WEST AFRICAN JOURNAL OF BUSINESS AND MANAGEMENT SCIENCES
FACULTY OF BUSINESS ADMINISTRATION
IMO STATE UNIVERSITY, OWERRI
NIGERIAN EDITION
VOL. 10 NO. 1 MARCH 2021

DETERMINANTS OF MARKET VALUES OF QUOTED BANKING INSTITUTIONS: PANEL DATA EVIDENCE FROM NIGERIA AND SOUTH AFRICA

AKOBUNDU, CHARLES ECHEWODO
Department of Finance and Banking,
University of Port Harcourt,
Rivers State, Nigeria

E. J. OKEREKE PhD.
Department of Finance and Banking,
University of Port Harcourt,
Rivers State, Nigeria

And

P. C. NWAKANMA PhD.
Department of Finance and Banking,
University of Port Harcourt,
Rivers State, Nigeria

Abstract

The study evaluated key factors affecting the market values of quoted banks in Nigeria and South Africa. The panel data were derived from the 2010-2019 financial statements of the banks of the two African countries. Banking institutions' market values were modeled on debt-equity, company size, dividends policy, profitability, money supply, inflation rates, gross domestic products and exchange rates. Panel data methodology was used while the fixed-effects model was used as the 5 percent meaning estimation technique. Fixed effects, random effects and pooled estimates have been tested during the Hausman test. Roots of the panel unit and cointegration analysis of the panel were performed in the study. From Nigeria, the study found that the internal and external variables account for 81.5 and 82.9 percent of total variations in the market values. Corporate size, equity returns, Earnings per share and the payout ratio have a positive effect while Nigerian banks' quoted equity ratio has a negative impact on the market values. The result showed that money supply had a negative impact on market values of Nigerian banking entities while inflation, gross domestic product and exchange rates had a positive impact. in the South African study, both internal and external variables account for 49.1 and 61.1 per cent of the total variations in market values. Equity and corporate size returns have a negative effect, whereas earnings per share, dividend policy and debt-equity ratio have a positive impact on the quoted South African banks. The macro-variables show that the money supply and gross domestic products have a negative effect, while inflation rate and exchange rates have a positive impact on South Africa's quoted banking institutions' market values. The study concluded that the variables in Nigeria have higher explanatory powers than South Africa. Based on the results the management of banking institutions should improve management strategies to manage the uncertainties that affect their market values in the operating environment.

Keywords: Market Value, Quoted Banking Institutions, Panel Data Evidence, Nigeria, South Africa

Introduction

Capital market is a key institution in mobilizing medium and long-term funds for national, continental and global productivity activities. In particular, the two market components can be identified as primary and secondary markets. in the primary market, companies and sovereigns issue financial instruments which represent claims on their future cash flows and use them to tap major regional and global savings pools to finance themselves, while the secondary market offers investors exit and facilitates price discovery (AL- Shubiri, 2010). The market plays an important role in fostering dynamic and economic development. The Market value of any asset within a deregulated financial market depends on the demand and supply market forces, both micro and macro. While internal factors such as profits, capital cost and capital structure include micro-elements, the macro-economic and monetary variables are included (Hasan, 2017).

Prior to the deregulation of stock prices in certain African countries, newly issued and existing stock prices were regulated by the Market Regulatory Agent, Securities and Bursaries, with no reference to internal factors, such as financial information that might affect listed company stock prices. in the context of information and performance expected around the particular stock on the market, stock prices in the deregulated stock exchange fluctuate. News and information cause common stock buyers and sellers to decide on purchases and sales that generate market activities that affect market values (Nirmala, Sanju, & Ramachandran, 2011).

The stock price constitutes a company's value. There are dramatic changes in financial markets and stock prices may appear to be too volatile to be justified by changes in the corporate fundamentals. Factors that determine the market values of quoted companies have long been a major starting point for finance scholars. Politicians, financial analysts and practitioners must still find solutions to factors affecting stock price behaviour. This is a remarkable aspect of the dividend policy argument pioneered by Gordon, Miller and Modigliani. The fundamentalists consider the value of the company's share to be based on expectations of future income and the rate at which income is reduced over time. The technical school of thought takes the monetary and macroeconomic variability of movements and stock price behaviour. The Macroeconomic School considers stock price movements to be based on macroeconomic variables such as inflation, interest rate, money supply and other macroeconomic variables (Jatoi, Shabir, Hamad, Iqbal, & Muhammad, 2014).

Internal and external factors that simultaneously determine demand for shares determine the stock balance price. Any macroeconomic variables can impact stock returns by impacting share demand. Financial literature has drawn considerable attention to the inelastic supply and inefficiency of the stock market. Grossman and Stiglitz (1980) felt that the stock market was not particularly competitive with development countries' stock prices which have the degree of imperfection of the market close to unity. Some sources of imperfection exist, such as an inelastic supply curve, cost of transaction, taxes and inadequate information.

The abnormal price reactions continue several days after the announcement, in contrast to the effective market hypothesis, suggesting that the Danish stock market may not be informatively efficient. It is challenging to test information market responses in emerging markets because there is a relatively high number of under-informed, unrealistic investors, low liquidity, weak legal, regulatory, institutional and operating bottlenecks in emerging markets

(Osei, 2012). There are strands of studies on factors which determine quoted companies' stock prices. Studies by scholars focused on macroeconomic factors that determine stock prices while studying corporate factors that determine stock prices. This study examined internal and external market values of quoted banking institutions in Nigeria and South Africa.

Literature Review

Theoretical Foundations

Efficient market Hypothesis

The hypothesis of an efficient market (EMH) claims that the financial market is informatively efficient. The hypothesis has three main forms: "weak," "semi-fortified" and "strong." Weak market hypothesis claims that prices for traded assets (e.g. bonds or property) already reflect all past information publicly available. Semi-strong market efficiency hypothesis states that prices reflect all information made available to the public and that prices change immediately to reflect new public information. In addition, strong market-efficiency hypothesis says that prices immediately reflect even hidden or "insider" information. Efficient market theory means that market responses to new information quickly (Akani & Lucky, 2014). It is therefore important to know when the accounting report was first publicly published. The report is informative only if it provides information that is not previously known to the market.

Fundamental Equity Theory of Analysis

Baker and Harlem (1973) argued that investors were mainly concerned with future expectations, given the high interest of investors in profit projections and historical data. Financial practitioners use a range of tools and methods to achieve better investment decision-making results. There are an endless number of different investment strategies, but almost all use the fundamental elements (McKenzie, 2007). The investment selection begins with an essential analysis, and the unique nature of capital market instruments forces investors to rely on key factors in their investment decisions (Suresh, 2013). The cornerstone of investment is fundamental analysis. Indeed, some people would say that you don't invest if you don't make a fundamental analysis. This fact was evident in the safety analysis (Graham & Dodd, 1934).

Equity price theory of technical analysis

In order to decide on the equity investment, an investor must understand the stock market behaviour and stock price trends and ask why the stock market is behaving in a certain way. Investors must develop a bird's-eye view over the market and analyse every factor that the stock market has been behaving in a certain way with instruments and techniques to avoid mistakes in investment decisions. According to Keerti and Gururaj (2013), a technical analysis is one of the tools which the investor can use to analyse stock market behaviour and stock price trends in the stock market. Keert and Gururaj (2013) state that technical analysis helps to study the market effects, mainly by using diagrams to predict future price trends. The movement of the script price and its behaviour can be explained by the technical analysis in a more exemplary way. It gives better insight into making stock investment decisions. It considers only the actual market or instrument price behaviour.

Empirical Review

Akani, Okonkwo, and Ibenta (2016) examined, with Nigeria Economy evidence from 1980-2013, the effect of monetary policy on capital market activities. Secondary data were

obtained from the Statistical Bulletin of the central bank of Nigeria, the Granger Causality Test and the Johansen Co-integration Test in a Vector Error Correction Model (VECM). The empirical results indicate that there is a long-lasting balance between the monetary policy instruments such as Broad Money Supply (M2), the liquidity ratio (LIR), the interest rate (INTR) and the market capitalization (MC), whereas the Monetary Policy Rate and the Treasury Bill (TBR) have a negative and negative market capitalization relationship (MC). The results show in Model II that the independent variables have a positive and significant relationship with the dependent variables of All Share Price Index (ASPI) (MPR). The summary model revealed an R2 of 75 percent for Model I and an R2 of 94 percent for Model II, which means the relationship between dependent and independent variables is strong and positive over the period. The study also shows that in models there is no bi- and unidirectional causality derived from dependent and independent variable, except for a unidirectional causality in model I from money supply (M2) to market capitalization (MC).

Lucky et al (2015) reviewed Nigeria's prudential stock price determinants: the Fundamentalist Application and the Macro-economic View, 1980-2014. The study used as dependent variables aggregate values from end-of-year stock prices of commercial banks. The micro-prudentials are ratios of retained income, dividend payout ratios, profitability ratios, and the capital of commercial banks to total assets, loans and bank size while the macro-prudential variables are monetary policies, inflation rates, the total share price index to gross domestic product, real gross domestic product and exchange rates and broad monetary supply. The Ordinary Last Square Co-integration Method, Enhanced Dickey Fuller Root Test and Granger Causality Test were used to investigate the nature of the interaction between the dependent and the independent variables in the regression model. The study found that all micro cautionary variables have a positive effect on commercial banks' stock prices with the exception of the borrowing rate. The model summary demonstrates a strong relationship between the dependent and the independent variables with a R^2 of 69,4%, 12,4351 and the general probability of 0,000004, of the micro-prudential variables, while the macro-prudential variables show an R2 of 52,0%, 8,788,310. The results confirm fundamentalist and macroeconomic points of view.

Ibanichuka and Alasin (2018) reviewed Nigeria commercial banks' audit reports and the value relevance of accounting information. Data were derived from commercial banks' financial statements. Two multiple regressions have been formulated to investigate the effects on commercial banks' stock prices of audit reports and audit properties. The data analysis technique is the multiple regression model based on the SPSS version (22.0). The statistics from Durbin Watson show multiple serial autocorrelations. The outcome shows collinearity which corresponds to the Eigen value condition index, while the Variance Inflation Factors indicate the absence of auto-correlation. Model I showed that all variables of the audit report have a positive impact on value relevance, while Model II found audit compensation, corporate governance and audit familiarity with positive effects, independence, joint audits and size with a negative effect on stock prices. The study concludes that independent variables are relevant to the value of Nigeria's quoted commercial banks' accounts.

Hosseini, Ahmed and Lai (2011) evaluated the performance, over a period between January 1999 and January 2009, of four macroeconomic variables, namely crude oil price,

money provision, manufacturing and inflation, using econometric methods in China and India. The study concluded that both macroeconomic factors and stock market indexes in the market are short-term and long-term balanced. While testing effects of variables such as real effective economic rate (REER), reserve currencies, trade balance, FDI, IIP, wholesale stock price index (NIFTY).

Kumar (2011) found no co-integration, except wholesale price index, between Nifty and other variables as per the Johansen test for co-integration. In addition, the study did not show any sign of causality between these two variables.

From January 2005 to February 2011, Tripathy (2011) has attempted to measure market efficiency and causal effect between interest rate, exchange rate, inflation rate and stock market. The study used Ljung Box Q – test, Breusch – Godfrey LM test, and Granger Causality tests showed that Indian stock market was classified as an effective market assumption. A two-way relationship was established between interest rate, exchange rate and stock market, international stock market, exchange rate and BSE volume.

Literature Gap

The empirical examination of factors that determine market values of quoted firms remains a persuasive causal link between internal and external variables measures. One reasonable conclusion based on previous research is that the determination of market values depends on both internal and external factors. This is in line with Gordon's argument against Miller's and Modigliani's views. In relation to corporate values, it could be concluded that both internal and external variables matter.

Methodology

This study looked at internal and external factors that determine the market values in Nigeria and South Africa of quoted financial institutions. For Ex-post facto research, the relevant data for testing hypotheses were obtained, analyzed and interpreted. The survey population consists of 22 Nigerian banking institutions, 27 South African banking institutions. The study adopted convenient and accessible sampling techniques in selecting 10 quoted Nigerian banks and 10 quoted South African banks. Annual financial statements of banks and publications of central banks of selected companies in Nigeria and South Africa gathered data from the panel. The researcher used model regressions of the ordinary least square (OLS), fixed effects and random effects to test the various hypotheses. Pooled OLS regression techniques are popular in financial studies due to their ease of use and predictive accuracy.

Specification of Model

A literature review can affect the Market value of a company by several generic factors. It is therefore necessary to investigate internal and external Market value factors. Regression models are developed to capture internal and external market values determining the quoted banking institutions in selected countries in Africa.

$$MV = f(DER, EPS, ROE, FS, DP) \quad (1)$$

$$MV = f(GDP, IFR, EXR, MS) \quad (2)$$

Transforming above equations to econometrics forms, we have

$$MV = \alpha_0 + \alpha_1 DER + \alpha_2 EPS + \alpha_3 ROE + \alpha_4 FS + \alpha_5 FS + \mu \quad (3)$$

$$MV = \alpha_0 + \alpha_1 GDP + \alpha_2 IFR + \alpha_3 EXR + \alpha_4 MS + \mu \quad (4)$$

Where

MV = Market value of the quoted banking institutions proxy by end of years equity price
DER = Debt-equity Ratio
EPS = Earnings per share
ROE = Return on equity
FS = Firm size
DP = Dividend Payout Ratio
GDP = Gross domestic products
IFR = Inflation rate
EXR = Real Exchange Rate
MS=Money supply

μ

$\beta_1 - \beta_4$ = Error Term

= Coefficient of Independent Variables to the Dependent Variables

β_0 = Regression Intercept

A-Priori Expectation of the Result

The a-priori expectation of the variables proposes that an increase in the explanatory variables lead to increase in the dependent variables. Therefore it can be mathematically stated as follows:- a_1, a_2, a_3 a_4.>0.

Hausman Test

The Hausman test is used to establish the appropriate choice between random effect regression and fixed effect regression (Brooks, 2014). Since heterogeneity invalidates the cardinal assumption of homogenous deviation of endogenous variables which underpins the application of random effect model, the test is imperative to decide if a variable can be treated as a distinct element with separate structural equation or as an exogenous variable. Croissant & Millio (2019) succinctly noted that Hausman test detects endogenous regressors in a regression model.

Fixed-effects model

Fixed-effects model is a class of statistical models in which the levels (i.e. values) of endogenous variables are assumed to be constant.. Nevertheless, the slopes for all endogenous variables remain constant cross-sectional and over time. Thus:

$$y_{tt} = \alpha_j + x_{it}^{1}\beta + \varepsilon_{it} \quad \varepsilon_{it} \approx HD\left(0.\sigma^2\right) \quad (5)$$

Expressing this in a regression framework, we have:

$$y_{tt} = \sum_{j=1}^{N} \alpha_j d_{ij} + x_{ij}\beta + \varepsilon_{it} \quad \varepsilon_{it} \quad (6)$$

Where

d_{ij} = 1 if *i*= j and 0 elsewhere.

Random Effects Model

The stochastic term, otherwise referred to as white noise or error term is usually added in regression models to account for endogenous variables excluded in the model. Thus we write the random effects model as:

$Y_{it} = \alpha + \beta x_{it} + \omega_{it}$, $\omega_{it} = \epsilon_i + \upsilon_{it}$ (7)

Where

$x_{i\,t}$ is still a 1 x k vector of explanatory variables, but unlike the fixed effects model, there are no dummy variables to capture the heterogeneity in the cross-sectional dimension.

Panel Unit Root Test

Often times, the simultaneous use of time series data for a collection of entities lead to multiple heterogeneity given that each time series data could possess heterogenous features. This is often referred to as heterogenous panel which by nature have a preponderance of biases that may culminate in misleading results. It is therefore pertinent to scrutinise the data for the existence of unit root and ensure that the data are stationary at a given level. To introduce panel data unit root tests, consider the autoregressive model:

$$y_{it} = \alpha_i + \gamma_i y_i t - 1 + \varepsilon_{it} \quad (8)$$

Which we can rewrite as

$$\Delta y_{it} = \alpha_i + \pi_i y_i t - 1 + \varepsilon_{it} \quad (9)$$

Where

$\pi_i = \gamma_i - 1$. The null hypothesis that all series have a unit root then becomes $H_0 : \pi_i = 0$, for all *i*. a first choice for the alternative hypothesis is that all series are stationary with the same mean-reversion parameter.

Panel Data Co-integration Tests

Co-integration is used to test long-run relationship between the endogenous and exogenous variables. Pedroni (1999, 2004) in his works was very general and accommodates separate intercepts for each group of potentially co-integrating variables and separate deterministic trends. For a set of variables y_{it} and $x_{m,\,i,\,t,}$ that are individually co-integrated of order one and thought to be co-integrated:

$y_{i,\,t} = \alpha_i + \delta_i t + \beta_{1i} x_{1i,t} + \beta_{2i} x_{2i,t} .. + \beta_{Mi} x_{Mi,t} + u_{i,t}$ (10)

Where

m = 1, M are the explanatory variables in potentially co-integrating regression; t = 1, .., T and i = 1, .., N. The residuals from this regression, $\hat{u}_{i,\,t}$ are these subjected to separate Dickey-Fuller or augmented Dickey-Fuller type regression for each group of variable to determine whether they are I (1).

Results and Discussions

Essential Determinants of Market values of Nigeria Banking Institutions

Table4. 1: Panel Unit Roots Tests

Method	Statistic	Prob.**	Remark	Statistics	Prob.**	Remark
MV: at level				**MV: First Difference**		
			Micro-Variables			
Levin, Lin & Chu t*	-6.61250	0.0000	Stationary	-8.13127	0.0000	Stationary
Im, Pesaran and Shin W-stat	-2.44908	0.0072	stationary	-3.25293	0.0006	Stationary
ADF - Fisher Chi-square	39.6523	0.0055	Stationary	50.4048	0.0002	Stationary
PP - Fisher Chi-square	51.9654	0.0001	Stationary	125.485	0.0000	Stationary
ROE			**ROE**			
Levin, Lin & Chu t*	-17.8215	0.0000	Stationary	-9.69726	0.0000	Stationary
Im, Pesaran and Shin W-stat	-7.07553	0.0000	Stationary	-4.04824	0.0000	Stationary
ADF - Fisher Chi-square	82.7762	0.0000	Stationary	56.1254	0.0000	Stationary
PP - Fisher Chi-square	56.7490	0.0000	Stationary	133.583	0.0000	Stationary
FS			FS			
Levin, Lin & Chu t*	-0.67917	0.2485	Not Stationary	-17.8722	0.0000	Stationary
Im, Pesaran and Shin W-stat	-3.38226	0.0004	Stationary	-5.69759	0.0000	Stationary
ADF - Fisher Chi-square	55.9368	0.0000	Stationary	59.1984	0.0000	Stationary
PP - Fisher Chi-square	74.1762	0.0000	Stationary	133.785	0.0000	Stationary
EPS			EPS			
Levin, Lin & Chu t*	-2.49828	0.0062	Stationary	-9.98090	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.34453	0.0894	not Stationary	-5.30785	0.0000	Stationary
ADF - Fisher Chi-square	29.2138	0.0836	not Stationary	67.8778	0.0000	Stationary
PP - Fisher Chi-square	58.1639	0.0000	not Stationary	107.975	0.0000	Stationary
DP			**DP**			
Levin, Lin & Chu t*	-0.98640	0.1620	Stationary	-2.43870	0.0074	Stationary

Im, Pesaran and Shin W-stat	-0.23383	0.4076	Stationary	-1.45073	0.0134	Stationary
ADF - Fisher Chi-square	19.4352	0.2467	Stationary	30.7845	0.0143	Stationary
PP - Fisher Chi-square	16.8302	0.3967	not Stationary	76.8690	0.0000	Stationary
DER				**DER**		
Levin, Lin & Chu t*	-0.78844	0.2152	Not Stationary	2.16421	0.0152	Stationary
Im, Pesaran and Shin W-stat	-0.52101	0.3012	Not Stationary	-1.48150	0.0192	Stationary
ADF - Fisher Chi-square	26.8885	0.1384	Not Stationary	33.9448	0.0265	Stationary
PP - Fisher Chi-square	66.0278	0.0000	Stationary	133.629	0.0000	Stationary
MV	**Macro-Variables**			**MV**		
Levin, Lin & Chu t*	-6.61250	0.0000	Stationary	-8.13127	0.0000	Stationary
Im, Pesaran and Shin W-stat	-2.44908	0.0072	stationary	-3.25293	0.0006	Stationary
ADF - Fisher Chi-square	39.6523	0.0055	Stationary	50.4048	0.0002	Stationary
PP - Fisher Chi-square	51.9654	0.0001	Stationary	125.485	0.0000	Stationary
MS				MS		
Levin, Lin & Chu t*	0.84018	0.7996	Not Stationary	4.26801	0.0057	Stationary
Im, Pesaran and Shin W-stat	-3.19326	0.0007	Stationary	-3.76304	0.0001	Stationary
ADF - Fisher Chi-square	49.8240	0.0002	Stationary	56.7809	0.0000	Stationary
PP - Fisher Chi-square	237.855	0.0000	Stationary	230.766	0.0000	Stationary
IFR				IFR		
Levin, Lin & Chu t*	-5.17017	0.0000	Stationary	-4.29866	0.0000	Stationary
Im, Pesaran and Shin W-stat	-0.92185	0.1783	not Stationary	-6.01367	0.0254	Stationary
ADF - Fisher Chi-square	23.2356	0.2774	not Stationary	26.3868	0.0034	Stationary
PP - Fisher Chi-square	21.2701	0.3814	not Stationary	101.055	0.0000	Stationary
GDP				**GDP**		
Levin, Lin & Chu t*	-4.08453	0.0000	Stationary	-51.2839	0.0000	Stationary
Im, Pesaran and Shin W-stat	-0.10009	0.4601	Not Stationary	-23.0026	0.0000	Stationary

	15.692		Not	206.13		Stationar
ADF - Fisher Chi-square	5	0.7355	Stationary	1	0.0000	y
	15.714		not	15.938		Stationar
PP - Fisher Chi-square	4	0.7342	Stationary	6	0.7204	y
EXR			**EXR**			
Levin, Lin & Chu t*	-		Stationary	-		Stationar
	3.12455	0.0009		11.1350	0.0000	y
Im, Pesaran and Shin W-	0.6896		Not	-		Stationar
stat	3	0.7548	Stationary	2.92988	0.0017	y
ADF - Fisher Chi-square	9.9739		Not	47.733		Stationar
	8	0.9686	Stationary	5	0.0005	y
PP - Fisher Chi-square	1.5816		not	13.551		Stationar
	5	0.0000	Stationary	6	0.0025	y

So urc

e: Computed from E-view 9.0

The first step is to use/ apply a range of panel unit root tests (the Levin, Lin and Chu 2002 test; the Im, Pesaran and Shin, 2003 W-Stat; and two Fisher-type tests using ADF and PP tests from Maddala and Wu, 1999; and Choi, 2001). The results for each one of our five variables are reported in Table 1. As it can be inferred from the table, at first differences are used the hypothesis of unit root non-stationary is rejected at the 1, 5 and 10 percent level of significance. These results lead us to conclude that our series are characterized as I (1) process. Therefore, we can implement a test for panel cointegration t the essential determinants of Market value of the quoted banking institutions in Africa.

Table 2: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
		Micro-Variables		
FS	0.021876	0.043552	0.502310	0.6167
ROE	0.029523	0.073915	0.399415	0.6906
EPS	0.062860	0.076348	0.823338	0.4126
DP	0.078470	0.072399	1.083859	0.2815
DER	-0.114242	0.039539	-2.889328	0.0049
C	0.707070	0.315382	2.241944	0.0276
		Effects Specification		
Cross-section fixed (dummy variables)				
R-squared	0.841952	Mean dependent var		0.828700
Adjusted R-squared	0.815920	S.D. dependent var		0.440598
S.E. of regression	0.189036	Akaike info criterion		-0.356274
Sum squared resid	3.037453	Schwarz criterion		0.034502

Log likelihood	32.81368	Hannan-Quinn criter.	-0.198120
F-statistic	32.34362	Durbin-Watson stat	1.442492
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.675224	5	0.0000

Macro-Variables

MS	-0.159220	0.062835	-2.533960	0.0131
IFR	0.549393	0.413938	1.327235	0.1880
GDP	0.360933	0.221752	1.627642	0.1073
EXR	0.189364	0.278960	0.678822	0.4991
C	-1.641010	1.215596	-1.349963	0.1806

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.853197	Mean dependent var	0.828700
Adjusted R-squared	0.829017	S.D. dependent var	0.440598
S.E. of regression	0.182187	Akaike info criterion	-0.430080
Sum squared resid	2.821342	Schwarz criterion	-0.039305
Log likelihood	36.50402	Hannan-Quinn criter.	-0.271926
F-statistic	35.28617	Durbin-Watson stat	1.607622
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.736937	5	0.0000

Source: Computed from E-view 9.0

Analysis of Results

Following the various methods of panel data analysis, the question of which is the most appropriate or suitable methods arises. Therefore, some means of selecting the most suitable method among the different approaches especially between the fixed effect model (FEM) and random effect model (REM) is needed. But when such a correlation exists, the Fixed-effects model would be more suitable because the random effect model would be inconsistently

estimated. From the table above, the Hausman test show probability of the Chi-Sq. Statistic is 0.0000 less than 0.05, therefore, the study adopt the fixed effect model for the two models.

F-Test:

The F-calculated value is 32.34362, 35.28617 and probability of 0.000000 considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression plane is statistically significant. This means that the joint influence of the essential factors on the market values is statistically significant.

Coefficient of Multiple Determination (R^2):

The computed coefficient of multiple determination of 0.815920 from the micro variables from the fixed effect model, this implies that 81.5 percent of the total variations in the market values are accounted for, by the micro variables as formulated in the regression model. Furthermore, the computed coefficient of multiple determination of 0.829017 from the macro variables from the fixed effect model, this implies that 82.9 percent of the total variations in the market values are accounted for, by the macro variables as formulated in the regression model.

Durbin Watson statistics (DW):

The computed DW is 1.442492 from the micro variables and 1.607622 from the macro variables from the fixed effect results shows that at 5% level of significance with four explanatory variables and 100 observations, the calculated DW for dL and du are 0.861 and 1.562 respectively. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation from the micro variables and no evidence of positive first order serial correlation from the macro variables.

T-Test:

This is used to measure the significance of the independent variables to the dependent variable (market values) and the hypothesis was tested at 5% level of significance and at 95% confidence interval. From the table above, the t-test and probability proved that firm size, Return on equity, Earnings per share and dividend payout ratio have no significant effect on market values of the quoted Nigerian banking institutions while debt-equity ratio have significant effect on the market values. Furthermore, from the table above, the t-test and probability proved that money supply while inflation rate, gross domestic products and exchange rate have no significant effect on market values of the quoted Nigeria banking institutions.

Regression Coefficient:

from the micro variables, the study found that firm size, Return on equity, earnings per share, and dividend payout ratio have positive effect while debt-equity ratio have negative effect on the market values of quoted Nigerian banking institutions. From the macro- variables, the result indicates that money supply have negative effect while inflation rate, gross domestic product and exchange rate have positive effect on market values of the Nigerian banking institutions.

Table 3: Pedroni Residual Cointegration Test

Series: MV FS ROE EPS DP DER

	Statistic	Prob.	Weighted Statistic	Prob.
Micro-Variables				
Panel v-Statistic	-1.937822	0.0437	-2.466613	0.0332
Panel rho-Statistic	3.383534	0.0096	3.385510	0.0096
Panel PP-Statistic	-0.454926	0.3246	-3.716960	0.0001
Panel ADF-Statistic	4.831560	0.0072	-0.998455	0.1590
	Statistic	Prob.		
Group rho-Statistic	4.809492	0.0000		
Group PP-Statistic	-4.960986	0.0000		
Group ADF-Statistic	0.187377	0.5743		
Macro-Variables				
Pedroni Residual Cointegration Test				
Series: MV MS IFR GDP EXR				
	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-1.615138	0.0469	-1.991597	0.0468
Panel rho-Statistic	3.108984	0.0091	2.948168	0.0184
Panel PP-Statistic	-1.921173	0.0274	-6.095375	0.0000
Panel ADF-Statistic	0.113250	0.5451	-1.973757	0.0242
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	4.375266	0.0000		
Group PP-Statistic	-8.970878	0.0000		
Group ADF-Statistic	-1.349757	0.0885		

Source: Computed from E-view 9.0

The recent literature has focused on tests of cointegration in a panel setting and we provide the results in Table 3 for two panel cointegration tests based on Pedroni (1999) (2004) and Kao (1999), where both are Engle-Granger based tests.

Table 2: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
Micro-Variables			
FS does not Granger Cause MV	80	0.87818	0.4198
MV does not Granger Cause FS		0.19393	0.8241
ROE does not Granger Cause MV	80	2.00958	0.1412
MV does not Granger Cause ROE		0.96077	0.3873
EPS does not Granger Cause MV	80	1.22615	0.2992
MV does not Granger Cause EPS		3.32712	**0.0413
DP does not Granger Cause MV	80	2.21651	0.1161
MV does not Granger Cause DP		0.74990	0.4759
DER does not Granger Cause MV	80	0.37915	0.6857
MV does not Granger Cause DER		0.04540	0.9556
Macro-Variables			
MS does not Granger Cause MV	80	10.6205	9.E-05
MV does not Granger Cause MS		3.99560	**0.0224
IFR does not Granger Cause MV	80	2.32980	0.1043
MV does not Granger Cause IFR		5.43612	**0.0062
GDP does not Granger Cause MV	80	3.99758	**0.0224
MV does not Granger Cause GDP		6.60068	**0.0023
EXR does not Granger Cause MV	80	1.62317	0.2041
MV does not Granger Cause EXR		6.72618	**0.0021

To summarize, our Granger Causality test, results from the micro variables proved that market values granger-cause earnings per share, this implies that there is uni-directional causality from market values to Earnings per share while other variables have no causal relationship among the variables. However, from the macro variables, the results proved that there is uni-directional causality from market values to money supply, a bi-directional causality from inflation rate to Market value and market values to inflation rate, a unidirectional causality from gross domestic product to Market value and market values to exchange rate.

Table 4: Phillips-Peron Results (Non-Parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Micro-Variables					
Access Bank	0.106	0.010671	0.002242	8.00	9
FCMB Plc	Dropped from Test				
Fidelity Bank Plc	-0.541	0.001538	0.000246	8.00	9
First Bank plc	0.037	0.021302	0.012914	5.00	9
GTB Plc	-0.176	0.009283	0.001374	7.00	9
Stanbic IBTC Plc	-0.180	0.018430	0.019140	1.00	9
Sterling Bank Plc	-0.098	0.004008	0.001083	8.00	9
UBA Plc	-0.043	0.014676	0.004801	5.00	9
Union Bank Plc	Dropped from Test				
Zenith Bank Plc	-0.183	0.006691	0.000985	8.00	9

Source: computed from E-view 9.0

The results of the power for the entire test procedure based on the underlying time series model is stationary AR, all the procedures produced a reasonably high power over all the sample sizes and order considered except at order 2 where ADF (Augmented Dickey Fuller) produced extremely low power. The power of the tests is extremely high over all the sample sizes and orders considered. From the coefficient of the sample size, most of the firms have linear relationship and also integrated in the order of 1(1).

Essential Determinants of Market values of South African Banking Institutions

Table 6: Panel Unit Roots Tests

Method	**Statistic**	**Prob.****	**Remark**	**Statistics**	**Prob.****	**Remark**
MV: Level				**MV: First Difference**		
			Micro-Variables			
Levin, Lin & Chu t*	-7.05375	0.0000	Stationary	-2.28778	0.0111	Stationary
Im, Pesaran and Shin W-stat	-1.97818	0.0240	Stationary	-1.15177	0.0247	Stationary
ADF - Fisher Chi-square	36.0420	0.0152	Stationary	27.1582	0.0009	Stationary
PP - Fisher Chi-square	92.8172	0.0000	Stationary	74.5888	0.0000	Stationary
ROE			**ROE**			

Levin, Lin & Chu t*	-7.49847	0.0000	Stationary	-16.2718	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.11258	0.1329	not Stationary	-4.55196	0.0000	Stationary
ADF - Fisher Chi-square	32.0594	0.0427	Stationary	54.1597	0.0001	Stationary
PP - Fisher Chi-square	20.3101	0.4387	Not Stationary	143.342	0.0000	Stationary
FS			**FS**			
Levin, Lin & Chu t*	-0.79528	0.2132	Stationary	-3.06402	0.0011	Stationary
Im, Pesaran and Shin W-stat	1.48906	0.9318	not Stationary	-1.78755	0.0369	Stationary
ADF - Fisher Chi-square	12.0966	0.9127	not Stationary	35.9744	0.0155	Stationary
PP - Fisher Chi-square	15.5757	0.7426	Not Stationary	54.0641	0.0001	Stationary
EPS			EPS			
Levin, Lin & Chu t*	-1.95434	0.0253	Stationary	-8.24067	0.0074	Stationary
Im, Pesaran and Shin W-stat	-1.00102	0.1584	not Stationary	-7.50176	0.0066	Stationary
ADF - Fisher Chi-square	27.8111	0.1139	not Stationary	31.9213	0.0441	Stationary
PP - Fisher Chi-square	62.1618	0.0000	Stationary	113.421	0.0000	Stationary
DP			**DP**			
Levin, Lin & Chu t*	-7.35898	0.0000	Stationary	-4.96027	0.0000	Stationary
Im, Pesaran and Shin W-stat	-2.48193	0.0065	Stationary	-2.56492	0.0052	Stationary
ADF - Fisher Chi-square	37.2435	0.0019	Stationary	30.4868	0.0024	Stationary
PP - Fisher Chi-square	13.2317	0.6557	not Stationary	35.7580	0.0004	Stationary
DER			**DER**			
Levin, Lin & Chu t*	-3.92821	0.0000	Stationary	-6.87481	0.0000	Stationary
Im, Pesaran and Shin W-stat	-0.23644	0.4065	Not Stationary	-2.94144	0.0016	Stationary
ADF - Fisher Chi-square	25.0038	0.2013	Not Stationary	47.2069	0.0005	Stationary
PP - Fisher Chi-square	36.3826	0.0139	Stationary	105.435	0.0000	Stationary
MV Macro-Variables MV						
Levin, Lin & Chu t*	-2.29907	0.0108	Stationary	-6.46023	0.0000	Stationary

Im, Pesaran and Shin W-stat	-0.28891	0.3863	not stationary	-1.70065	0.0445	Stationary
ADF - Fisher Chi-square	24.6134	0.2166	not Stationary	33.3363	0.0310	Stationary
PP - Fisher Chi-square	29.0024	0.0877	not Stationary	86.7882	0.0000	Stationary
MS			**MS**			
Levin, Lin & Chu t*	4.79692	0.0000	Stationary	-4.57279	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.31762	0.0938	not Stationary	-3.21628	0.0006	Stationary
ADF - Fisher Chi-square	27.2902	0.1273	not Stationary	50.8901	0.0002	Stationary
PP - Fisher Chi-square	158.534	0.0000	Stationary	184.507	0.0000	Stationary
IFR			IFR			
Levin, Lin & Chu t*	6.15249	0.0000	Stationary	-5.68540	0.0000	Stationary
Im, Pesaran and Shin W-stat	0.05828	0.5232	not Stationary	-3.74454	0.0001	Stationary
ADF - Fisher Chi-square	14.4147	0.8089	not Stationary	56.5826	0.0000	Stationary
PP - Fisher Chi-square	40.7294	0.0040	Stationary	224.126	0.0000	Stationary
GDP			**GDP**			
Levin, Lin & Chu t*	2.81079	0.9975	Not Stationary	-10.4884	0.0000	Stationary
Im, Pesaran and Shin W-stat	2.97194	0.9985	Not Stationary	-5.31944	0.0000	Stationary
ADF - Fisher Chi-square	2.27054	0.0000	Stationary	73.1799	0.0000	Stationary
PP - Fisher Chi-square	0.18428	0.0000	Stationary	53.4480	0.0001	Stationary
EXR			**EXR**			
Levin, Lin & Chu t*	-3.34322	0.0004	Stationary	-5.74841	0.0000	Stationary
Im, Pesaran and Shin W-stat	0.06790	0.5271	Not Stationary	-1.93276	0.0266	Stationary
ADF - Fisher Chi-square	14.8550	0.7846	Not Stationary	36.6721	0.0128	Stationary
PP - Fisher Chi-square	50.4891	0.0002	Stationary	152.399	0.0000	Stationary

Source: Computed from E-view 9.0

The first step is to use/ apply a range of panel unit root tests (the Levin, Lin and Chu 2002 test; the Im, Pesaran and Shin, 2003 W-Stat; and two Fisher-type tests using ADF and PP tests from Maddala and Wu, 1999; and Choi, 2001). The results for each one of our five variables are reported in Table 6. As it can be inferred from the table, at first differences are

used the hypothesis of unit root non-stationary is rejected at the 1, 5 and 10 percent level of significance. These results lead us to conclude that our series are characterized as I (1) process. Therefore, we can implement a test for panel cointegration the essential determinants of market values of the quoted banking institutions in South Africa.

Table 7: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Micro-Variables				
ROE	-0.093526	0.078423	-1.192586	0.2360
FS	-0.002843	0.031114	-0.091366	0.9274
EPS	0.052499	0.050708	1.035319	0.3032
DP	0.205476	0.133044	1.544422	0.1258
DER	0.189167	0.059187	3.196105	0.0019
C	1.366171	0.246238	5.548163	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.117328	0.5928
Idiosyncratic random			0.097246	0.4072
Weighted Statistics				
R-squared	0.537308	Mean dependent var		0.318823
Adjusted R-squared	0.491420	S.D. dependent var		0.103339
S.E. of regression	0.098502	Sum squared resid		0.912051
F-statistic	2.992242	Durbin-Watson stat		1.014582
Prob(F-statistic)	0.014980			
Unweighted Statistics				
R-squared	-0.029693	Mean dependent var		1.257500
Sum squared resid	2.245221	Durbin-Watson stat		0.537547
Correlated Random Effects - Hausman Test				
			Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Test Summary					
Cross-section random			7.445027	5	0.1896
Macro-Variables				
MS	-0.000987	0.083104	-0.011881	0.9905
IFR	0.289695	0.182084	1.590993	0.1153
GDP	-0.020678	0.037193	-0.555957	0.5797

EXR	0.224368	0.173390	1.294006	0.1992
C	0.721637	0.170915	4.222194	0.0001

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.666386	Mean dependent var	1.256600
Adjusted R-squared	0.611437	S.D. dependent var	0.148237
S.E. of regression	0.092403	Akaike info criterion	-1.787830
Sum squared resid	0.725759	Schwarz criterion	-1.397054
Log likelihood	104.3915	Hannan-Quinn criter.	-1.629676
F-statistic	12.12752	Durbin-Watson stat	1.184632
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.273063	5	0.0000

Source: Computed from E-view 9.0

From the table above, the Hausman test show probability of the Chi-Sq. Statistical probability 0.1896 is greater than 0.05, therefore, the study adopt the random effect model for micro variables while the Chi-Sq. Statistical probability 0.0000 less than 0.05, therefore, the study adopt the fixed effect model for macro variables.

F-Test:

The F-calculated value is 2.992242, 12.12752 and probability of 0.014980 and 0.000000 considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression plane is statistically significant. This means that the joint influence of the essential factors on the market values is statistically significant.

Coefficient of Multiple Determinations (Adj, R^2):

The computed coefficient of multiple determinations (Adjusted R^2) of 0.491420 from the microvariables from the fixed effect model, this implies that 49.1 percent of the total variations in the market values are accounted for, by the micro variables as formulated in the regression model. Furthermore, the computed coefficient of multiple determination of 0.611437 from the macro variables from the fixed effect model, this implies that 61.1 percent of the total variations in the market values are accounted for by the macro variables as formulated in the regression model.

Durbin Watson statistics (DW):

The computed DW is 0.537547 from the micro variables and 1.184632 from the macro variables from the fixed effect results shows that at 5% level of significance with four explanatory variables and 100 observations, the calculated DW for dL and du are 0.861 and

1.562 respectively. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation among the variables.

T-Test:

This is used to measure the significance of the independent variables (essential factors) to the dependent variable (market values) and the hypothesis was tested at 5% level of significance and at 95% confidence interval. From the table above, the t-test and probability proved that firm size, Return on equity, Earnings per share and dividend policy have no significant effect on market values of the quoted South Africa banking institutions while debt-equity ratio have significant effect on the market values. Furthermore, from the table above, the t-test and probability proved that the macro variables have no significant effect on the market values of South African banking institutions within the periods covered in this study.

Regression Coefficient:

From the micro variables, the study found that Return on equity and firm size have negative effect while earnings per share, dividend policy and debt-equity ratio have positive effect on the quoted South African banking institutions. From the macro variables, the results indicate that money supply and gross domestic products have negative effect while inflation rate and exchange rate have positive effect on the market values of the quoted South African banking institutions.

Table 8: Pedroni Residual Cointegration Test

Pedroni Residual Cointegration Test
Series: MV ROE FS EPS DP DER

	Statistic	Prob.	Weighted Statistic	Prob.
Micro-Variables				
Panel v-Statistic	-2.324040	0.0099	-2.810517	0.0375
Panel rho-Statistic	3.044996	0.0088	2.799986	0.0474
Panel PP-Statistic	-4.281239	0.0000	-8.114458	0.0000
Panel ADF-Statistic	-0.291238	0.3854	-1.732153	0.0416
	Statistic	Prob.		
Group rho-Statistic	4.300275	0.0000		
Group PP-Statistic	-8.523993	0.0000		
Group ADF-Statistic	-1.455595	0.0728		
Macro-Variables				
Pedroni Residual Cointegration Test				
Series: MV MS IFR GDP EXR				
Panel v-Statistic	-2.021020	0.0084	-2.303379	0.0294
Panel rho-Statistic	4.305435	0.0000	4.293511	0.0000
Panel PP-Statistic	1.912876	0.0321	1.765277	0.9612

Panel ADF-Statistic	-0.465520	0.3208	-0.416751	0.3384
	Statistic	Prob.		
Group rho-Statistic	5.895955	0.0000		
Group PP-Statistic	-4.072420	0.0011		
Group ADF-Statistic	-0.173772	0.4310		

Source: Computed from E-view 9.0

Pedroni's (1999) (2004) proposed cointegration testing allow for heterogeneous interceptions and trend coefficients across cross-sections using various methods to build statistics to test the non-cointegration hypothesis. Two alternative hypotheses are found: one is the homogeneous alternative called the internal-dimensional test or panel-statistical test and the other is the one called the inter-dimensional or group-statistic test. The advantages of this type of panel cointegration test are that heterogeneous differences can be achieved between companies at any point in time to bring together the long-term information contained in the panel while allowing short-run dynamics for different groups to differ. The test Kao(1999) follows the same basic approach; however the first stage regressors specify cross-sectional specific intercepts and homogeneous coefficients. The results of panel cointegration give us evidence of cointegration as most test statistics from Pedroni reject the null hypothesis that the two estimated model are not cointegrated.

Table 9: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
Micro-Variables			
ROE does not Granger Cause MV	80	0.50488	0.6056
MV does not Granger Cause ROE		0.42409	0.6559
FS does not Granger Cause MV	80	1.15486	0.3206
MV does not Granger Cause FS		0.20606	0.8142
EPS does not Granger Cause MV	80	1.90045	0.1566
MV does not Granger Cause EPS		1.16474	0.3176
DP does not Granger Cause MV	80	2.93208	0.0594
MV does not Granger Cause DP		0.47519	0.6236
DER does not Granger Cause MV	80	0.11850	0.8884
MV does not Granger Cause DER		0.07313	0.9295
Macro-Variables			
MS does not Granger Cause MV	80	0.35915	0.6995
MV does not Granger Cause MS		0.84783	0.4324

IFR does not Granger Cause MV	80	0.49925	0.6090
MV does not Granger Cause IFR		2.78210	0.0683
GDP does not Granger Cause MV	80	0.85216	0.4306
MV does not Granger Cause GDP		2.03807	0.1374
EXR does not Granger Cause MV	80	0.18551	0.8311
MV does not Granger Cause EXR		0.91327	0.4056

Source: Computed from E-view 9.0

From the causality test presented in table 9, there is independent relationship from micro variables and Market value of the quoted banking institutions in South Africa; we accept the null hypothesis that there is no causal relationship between micro variables and market values. The study found no causal relationship among macro variables and market values of the quoted South African banking institutions, we accept null hypotheses that macro variables does granger cause market values of the quoted banking institutions in South Africa.

Table 10: Phillips-Peron Results (Non-Parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Sasfin Bank Ltd South Africa	0.129	0.001024	0.001213	1.00	9
African Bank Ltd South Africa	-0.562	0.000980	0.000166	7.00	9
Bidvest Bank Ltd South Africa	-0.334	0.004456	0.000735	8.00	9
Capitec Bank Ltd South Africa	-0.264	0.000460	0.000213	6.00	9
First National Bank Ltd South Africa	Dropped from Test				
First Rand Bank Ltd South Africa	0.055	0.004120	0.002883	4.00	9
Grindrod Bank Ltd South Africa	0.076	0.000150	0.000107	4.00	9
Nedbank Ltd South Africa	Dropped from Test				
Standard Bank Ltd South Africa	-0.196	0.000559	0.000291	5.00	9
Wesbank Ltd South Africa	-0.428	0.000481	8.54E-05	8.00	9

Source: Computed from E-view 9.0

As a starting point of panel stationarity analysis, we employ the first generation panel unit root tests which allow for cross-sectional independence between firms. As displayed in Table 4.10, the results suggest that the firms' null hypothesis cannot be rejected by all the first generation tests (LLC, IPS, MW and Choi tests). This finding of stationarity is not in line with

Song and Wu (1998) who reported the absence of hysteresis in the firms for the annual data of 10 banking institutions in South Africa by using Levin and Lin (1992) panel unit root test.

However, the cross-sectional (CD) dependence test rejects the presence of cross-sectional independence and hence, the first generation unit root test is not applicable. Therefore, the failure of these tests to reject the null of the firms hysteresis is due to the fact that the first generation panel unit root tests do not allow neither for cross-sectional dependence nor for possible structural breaks.

Discussion of Findings

The estimated micro-variables found that firm size, Return on equity, earnings per share, and dividend payout ratio have positive effect while debt-equity ratio have negative effect on the market values of quoted Nigerian banking institutions. From the macro- variables, the result indicates that money supply have negative effect while inflation rate, gross domestic product and exchange rate have positive effect on market values of the Nigerian banking institutions. the estimated regression model found that Return on equity and firm size have negative effect while earnings per share, dividend policy and debt-equity ratio have positive effect on the quoted South African banking institutions. From the macro variables, the results indicate that money supply and gross domestic products have negative effect while inflation rate and exchange rate have positive effect on the market values of the quoted South African banking institutions. The positive relationship between variables and market values of the banking institutions confirms our a-priori expectation and in line with the opinions of Gordons that capital structure is relevant. The positive effect of debt-equity ratio on the market values of country's banking institutions confirms the fundamental and the technical views and confirms the random work hypothesis.

Empirically, the positive relationship between debt-equity ratio and Market value of quoted banking institutions in Africa confirms the findings of Olugbenga and Atanda (2014) that book values and equity share influence investment decisions, Oshodin and Mgbame (2014) that the Earnings per share information is the most considered by investors when deciding on shares, Olugbenga and Atanda (2014) that there is a significant relationship between accounting information and share prices of firms listed on Nigerian Stock Exchange. Lucky *et al* (2015) that all the micro variables have positive effects on the stock prices of banking institutions except lending rates. The negative relationship between Earnings per share and market values of the banking institutions contradicts our a-priori expectation. The negative effect of variables on the market values of Ethiopian banking institutions contradicts the fundamental and the technical views and confirms the random work hypothesis.

Conclusion and Recommendations

Conclusion

From the empirical findings from Nigeria, the study concludes that debt-equity ratio has significant relationship with market values, that Earnings per share have no significant relationship with market values. That Return on equity has no significant relationship with market values. Firm size has no significant relationship with market values of banking institutions in Nigeria. That dividend policy has no significant relationship with market values of banking institutions in Nigeria. That gross domestic product has no significant relationship with

market values. That inflation rate has no significant relationship with market values of banking institutions in Nigeria. That exchange rate has no significant relationship with market values, that money supply have significant relationship with market values of banking institutions in Nigeria.

From the empirical findings from South Africa, the study concludes that, debt-equity ratio has significant relationship with market values of banking institutions in South Africa. That Earnings per share have no significant relationship with market values, that Return on equity has no significant relationship with market values, firm size has no significant relationship with market values, that dividend policy has no significant relationship with market values, that gross domestic product has no significant relationship with market values, that inflation rate has no significant relationship with market values, that exchange rate has no significant relationship with market values and that money supply has no significant relationship with market values of banking institutions in South Africa.

Recommendations

1. Based on the findings from the study where the study observed that firm size mixed effect on the market values of the quoted banking institutions in Nigeria and South Africa, it is therefore recommended that the banking institutions in Nigeria and South Africa should minimize the costs associated with expansion and adopts every possible strategy to utilize maximum benefit of economies of scale. Banking institutions in Nigeria and South Africa should consider other quantitative and qualitative factors towards improving the market values rather than relying on firm size which can negatively affect market values of the banking institutions.

2. The cross sectional data indicates that the dividend policy of the Nigerian and South African banking institutions is constant dividend policy, therefore we recommend that constant dividend policy should be maintained among the quoted banking institutions in Nigeria and South Africa. According to the signaling hypothesis, this will signal positive information to investors and affect positively market values of the firms.

3. The quoted Nigerian and South African banking institutions should have more of equity in the capital structure than debt. This is evidenced from our finding depicting a positive, though insignificant, relationship between debt-equity ratios on the market values of the quoted banking institutions in Nigeria and South Africa. There is need for the management of banking institutions in African countries to strengthen its efforts for effective management of the micro and the macro variables to avoid the negative effect on the share prices.

REFERENCES

Akani, H. W., & Lucky, A. L., (2014). Money supply and aggregate stock prices in Nigeria: An analysis of co-Integration and causality test. *Research Journali's Journal of Finance, 2 (10), 1 – 24.*

Akani, H. W., Okonkwo V. I., & Ibenta, S. N. (2016). Empirical analysis of monetary policy on capital market activities: Evidence from Nigerian economy. *Journal of Accounting and Financial Management 2 (3), 82 – 111*

AL- Shubiri, F. N. (2010). Analysis the determinants of market stock price movements: An empiric al study of Jordanian commercial banks. *International Journal of Business and Management, 5(10), 137-147.*

Almajali, A. Y., A.S. Alamro, and Y.Z Al-Soub. 2012. Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange. Journal of Management Research, ISSN 1941-899X, Vol. 4, No. 2.

Andy, C.W.C, Chuck, C.Y.K., & Alison, E.L. (2002). The Determination of Capital Structure: Is National Culture a Missing Piece of the Puzzle? Journal of International Business Studies, 33, 19- 32

Athanasoglou, P.P., Brissimis, S. N. & Delis, M. D. (2005). Bank-specific, Industry Specific and Macroeconomic Determinants of Bank Profitability. Bank of Greece Working Paper No. 25

Baker KBH, Haslem JA (1973). Information needs of individual investors, J. Accountancy, pp. 64-69

Bartram, S.M. (2009). Agency conflicts and corporate payout policies. A Global Study.

Brealey, R. A., Myers, S. C., & Allen, F. (2008). *Principles of Corporate Finance.* 9 ed New York: McGraw-Hill Education

Choi, I. (1995). Unit root tests for panel data. *Journal of International Money and Finance, 5(20), 249- 272*

Elmi, M. A., & Muturi, W. M. (2016). Effects of profitability on dividend payout by commercial and services firms listed in the Nairobi securities exchange. European Journal of Business and Social Sciences, 5(2), 160-167

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25(2), 383–417.*

Fama, E. F. (1981). Stock returns, real activity, inflation and money. *The American Economic Review, 71(4), 45-565* Fama, E. F., & Schwert, G. W. (1977). Asset returns and inflation. *Journal of Financial Economics, Elsevier, 5(2), 115-146.*

Grossman, S. J., & Stiglitz , J. E. (1980).On the impossibility of informationally Efficient Markets.*American Economic Review , 70, 393-408*

Hasan, M.S. (2017). Stock Returns, Inflation and Interest rates in the United Kingdom', *European Journal of Finance, 14(8), 687-699.*

Hosseini, S., M., Ahmad, Z.. *(*2011). The Role of Macroeconomic variables on Stock market Index in China and India. International Journal of Economics and Finance, 3(6), 233–243. 23.

Ibanichuka, E. A.L. &Alasin, C B.(2018).Audit reports and value relevance of accounting information: evidence from commercial banks in Nigeria. *Indian Journal of Finance and Banking, 2(1), 45-65.*

Jatoi, M.Z., Shabir, G.,Hamad, N.,Iqbal N. & Muhammad, K. (2014).A Regressional impact of earning per share on Market value of share: A case study cement industry of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4*(4), 221-227

Kallunki, J. & Martikainen, T. (1997).The lead-lag structure of stock returns and accounting earnings. International Review of Financial-Analysis, 6 (1),37-48.

Kansaar, G. & Taffter, N. (1988). Estimation of bank stock price parameters and the variance components model. *Applied Economics, 20(4): 497-507*

Kao, C. (1999). Spurious regression and residual based tests for cointegration in panel data. *Journal of Econometrics, 90(1), 1-44.*

Kaźmierska-Jóźwiak, B. (2015). Determinants of dividend policy: evidence from polish listed companies. Procedia economics and finance, 23, 473-477

Keerti, G. K., Gururaj. A, K. (2013). Fundamental analysis vs. technical analysis: a choice of sectoral analysis. International Journal of Engineering and Management and Science, 4(2), 234-246

Lucky, A. L., Akani, H. W., & Chukwuemeka, A. (2015). Prudential Determinants of Stock prices of Commercial Banks in Nigeria: An Application of Fundamentalists and Macroeconomic View 1980 – 2014. *ILARD International Journal of Banking and Finance Research, 1 (7), 1 – 37.*

Matt, H.E. (2000). Excellence in Financial Management. Course 1: Evaluating Financial Performance. Retrieved from www.exinfin.com/Trainin

McKenzie, M. (2007). Technical trading rules in emerging markets the 1997 Asian currency crisis. Emerging Markets Finance and Trade, 43, 46-73.

Miah, M. ((2012). Value relevance of accounting information and stock market vulnerability - A Study on Listed Companies in Dhaka Stock Exchange. *International Journal of Research in Commerce and Management , 3 (4), 24-26.*

Ngerebo-a, T.A (2007). *Corporate Financial Management 1*: The Blueprint Limited, Port Harcourt.

Nirmala, P.S., Sanju, P. S. & Ramachandran, M. (2011).Determinants of share prices in India.*Journal of Emerging Trends in Economics and Management Science (JETEMS), 2*(2), 124-130.

Olugbenga, A &Oyerinde, A. (2014). The relationship between financial accounting information and market values of quoted firms in Nigeria. Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics (GJCRA), 1.

Osei, K. A. (2012). Asset Pricing and Informational Efficiency of the Ghana Stock market.*AERC Research paper 11(5), Nairobi Kenya*

Pandey, I. M.(2005).Financial Management. Vikae Publishing House PVT LTD

Pathirawasam, C. (2010). Value relevance of accounting information: Evidence from Sri Lanka. International Journal of Research in Commerce & Management, 8(1), 13-20.

Pedroni, P. (1999). Critical values for cointegration tests in heterogeneous panels with multiple regressors. *Oxford Bulletin of Economics and Statistics, Special Issue, 6(1), 653-670.*

Pedroni, P. (2002). Fully modified OLS for heterogeneous cointegrated panels and the case of purchasing power parity. *Department of Economics, Indiana University*, Mimeo.

Ranjani, R.P.C.,& Karunarathne, W.V.A.D. (2006). *The impact of earnings and cash flows on the determination of stock returns*. PU Management Review

Seetharaman, A., & Raj, J.R. (2011). An empirical study on the impact of Earnings per share on stock prices of a listed bank in Malaysia. *International Journal of Applied Economics and Finance. 5(2) 20 –63.*

Shamki, D., & Raman, A. A. (2012). Value relevance of earnings and book value: Evidence from Jordan. International Journal of Business and Management, 7(3), 133-141.

Sharma, S., & Singh, B. (2006). Determinants of equity share prices in Indian corporate sector: An empirical study. *The ICFAI Journal of Applied Finance, 12(4), 21-38.*

Suresh, A.S. (2013), A study on fundamental and technical analysis. International Journal of Marketing, Financial Services and Management Research, 2(5), 44-59.

Tharmila, K.,& Nimalathasam, B. (2013). The value relevance of accounting information and its impact on market vulnerability: A study of listed manufacturing. *Research Journal of Finance and Accounting, 4(18), 102-109.*

Thompson, S., & Adah, A. (2012). Stock market crisis and value relevance of accounting information: Impact on quoted cement manufacturing firms in Nigeria. *International Journal of Research in Commerce & Management, 3*, 16–19.

Wang, Fu & Lou (2013). Accounting information and stock price reaction of listed companies: Empirical Evidence from 60 listed companies in Shanghai Stock Exchange. *Journal of Business & Management, 2(2),11-21.*