central banks have to bail them out with our money (tax payers' money). An increase oversight of the Treasuries and the central banks is needed, speculation must be curbed, and futures market has to be regulated because they affect the spot market with their outrageous scenarios and price manipulations. CEO salaries are provocative for our welfare and just societies; then, limits on executive pay are necessary. Transparency and accountability for mortgage-fraud or other greedy actions by executives is important for the public to start trusting the markets. Investment banks and exotic types of financial instruments must be regulated and the same must hold for all the other financial institutions.

POLICY EFFECTIVENESS AND SOME POLITICAL CONSIDERATIONS TO PREVENT FUTURE CRISES

A financial panic in the next several years is very probable; this can be caused by the rating firms, by the central banks' policies, by the international institutions, by derivatives exposure and bank interconnectedness, which may trigger a global liquidity crisis. But, there is no possibility that Greece's exit from Euro-zone can caused any global or European crisis, its economy is very small (2% of the Euro-zone). These people (in Europe and the U.S.), which pretend that they worry and they care for Greece's exit from Euro-zone are lying because their objective is different; they want to terrorize the other nations that no one can go against globalization. Social disorder is also very probable during a new global financial crisis. Social disorder involves riots, strikes, sabotage, dysfunctions. It is distinct from social protest because disorder involves illegality, violence, and property destruction; which will be very risky for countries that carrying of arms is free, like in the U.S.A. But, the new "constructed" Ukraine crisis in Europe, the continuation of the cold war, together with the continuing EU austerities and wrong German and IMF policies, the Islamic State of Iraq and Syria (ISIS), the millions of illegal immigrants in Europe that the foreign policies of West created, which alter the European identity, pressure from the "allies" give very bad signals for the entire world.

 Countries have to be independent democracies, self-sufficient (even exercising protectionism for their domestic industries), promoting first the primary sector (agriculture), second the secondary one (manufacture), and lastly the tertiary sector (services). An economy specializing only in services has no future. The country must produce more goods and services than are needed for domestic consumption and export the excess production. But, the persistence of the West on cold war put embargos, which affect negatively the economies of the small European nations. A nation has to have growth and zero unemployment, also, it has to have a high saving rate, too (25% of the disposable income). The financial markets and the entire economy have to be controlled (regulated) and every firm must comply with the socially imposed constraints. The ultimate objective of a country is maximization of its social welfare (minimization of the loss to society). We need a worldwide governmental intervention to support and regulate the national banking systems. Central banks have to be public, supporting the public policies of the nation. Domestic public policies must deal with human beings and their welfare. Economic policies must have one objective; the prevention of future crises, as the one that the world and the EU experienced lately. The Theory of Finance has to change from now; the U.S. government securities are not risk-free anymore because governments are controlled by the markets (Mammon). Who gave this power to the rating firms to overturn (even though that we know it is wrong) our global financial system? The negative effects on the real economy and on peoples' lives are enormous. These existing financial markets, institutions, and policies have to be controlled by the governments of the sovereign nations; otherwise, they will generate very

soon a global collapse and the worst civil unrest and destruction of the entire world, except if this is the objective.

The Fed actually can monetize any amount of debt the Treasury issues, up to the point of a collapse of confidence in the dollar. If national income can pay the interest on the debt, with enough left over to reduce total debt as a percentage of GDP, then the situation should remain stable. If there is not enough national income left over after the interest to reduce the debt as a percentage of GDP, and if this condition persists, then the U.S. will eventually go bankrupt. The same holds for all the EU member-nations and in trouble are those that are members of the EMU. The deficits are sustainable only when,

$$(\dot{q} + \pi) - I > |T - G|$$ (1)
$$(4\% + 1\%) - 2\% > 2\%$$

Where, = the growth of real output (GDP), = inflation, = the growth of nominal GDP, = borrowing (interest) cost (as a percentage of GDP), = taxes, = government spending, and = primary deficit (as a percentage of GDP).

The deficit is not sustainable if,
$$(\dot{q} + \pi) - I < |T - G|$$ (2)
$$(2\% + 1\%) - 2\% < 2\%$$

The above numerical example is showing an unsustainable condition. This shows the trend toward unsustainability. The key factors in primary deficit sustainability (PDS) are borrowing costs ( ), real output ( ), inflation ( ), taxes ( ), and government spending ( ). The best way to move toward sustainability is to increase real growth (the production of the nation). Another way is the one that (Troika) EU is using for its member-nations, improving debt sustainability by increasing taxes, which is absolutely wrong during periods of recessions or depressions. Also, if taxes are held steady and spending is cut, the primary deficit shrinks, but this policy is contractionary and does not stimulate an economy that is in recession. The central banks' policies can affect inflation ( ) and interest rate ( ) cost of borrowing, which can affect the PDS and finally, the debt as a percentage of the GDP. In the absence of higher real growth, either politicians must reduce deficits or the central banks must produce inflation and reduce the cost of borrowing, with its excess supply of liquidity. But, for all these scenarios to work, the country must be independent, which means to stay out of the EMU.

Data on public and private debt and deficits, on economic performance, on unemployment, and the buildup of derivatives inside megabanks are readily available, but conventional economic models and economists do not want to see the truth; they follow this trend to destruction and they do not want to prevent the coming new global crisis, due to the American structural problems and the Europeans that follow them. The real growth of the economy ( ) is measured as follows:

$$\dot{q}_t = \dot{y}_t - \pi_t$$ (3)

For example, we can have a good real growth by having: . This 3% real growth seems to be a desirable outcome, based on advances in technology and productivity, alternative sources of energy, embargos, imports from China and other low cost of production countries, and more efficiency, can result in certain products dropping in price over time. Then, why deflation is

bad? Deflation helps consumers and workers, but it hurts the Treasury and the banks [increases real rate of interest; eq. (4)], and for this reason, it is firmly opposed by the Fed and ECB. Fed prefers inflation because it erases government debt, reduces the debt to GDP ratio, props up the banks, can be taxed, and lowers the real cost of capital. Thus, the Fed and the ECB are working for the banks, businesses, and the government; their policies are against people's interest.

$$r_t = i_t - (-\pi_t) \qquad (4)$$

Consequently, Fed likes inflation and this is its objective; economic growth and employment are incidental by-products of the drive to inflation. ECB likes its power and the control that exercises on the central banks of the Euro-zone member-nations. The free market economy needs inflation and the Fed causes it. As long as deflation is a "threat", the Fed will continue with zero target rate, enormous money supply, and efforts to devalue the dollar in order to import inflation through higher import prices. Real growth is more important than nominal growth, but it is being ignored by the Fed. It seems that the Fed will pursue this easy money (printing money) policy (pseudo-remedy) as far as possible until global investors finally lose confidence in its currency (the U.S. dollar) and in bonds denominated in dollars. Countries need publicly-owned central banks so that bankers and financiers could not use the printing of money to control the affairs of the nation. The ECB has eliminated the monetary policy from the member-nations. Then, these nations have no tools of improving their economies or get rid of their current economic crises. The EMU has unfolded as the worst nightmare for the poor European nations that made the mistake or were forced to join this monster.

Furthermore, to see the effects of monetary and the abandoned fiscal policy on our economy, we can use a vector auto-regression (VAR) with dependent variables, u_t, π_t, and q_t, and independent ones the three policy tools (i_{FF_t}, t_t, and g_t), as follows:

$$u_t = \alpha_{10} + A_{11}(L)u_{t-1} + A_{12}(L)\pi_{t-1} + A_{13}(L)q_{t-1} + A_{14}(L)i_{FF_t} + A_{15}(L)t_t + A_{16}(L)g_t + \varepsilon_{1t}$$

$$\pi_t = \alpha_{20} + A_{21}(L)u_{t-1} + A_{22}(L)\pi_{t-1} + A_{23}(L)q_{t-1} + A_{24}(L)i_{FF_t} + A_{25}(L)t_t + A_{26}(L)g_t + \varepsilon_{2t}$$

$$q_t = \alpha_{30} + A_{31}(L)u_{t-1} + A_{32}(L)\pi_{t-1} + A_{33}(L)q_{t-1} + A_{34}(L)i_{FF_t} + A_{35}(L)t_t + A_{36}(L)g_t + \varepsilon_{3t} \qquad (5)$$

Where, u_t = unemployment rate, i_{FF_t} = federal funds rate, $t_t = \ln T_t$ = tax or government revenue, and $g_t = \ln G_t$ = government spending.

The estimation of the above VAR, eq. (5), will tell us the effectiveness of the two public policies, monetary and fiscal. This current enormous liquidity is money that sits in banks as excess reserves and does not produce inflation. Inflation appears only if consumers and businesses borrow and spend these reserves as printed money. Also, unemployment and low growth keep prices low, too. Table 1 gives the empirical results of eq. (5) and shows that pure monetary policy is not effective; a mixed public policy (fiscal and monetary) is needed to improve the economies.

CONCLUSION

Lastly, the U.S. economy has two major problems; overconsumption (underproduction, waste of resources, and outsourcing) and lack of savings (dis-saving and borrowing or spendthrift). The European economies have three major problems: common currency, lack of domestic public policies, and loss of national sovereignty. These cause current account deficits and

capital account surpluses, which devaluated the U.S. dollar (over valuated the euro) and affected the financial markets, the interest rates, the national debt, the oil prices, the inflation, the competitiveness, the growth and employment, and the social welfare of the nations. We must learn that we cannot live beyond our means indefinitely. Actually, there is a vicious cycle in the economy, due to the wrong public policies. This latest crisis started with deregulations, integrations, globalization, enormous debts, corruptions, deterioration of human values, with high energy prices; it continued with a deteriorating housing sector, it followed with an ill-functioning financial market, it reached a slowing consumer and business spending, and it ended to a severe recession (the first depression of the 21st century).

Table 1: The VAR Estimation of Public Policy Effectiveness: Eq. (5)

Variables	u_t	p_t	q_t
C	-0.658	-0.011	0.126^{***}
	(1.324)	(0.020)	(0.181)
u_{t-1}	0.969^{***}	0.001	-0.003^{***}
	(0.038)	(0.001)	(0.001)
u_{t-2}	-0.013	-0.001	0.004^{***}
	(0.037)	(0.001)	(0.002)
p_{t-1}	4.548^{**}	1.334^{***}	-0.057
	(2.329)	(0.036)	(0.063)
p_{t-2}	-4.195^{**}	-0.339^{***}	0.043
	(2.321)	(0.036)	(0.062)
q_{t-1}	-4.721^{***}	-0.027	0.847^{***}
	(1.152)	(0.018)	(0.031)
q_{t-2}	4.848^{***}	0.029	0.133^{***}
	(1.133)	(0.017)	(0.030)
i_{FF_t}	-0.060^{***}	0.001^{**}	-0.001
	(0.013)	(0.001)	(0.001)
$i_{FF_{t-1}}$	0.070^{***}	-0.001	-0.001
	(0.014)	(0.001)	(0.001)
t_t	-3.141^{***}	0.009	0.206^{***}
	(0.498)	(0.008)	(0.013)
t_{t-1}	2.118^{***}	-0.010	-0.178^{***}
	(0.513)	(0.008)	(0.014)
g_t	1.996^{**}	0.001	0.134^{***}
	(0.706)	(0.011)	(0.019)
g_{t-1}	-1.252^{*}	0.004	-0.145^{***}
	(0.712)	(0.011)	(0.019)
R^2	0.988	0.999	0.999
SSR	21.908	0.005	0.016
F	4774.112	4603553	778834.6
N	713	713	713

Note: ***= significant at the 1% level, ** = significant at the 5% level, and * = significant at the 10% level. **Source:** *Economagic.com*.

In addition, Sachs [7] said that "the United States should approach its foreign policy using 'sustainable-development logic' rather than relying on 'militarized, us-versus-them, extremist-fundamentalism logic'". European nations cannot create conflicts among nations (i.e., Imia in Greece) to sell their weapons by lending money to the poor nations to buy their military

equipment and improve the manufacturing of the corrupted and unhesitating nation-producers and their economic growth, plus the bribery and crimes that they generate in different governments. Without an investment in sustainable development, without an increase in domestic production and reduction in imports, the U.S. will lose the competitiveness race, as it has happened with the Euro-zone member-nations with the overvalued common currency. Even today (in 2015), the U.S. economic data are very disappointing. The European ones are catastrophic. The economies need a mixed expansionary economic policy (fiscal and monetary). The neo-liberal policies are against this policy and people and nations are in devastation. The global uncertainty, the deregulation of financial markets, the integration of unequal and different nations, the sell-offs of the SOEs, the private monopolists (no one respects the anti-trust laws anymore), the corruption in business and politics (corporations do not pay taxes), the illegal migration, and the other domestic problems, due to globalization and integration are going to change our economic system (many economic laws do not hold anymore and we have to bail out all these untrustworthy businesses). The only prediction that we can do for the future, after the current worst global recession and the European debt crises and depressions, is that this new economic system, "globonomics", will be the last in our socio-economic history, except if we will decide to go back to a value oriented system.

Finally, these corrupted people in financial markets and institutions (the originators of the crisis) need some knowledge in value-oriented welfare economics and business ethics. The current crisis was not an economic one, but a moral, ethical, social, spiritual, educational, and political crisis, which was expected by every prudent person after all these mistakes that were made since 1960s. President Obama proposed to amend the law to require the Fed to get Treasury secretary's written approval before exercising its authority to lend to nearly anyone in "unusual and exigent circumstances". But, loss of confidence in the global financial system can rarely be restored. Very likely, a new system will be needed, with a new humane foundation that can engender new confidence. We wait to see. But Janet Yellen reminded to Congress on March 4, 2015 that Fed is independent. We have to educate and awaken the citizens so they could become active citizens and go back to their indigenous traditional values, otherwise there will be no hope.

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Map 1: The EU28 Member-Nations

Note: Ireland, United Kingdom, France, Netherlands, Germany, Denmark, Poland, Lithuania, Latvia, Estonia, Finland, Sweden, Czech Republic, Austria, Hungary, Romania, Bulgaria, Greece, Slovakia, Slovenia, Croatia, Italy, Belgium, Luxembourg, Portugal, Spain, Malta, Cyprus.