

Corporate Performance and Stock Prices of Nigerian Banks: A Panel Data Approach

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ABSTRACT

The main aim of the study was to determine the effect of corporate performance on stock prices of quoted Nigerian banks. The ex-post facto research design was adopted. This enabled the researcher make use of secondary data to determine the effect of earnings per share, dividend per share, return on equity and price earnings ratio on share prices of Nigerian banks. The following performance indicators: earnings per share, dividend per share, return on equity and price earnings ratio were the independent variables while the dependent variable were share prices. Data were sourced from the publication of the Nigeria Stock Exchange, Central Bank of Nigeria Statistical Bulletin and the annual reports of the various banks. The dependent and independent variables were observed over a period of eleven years, that is from 2007 to 2017. The analysis was a panel data analysis and were analyzed using the Ordinary Least Square (OLS) technique. The hypotheses were tested at 5% level of significance. The result revealed that earnings per share had a positive and significant impact on share prices, dividend per share had a positive and significant impact on share prices, return on equity had a positive and significant impact on share prices and price earnings ratio had a negative and non-significant impact on share prices.

Keywords: Corporate: Performance: Stock: Prices: Banks: Nigeria

1. INTRODUCTION

BACKGROUND TO THE STUDY

A bank is a financial intermediary that accepts deposits and channels those deposits into lending activities. Banks are fundamental component of the financial system, and are also active players in financial markets. The essential role of a bank is to connect those who have capital (such as investors or depositors), with those who seek capital (such as individuals wanting a loan, or businesses wanting to grow). Banks play a very useful and dynamic role in the economic life of every modern state. A study of the economic history of western country shows that without the evolution of commercial banks in the 18th and 19th centuries, the industrial revolution would not have taken place in Europe (Abudi&Chemarum, 2010).

All investors, whether institutional or individual, hold one common objective when they invest in the share market; they all hope to maximize expected returns at some preferred level of risk. For investment in common stocks, much is said to have caused the changes in share prices. These has over the years created concern to investors and others such as stockbrokers, fund managers and investment analysts. Due to worldwide changes in share price in recent years, studies on share price determination and factors that affect value of firms which in turn lead to changes in the share prices of firms have received increased attention (Adedoyin, 2011). If these factors can be identified, then it makes sense to consider changes in the value of firms to have been driven by these factors. Consequently, changes in share prices may be as a result of volatility in these value-drivers called corporate firm performance or characteristics. Angel (1997) established that the average price per share differs substantially amongst stock market around the world. The median of the United States Stock, for example, sells for about \$40; a typical London stock sells for about \$7.50 and a typical Hong Kong share is about \$2. Furthermore, when stock prices rise above a country's usual trading range, firms often split their stocks to restore prices to that range.

The Nigerian company operates under a turbulent environment, characterized by massive deceleration in money supply and credit, an energy crisis, problematic oil and gas sector, a weakening exchange rate, fluctuating inflation rate and high cost of capital. However a company share price is susceptible to all of these variables which it has no control over. There had been various questions on what is responsible to changes in price of shares. The behavior of share price has been discovered to have been influenced by many factors both internally and externally. Sunde& Sanderson (2009) mentioned many factors that affect share price which include: corporate earnings, management strength, news of law suit, mergers, takeovers, market liquidity, market stability, availability of substitute, government policies, analyst reports, macroeconomic issues, investor's perception and technical influences.

Aside the external factors, there are internal factors influencing share price. The price of a commodity, the economist makes us to believe is determined by the forces of demand and supply in a free economy. Accepting the economists view, what factors then influence demand and supply behavior? In the securities market, whether the primary or the secondary market, the price of shares is significantly influenced by a number of factors which include book value of the firm,

dividend per share, earnings per share, price earnings ratio and dividend cover (Somoye, Akintoye and Oseni, 2009).

Empirical results show that markets generally react when financial information is available to investors (Aduda&Chemarum, 2010). Aduda and Chemarum (2010) noted that there is always a change in the market on announcement of financial information and the only difference is the path such change or reaction takes. Sometimes the reaction is positive which is indicated by a significant increase in the value of shares or in the volume of shares traded; while at other times it is negative, indicated by a reduction in the value and volume of shares traded (Khan &Ikram, 2012). It is important to find out the dynamics that set the pace for the differential between the theory and practice due to various financial performance indicators. Previous studies done on the effect of performance indicators on share prices have produced contradictory results and therefore have failed to give conclusive results, hence the need to carry out this research to establish the state of affairs from Nigerian perspective as well as to advance contribution in this growing body of literature.

OBJECTIVES OF THE STUDY

The main objective of the study is to determine the effect of corporate performance on stock prices of quoted Nigerian banks. However, the specific objectives are:

1. To identify the effect of earnings per share on share prices of Nigerian banks.
2. To ascertain the effect of dividend per share on share prices of Nigerian banks.
3. To establish the responsiveness of return on equity on share prices of Nigerian banks.
4. To determine the contribution of price earnings ratio on share prices of Nigerian banks.

RESEARCH QUESTIONS

Following the above objectives, the research questions shall be:

1. How does earnings per share affect share prices of Nigerian banks?
2. To what extent does dividend per share affect share prices of Nigerian banks?
3. How does return on equity affect share prices of Nigerian banks?
4. What is the effect of price earnings ratio on share prices of Nigerian banks?

HYPOTHESES OF THE STUDY

In line with the objectives and research questions, the hypotheses of the study shall be:

1. Earnings per share does not have positive and significant impact on share prices of Nigerian banks.
2. Dividend per share does not have positive and significant impact on share prices of Nigerian banks.
3. Return on equity does not have positive and significant impact on share prices of Nigerian banks.
4. Price earnings ratio does not have positive and significant impact on share prices of Nigerian banks.

2. REVIEW OF RELATED LITERATURE

Empirical results show that markets generally react when financial information is available to investors (Aduda&Chemarum, 2010). Lee (2006) employs two types of aggregate index data: annual Dow Jones industrial average (DJIA) index data for the sample period 1920–1999, and annual Standard and Poor’s (S&P) 400 industrial index data for the sample period 1946–99. The study finds that investors overreact to non fundamental information but under react initially to fundamental information (dividend, book value and earning), with no significant reversal associated with fundamental information in the long run. The study also finds that the residual income model provides a better valuation than the dividend discount model.

Docking and Koch (2005) in their study to assess investor reaction to dividend increase or decrease shows that dividend change announcements elicit a greater change in stock price when the nature of the news (good or bad) goes against the grain of the recent market direction during volatile times. First, announcements to raise dividends tend to elicit a greater increase in stock price when market returns have been normal or down and more volatile. However, this tendency lacks statistical significance. Second, announcements to lower dividends elicit a significantly greater decrease in stock price when market returns have been up and more volatile.

Al-Qenae, Li & Wearing (2002) made an important contribution by investigating the effect of earning and other macroeconomic variables on the stock prices of Kuwait Stock Exchange during the period 1981-1997. The macroeconomic variables examined are gross national product (GNP), interest rate, and inflation. The study found a significant and higher sensitivity of the estimated earning response coefficient (ERC) with the leading period returns. Moreover, both inflation and interest rate have negative and statistically significant coefficients in almost all cases on stock prices while GNP has positive effect but it is only significant in a certain (high) return measure interval. This study supports the idea that investors in KSE are able to anticipate earnings and suggests that the KSE market exhibits some features of semi-strong efficiency (i.e., a scenario in which stock prices incorporate all publicly available information).

The empirical study undertaken by Ralph and Eriki (2001) on the Nigerian Stock Market examining the relation between stock prices and inflation provides a strong support for the proposition that inflation exerts a significant negative influence on the behavior of the stock prices. Moreover, the study shows that stock prices are also strongly driven by the level of economic activity measured by GDP, interest rate, money stock, and financial deregulation. On the other hand, the findings of the study show that oil price volatility has no significant effect on stock prices. Zhao (1999) studied the relationships among inflation, output (industrial production) and stock prices in the Chinese economy. The study employs monthly values covering the period from January 1993 to March 1998. The results indicate a significant and negative relation between stock prices and inflation. The findings also indicate that output growth negatively and significantly affect stock prices.

Dimitrios (2003) examine the relationships between stock prices and macroeconomic factors in the emerging Cypriot equity market. In this study, he used the vector autoregressive model (VAR). The macroeconomic factors examined in this study, which covers the period from 1975

to 1998, are exchange rate, industrial production, money supply, and consumer prices. The results of the study indicate a strong relationship between stock prices and those macroeconomic factors. According to him, the strong relationship between stock prices and exchange rate should not be surprising, since the Cypriot economy depends for most part on services such as tourism and off-shore banking. He also notes that the relationships between stock prices and industrial production, money supply, and consumer prices reflect macroeconomic policies implemented by Cypriot monetary and fiscal authorities.

Ibrahim (2003) applies co integration and VAR modeling to evaluate the long term relationship and dynamic interactions between Malaysian Equity Market, various economic variables, and major equity markets in the United States and Japan. The macroeconomic variables used are real output, aggregate price level, money supply, and exchange rate. The study yielded two main findings: first, the Malaysian stock price index is positively related to money supply, consumer price index, and industrial production. Second, it is negatively linked to the movement of exchange rates. Mukherjee and Naka (1995) investigate the relation between Tokyo stock prices and six macroeconomic variables using a vector error correction model (VECM). Their study covered 240 monthly observations for each variable in the period from January 1971 to December 1990. The results of the study show that the relationship between Tokyo stock prices, the exchange rate, money supply, and industrial production is positive, whereas the relationship between Tokyo stock prices and inflation and interest rates is mixed.

3. METHODOLOGY

RESEARCH DESIGN

The *ex-post facto* research design were adopted to enable us make use of secondary data to determine the cause-effect relationship between corporate performance and stock prices in the Nigerian banking sector. The dependent and independent variables were observed over a period of eleven (11) years, that is from 2007 to 2017. The same data were analyzed and tested using econometric analytical technique.

NATURE AND SOURCES OF DATA

The nature of data for this work were secondary. The source of data were the publications of the Nigerian Stock Exchange (NSE), Central Bank of Nigeria Statistical Bulletin and the annual report of the various banks for the years under study.

MODEL SPECIFICATION

The study adopted the Ordinary Least Square (OLS) regression model. The regression model adopted were:

$$SP_t = a_0 + a_1EPS_t + a_2DPS_t + a_3ROE_t + a_4PER_t + \mu_t \quad - \quad - \quad - \quad 1$$

Where: $a_0, a_1, a_2, a_3, a_4, a_5$ and μ_t represents the intercept of earnings per share, dividend per share, return on equity, price earnings ratio and Error terms respectively. Similarly,

SP_t = Stock Prices at time t

DPS_t = Dividend Per Share at time t

EPS_t = Earnings Per Share at time t

ROE_t = Return on Equity at time t

PER_t = Price Earnings Ratio at time t

μ_t = Error Term

Therefore, the specific model for each of the hypothesis were as follows:

MODEL 1: To test the effect of earnings per share (EPS) on share prices. The model were specified as:

$$SP_t = b_0 + b_1EPS_t + \mu_t \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad 2$$

MODEL 2: To test the effect of dividend per share (DPS) on share prices. The model were specified as:

$$SP_t = c_0 + c_1DPS_t + \mu_t \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad 3$$

MODEL 3: To test the effect of return on equity on share prices.. The model were specified as:

$$SP_t = d_0 + d_1ROE_t + \mu_t \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad 4$$

MODEL 4: To test the effect of price earnings ratio on share prices. The model were specified as:

$$SP_t = e_0 + e_1PER_t + \mu_t \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad 5$$

Where: $b_0, b_1, c_0, c_1, d_0, d_1, e_0, e_1, f_0, f_1$ represent the intercepts and $SP_t, EPS_t, DPS_t, ROE_t, PER_t, \mu_t$ are as earlier defined

TECHNIQUES OF ANALYSIS

In achieving the objectives of this study, the hypotheses stated in chapter one were tested using the Ordinary Least Square (OLS) method on the regression model adopted. A panel data from all quoted deposit money bank in the Nigerian Stock Exchange were used. The signs and significance of the regression coefficients were relied upon in explaining the nature and influence of the independent variable on the dependent variable as to determine both magnitude and direction of impact. In the analysis we relied on the following statistical tools; Correlation Coefficient (r), Coefficient of Determination (R^2), probability and the student (t) test. The hypotheses are tested at 0.05 (5%) level of significance.

4. PRESENTATION AND ANALYSIS OF DATA

PRESENTATION OF DATA

TABLE 4.1: SHARE PRICES, EPS, DPS, ROE AND PER OF THE TEN BANKS BETWEEN 2007 TO 2017

SHARE PRICES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Access Bank Plc	23.00	7.07	7.60	9.50	4.80	9.05	9.60	6.60	4.85	5.87	10.45
Diamond Bank Plc	19.32	7.46	7.40	7.50	1.92	4.94	7.35	5.58	2.30	0.88	1.50
Fidelity Bank Plc	11.83	4.69	2.40	2.69	1.46	2.29	2.69	1.62	1.50	0.84	2.46
First Bank of Nig. Plc	44.70	21.11	14.05	13.73	8.90	15.72	16.30	8.80	5.13	3.35	8.80
FCMB	18.88	6.00	7.16	7.50	4.18	3.75	3.69	2.49	1.69	1.10	1.48
Guaranty Trust Bank	34.63	12.90	15.50	17.76	14.25	23.00	27.02	25.18	18.18	24.70	40.75
Skye Bank Plc	17.19	8.59	5.49	8.80	3.84	4.30	4.40	2.66	1.58	0.50	0.50
Union Bank	43.06	15.20	6.00	4.20	10.60	7.35	9.63	8.50	6.90	5.50	7.80
UBA Plc	49.50	13.15	10.80	9.15	2.59	4.56	8.90	4.30	3.38	4.50	10.30
Zenith Bank Plc	46.09	22.00	13.60	15.01	12.18	19.49	27.40	18.41	14.05	14.75	25.64

EARNINGS PER SHARE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Access Bank Plc	0.87	1.73	1.41	-0.26	0.86	0.79	1.57	1.14	1.74	2.37	1.84
Diamond Bank Plc	0.89	1.1	0.48	0.45	-1.53	1.59	2.06	1.44	0.17	0.09	0.04
Fidelity Bank Plc	0.25	0.08	0.05	0.20	0.55	0.68	0.27	0.48	0.576	0.36	0.358
First Bank of Nig. Plc	1.56	2.23	1.41	0.83	0.57	2.37	2.16	2.35	0.43	0.39	1.21
FCMB	0.61	1.23	0.05	0.49	-0.57	0.77	0.81	1.12	0.24	0.72	0.48
Guaranty Trust Bank	1.67	1.51	1.65	1.65	1.77	2.9	3.17	3.32	3.51	4.67	6.03
Skye Bank Plc	0.25	0.08	0.05	0.20	0.55	0.68	0.27	0.48	0.576	0.36	0.57
Union Bank	1.56	2.23	1.41	0.83	0.57	2.37	2.16	2.35	0.43	0.39	0.35
UBA Plc	1.23	0.05	0.49	1.59	2.06	1.44	0.17	1.53	1.79	2.04	2.22
Zenith Bank Plc	1.02	0.78	1.86	2.07	1.32	3.05	2.66	2.95	3.15	3.80	5.01

DIVIDEND PER SHARE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Access Bank Plc	0.40	0.65	0.70	0.20	0.20	0.25	0.25	0.40	0.35	0.30	0.40
Diamond Bank Plc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.20
Fidelity Bank Plc	0.32	0.60	0.03	0.14	0.20	0.55	0.68	0.27	0.48	0.56	0.36
First Bank of Nig.	0.00	0.00	0.00	0.60	0.80	1.00	1.10	0.10	0.08	0.05	0.20

Plc												
FCMB	0.05	0.08	0.05	0.20	0.55	0.68	0.27	0.48	0.57	0.36	0.42	
Guaranty Trust Bank	0.75	1.00	0.75	1.00	1.10	1.55	1.70	1.75	1.77	2.00	0.57	
Skye Bank Plc	0.08	0.05	0.20	0.55	0.68	0.27	0.48	0.61	1.23	0.05	0.49	
Union Bank	0.00	0.78	1.86	2.07	1.32	3.05	2.66	2.95	3.15	3.80	0.43	
UBA Plc	0.00	0.25	0.75	0.10	0.05	0.50	0.50	0.10	0.20	0.20	0.75	
Zenith Bank Plc	0.50	1.00	1.70	0.45	0.85	0.95	1.60	1.75	1.75	1.55	1.77	

RETURN ON EQUITY	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Access Bank Plc	0.3	0.21	0.11	0.09	0.2	0.17	0.11	0.15	0.18	0.15	0.11
Diamond Bank Plc	0.13	0.1	-0.04	0.06	-0.24	0.21	0.31	0.51	0.026	0.013	0.006
Fidelity Bank Plc	0.30	0.20	0.70	0.70	0.20	0.55	0.68	0.27	0.55	0.40	0.68
First Bank of Nig. Plc	0.05	0.00	0.00	0.00	0.55	0.68	0.27	0.48	0.61	0.00	0.10
FCMB	0.56	0.20	0.03	0.03	0.14	0.56	0.08	0.14	0.68	0.27	0.27
Guaranty Trust Bank	0.05	0.80	0.00	0.00	0.60	0.05	1.00	0.60	1.55	0.10	0.70
Skye Bank Plc	0.36	0.55	0.05	0.05	0.20	0.36	0.05	0.20	0.27	0.48	0.48
Union Bank	0.20	1.10	0.75	0.75	1.00	0.20	0.78	1.00	3.05	1.75	0.66
UBA Plc	0.05	0.68	0.20	0.20	0.55	0.05	0.25	0.55	0.50	0.61	0.50
Zenith Bank Plc	1.52	0.25	0.07	1.06	0.11	0.22	0.18	0.19	0.18	0.2	0.22

PRICE EARNINGS RATIO	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Access Bank Plc	0.04	0.24	0.19	-0.03	0.18	0.09	0.16	0.17	0.36	0.40	0.18
Diamond Bank Plc	0.05	0.15	0.06	0.06	-0.80	0.32	0.28	0.26	0.07	0.10	0.03
Fidelity Bank Plc	0.02	0.02	0.02	0.07	0.38	0.30	0.10	0.30	0.38	0.43	0.15
First Bank of Nig. Plc	0.03	0.11	0.10	0.06	0.06	0.15	0.13	0.27	0.08	0.12	0.14
FCMB	0.03	0.21	0.01	0.07	-0.14	0.21	0.22	0.45	0.14	0.65	0.32
Guaranty Trust Bank	0.05	0.12	0.11	0.09	0.12	0.13	0.12	0.13	0.19	0.19	0.15
Skye Bank Plc	0.01	0.01	0.01	0.02	0.14	0.16	0.06	0.18	0.36	0.72	1.14
Union Bank	0.04	0.15	0.24	0.20	0.05	0.32	0.22	0.28	0.06	0.07	0.04
UBA Plc	0.02	0.00	0.05	0.17	0.80	0.32	0.02	0.36	0.53	0.45	0.22
Zenith Bank Plc	0.02	0.04	0.14	0.14	0.11	0.16	0.10	0.16	0.22	0.26	0.20

Source: www.capitalassets.com.ng, Annual Reports of the Different Banks for Various Years

TEST OF HYPOTHESIS ONE

STEP ONE: Statement of the hypothesis in both null and alternative forms.

The hypothesis is restated in both Null and Alternative forms as follows:

H₀: Earnings per share does not have positive and significant impact on share prices of Nigerian banks.

H_a: Earnings per share does not have positive and significant impact on share prices of Nigerian banks

STEP TWO: Analysis of Regression Result of the Impact of earnings per share on share prices of Nigerian banks.

Table A2 and A3 in the appendix presents the fixed effect and random effect respectively which formed the basis for the Hausman Test. The Hausman Test result shows that, the probability value is 0.2468. Hence, following the rule of thumb that, if the probability value is less than 0.05, then fixed effect is appropriate otherwise random effect, the random effect becomes appropriate since $0.2468 > 0.05$. The random effect result is shown as:

TABLE 3: CROSS-SECTION RANDOM EFFECT

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:46

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.322700	0.898526	4.810880	0.0000
EPS	5.239087	0.538426	9.730368	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.675501	Mean dependent var	10.94300	
Adjusted R-squared	0.642724	S.D. dependent var	10.29793	
S.E. of regression	6.155341	Akaike info criterion	6.567157	
Sum squared resid	3750.934	Schwarz criterion	6.837205	
Log likelihood	-350.1936	Hannan-Quinn criter.	6.676690	
F-statistic	20.60861	Durbin-Watson stat	2.098624	
Prob(F-statistic)	0.000000			

Source: Researcher's E-View Result

The E-view result in Table 3 shows that earnings per share positively and significantly affect share prices of Nigerian banks with a magnitude of 5.239. The t-value of 9.73 and probability value of 0.0000 at 0.05 significant value shows that it takes less than 0.001 probability to obtain the t-value. In overall, mathematically and statistically, the variable is valuable and not equal to zero in direction and size.

The R^2 is the summary statistics that shows the extent at which the independent variables explains the dependent variables. From the table, the R^2 of 0.68 shows that 68% variation in the share prices of the banks studied was explained by earnings per share and the remaining 32% explained by variables not included in the model while the adjusted R^2 , a measure of degree of variation if more variables are introduced is also 64%.

The F-statistics is a measure of the overall significant of the model. The F-value of 20.60861 with P-value of 0.0000 is significant at 0.05.

Decision: Thus, we reject the null hypothesis and accept the alternate hypothesis that earnings per share have positive and significant impact on share prices of Nigerian banks.

TEST OF HYPOTHESIS TWO

STEP ONE: Statement of the hypothesis in both null and alternative forms.

The hypothesis is restated in both Null and Alternative forms as follows:

H₀: Dividends per share does not have positive and significant impact on share prices of Nigerian banks

H_a: Dividend per share have positive and significant impact on share prices of Nigerian banks

STEP TWO: Analysis of Regression Result of the Impact of dividend per share on share prices of Nigerian banks.

Table A6 and A7 in the appendix presents the fixed effect and random effect respectively which formed the basis for the Hausman Test. The Hausman Test result shows that, the probability value is 0.0045. Hence, following the rule of thumb that, if the probability value is less than 0.05, then fixed effect is appropriate otherwise random effect, the fixed effect becomes appropriate since $0.0045 < 0.05$. The fixed effect result is shown as:

TABLE 4: CROSS-SECTION FIXED EFFECTS

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:52
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.470899	1.064359	7.958684	0.0000
DPS	3.664100	1.078416	3.397669	0.0010

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.731459	Mean dependent var	10.94300
Adjusted R-squared	0.774030	S.D. dependent var	10.29793
S.E. of regression	8.147543	Akaike info criterion	7.127949
Sum squared resid	6571.864	Schwarz criterion	7.397998
Log likelihood	-381.0372	Hannan-Quinn criter.	7.237482
F-statistic	7.512988	Durbin-Watson stat	2.387291
Prob(F-statistic)	0.000000		

Source: Researcher's E-View Result

The E-view result in Table 4 shows that dividend per share positively and significantly affect share prices of Nigerian banks with a magnitude of 3.664. The t-value of 3.398 and probability value of 0.0010 at 0.05 significant value shows that it takes less than 0.001 probability to obtain the t-value. In overall, mathematically and statistically, the variable is valuable and not equal to zero in direction and size.

The R^2 is the summary statistics that shows the extent at which the independent variables explains the dependent variables. From the table, the R^2 of 0.73 shows that 73% variation in the share prices of the banks studied was explained by dividends per share and the remaining 27% explained by variables not included in the model while the adjusted R^2 , a measure of degree of variation if more variables are introduced is also 77%.

The F-statistics is a measure of the overall significant of the model. The F-value of 7.513 with P-value of 0.0000 is significant at 0.05.

Decision: Thus, we reject the null hypothesis and accept the alternate hypothesis that dividend per share have positive and significant impact on share prices of Nigerian banks.

TEST OF HYPOTHESIS THREE

STEP ONE: Statement of the hypothesis in both null and alternative forms.

The hypothesis is restated in both Null and Alternative forms as follows:

H₀: Return on equity does not have positive and significant impact on share prices of Nigerian banks

H_a: Return on equity have positive and significant impact on share prices of Nigerian banks

STEP TWO: Analysis of Regression Result of the Impact of Return on Equity on share prices of Nigerian banks.

Table A10 and A11 in the appendix presents the fixed effect and random effect respectively which formed the basis for the Hausman Test. The Hausman Test result shows that, the probability value is 0.3890. Hence, following the rule of thumb that, if the probability value is less than 0.05, then fixed effect is appropriate otherwise random effect, the random effect becomes appropriate since $0.3890 > 0.05$. The random effect result is shown as:

TABLE 5: CROSS-SECTION RANDOM EFFECTS

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:56

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.13220	1.114874	9.088204	0.0000
ROE	2.134956	1.999753	1.067610	0.0083
Effects Specification				
Cross-section random (dummy variables)				
R-squared	0.772388	Mean dependent var	10.94300	
Adjusted R-squared	0.708993	S.D. dependent var	10.29793	
S.E. of regression	8.560344	Akaike info criterion	7.226797	
Sum squared resid	7254.670	Schwarz criterion	7.496845	
Log likelihood	-386.4739	Hannan-Quinn criter.	7.336330	
F-statistic	5.874086	Durbin-Watson stat	2.463952	
Prob(F-statistic)	0.000001			

Source: Researcher's E-View Result

The E-view result in Table 5 shows that return on equity positively and significantly affect share prices of Nigerian banks with a magnitude of 2.135. The t-value of 1.0676 and probability value of 0.2883 at 0.05 significant value shows that it takes more than 0.001 probability to obtain the t-value. In overall, mathematically and statistically, the variable is valuable and not equal to zero in direction and size.

The R^2 is the summary statistics that shows the extent at which the independent variables explains the dependent variables. From the table, the R^2 of 0.77 shows that 77% variation in the share prices of the banks studied was explained by return on equity and the remaining 23% explained by variables not included in the model while the adjusted R^2 , a measure of degree of variation if more variables are introduced is also 71%.

The F-statistics is a measure of the overall significant of the model. The F-value of 5.874 with P-value of 0.00001 is significant at 0.05.

Decision: Thus, we reject the null hypothesis and accept the alternate hypothesis that return on equity have positive and significant impact on share prices of Nigerian banks.

TEST OF HYPOTHESIS FOUR

STEP ONE: Statement of the hypothesis in both null and alternative forms.

The hypothesis is restated in both Null and Alternative forms as follows:

H₀: Price earnings ratio does not have positive and significant impact on share prices of Nigerian banks

H_a: Price earnings ratio have positive and significant impact on share prices of Nigerian banks

STEP TWO: Analysis of Regression Result of the Impact of Price earnings ratiioon share prices of Nigerian banks.

Table A14 and A15 in the appendix presents the fixed effect and random effect respectively which formed the basis for the Hausman Test. The Hausman Test result shows that, the probability value is 0.2741. Hence, following the rule of thumb that, if the probability value is less than 0.05, then fixed effect is appropriate otherwise random effect, the random effect becomes appropriate since $0.2741 > 0.05$. The random effect result is shown as:

TABLE 6: CROSS-SECTION RANDOM EFFECTS

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:58
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.51951	1.111794	11.26064	0.0000
PER	-9.372403	4.565503	-2.052874	0.0427

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.791083	Mean dependent var	10.94300
Adjusted R-squared	0.729577	S.D. dependent var	10.29793
S.E. of regression	8.431885	Akaike info criterion	7.196557
Sum squared resid	7038.571	Schwarz criterion	7.466605
Log likelihood	-384.8106	Hannan-Quinn criter.	7.306090
F-statistic	6.358384	Durbin-Watson stat	2.338685
Prob(F-statistic)	0.000000		

Source: Researcher's E-View Result

The E-view result in Table 6 shows that price earnings ratio had negative and insignificant effect on share prices of Nigerian banks with a magnitude of -9.372. The t-value of -2.053 and probability value of 0.0427 at 0.05 significant value shows that it takes more than 0.001 probability to obtain the t-value. In overall, mathematically and statistically, the variable is valuable and not equal to zero in direction and size.

The R^2 is the summary statistics that shows the extent at which the independent variables explains the dependent variables. From the table, the R^2 of 0.79 shows that 79% variation in the share prices of the banks studied was explained by price earnings ratio and the remaining 21% explained by variables not included in the model while the adjusted R^2 , a measure of degree of variation if more variables are introduced is also 73%.

Decision: Therefore, we reject the alternate hypothesis and accept the null hypothesis that price earnings ratio does not have positive and significant impact on share prices of Nigerian banks.

5. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY OF FINDINGS

1. Findings from hypothesis one shows that earnings per share have positive and significant impact on share prices of Nigerian banks. This implies that all things being equal, an increase on earnings per share will lead to an increase on the prices of shares and vice versa.
2. Findings from hypothesis two shows that dividend per share have positive and significant impact on share prices of Nigerian banks. This implies that all things being equal, an increase on dividend per share will lead to an increase on the prices of shares and vice versa.
3. Findings from hypothesis three shows that returns on equity have positive and significant impact on share prices of Nigerian banks. This implies that all things being equal, an increase on return on equity will lead to an increase on the prices of shares and vice versa.
4. Findings from hypothesis four shows that price earnings ratio have negative and insignificant impact on share prices of Nigerian banks. This implies that all things being equal, an increase on price earnings ratio will lead to a non significant decrease on the prices of shares and vice versa.

CONCLUSIONS

The main thrust of the study was to determine the effect of corporate performance on share prices of Nigerian banks. The results showed a high positive correlation between corporate performance and share prices. Therefore share prices can be considered as an indicator of corporate performance of Nigeria banks.

REFERENCES

- Aduda, J., & Chemarum, C. (2010). Market Reaction to Stocks Splits: Empirical Evidence from the Nairobi Stock Exchange. *African Journal of Business & Management (AJBUMA)*, 1: 165 - 184.
- Ahmed, K. M., Ashraf, A. and Ahmed .A (2006). Testing weak form of efficiency for Indian Stock Markets, *Economic and Political Weekly*, 7, 46-56
- Almumani, A.M., (2014), Determinants of Equity Share Prices of the Listed Banks in Amman Stock Exchange: Quantitative Approach, *International Journal of Business and Social Science*, 5(1): 71-80.
- Al-Omar, H. and Al-Mutairi, A. (2008), The Relationship between the Kuwaiti Banks Share Prices and Their Attributes, *Scientific Journal of King Faisal University (Humanities and Management Sciences)*, 9(1): 325-338.

- Al-Qenae, R., Li, C. & Wearing, B. (2002). The Information Content of Earnings on Stock Prices: The Kuwait Stock Exchange. *Multinational Finance Journal*, 16 (3&4), 197-221.
- AL-Shubiri, F., (2010), Analysis the Determinants of Market Stock Price Movements: An Empirical Study of Jordanian Commercial Banks, *International Journal of Business & Management*, 5 (10):137-143.
- Amidu, M. and Abor, J. (2006), Determinants of dividend payout ratios in Ghana, *The Journal of Risk Finance*, (7)2: 136-145.
- Anggraini, R. R; Setiawati, L, and Desembriarto, D. (2004).The Role of Fundamental Analysis and Financial Statements on Economic Crisis in Indonesia.*Journal of National Symposium on Accounting*. Indonesia. p. 218.
- Athansasoglou, P., Brissimis, S., Delis, M., "Bank-Specific, Industry-Specific and Macroeconomic Determinants of Bank Profitability", *Journal of International Financial Markets, Institutions and Money*", 121-136.
- Berger, A. N., Demirgüç-Kunt, A. Levine, R., Haubrich, J. G., (2004). Bank Concentration and Competition: An Evolution in the Making. *Journal of Money, Credit and Banking*, 36, 433- 452.
- Berger, A. N., Mester, L. J. (2003). "Explaining the dramatic changes in the performance of US banks: Technological change, deregulation, and dynamic changes in competition", *Journal of Financial Intermediation*, 12, 57-95.
- Bhana, N. (2002). The Share Price Reaction on the Johannesburg Stock Exchange for Special (Extra) Dividend Announcements. Retrieved on November 8, 2015 from <http://www.finance24.com>
- Chandra, P. (2004). *Investment Analysis and Portfolio Management*. New Delhi: McGraw-Hill
- Chaudhuri, K. & Koo (2001). Volatility of stock return: Importance of Economic Fundamentals. *Economic and Political Weekly*, 3852-3856
- Chaudhuri, K. & Smiles, S. (2004). Stock Market and Aggregate Economic Activity: Evidence from Australia. *Applied Financial Economics*, (14), 121-129.
- Chaudhuri, K. and Wu Y (2004). Mean reversion in stock prices: Evidence from emerging markets, *Managerial Finance*, 30: 22-37

- Chen, G., Firth, M. & Krishnan, G. (2001). Earnings Forecast Errors in IPO Prospectuses and their Association with Initial Stock Returns. *Journal of Multinational Financial Management*, 11, 225-240.
- Dimitrios, T. (2003). Macroeconomic Factors and Stock Prices in the Emerging Cypriot Equity Market. *Managerial Finance*, 29(4), 87-92.
- Docking, D. S. & Koch, P. D. (2005). Sensitivity of Investor Reaction to Market direction and Volatility: Dividend Change Announcements. *Journal of Financial Research*, 28 (1), 21-41.
- Efobi, U. (2010). The Efficient Market Hypothesis: Realities from the Nigerian Stock Market. *Global Journal of Finance and Management* 2 (2): 321-331.
- Emeni, F. K and Asein E.I (2003). Fundamental analysis of selected firms on the Nigerian Stock Exchange. *Nigeria Journal of Business Administration*, 5(1), 37-54.
- Ewah, S.O.E., Esang, A.E and Bassey J.U (2008). Appraisal of capital market efficiency on economic growth in nigeria, *International Journal of Business and Management*, 3(12), 219-225
- Gitman, J.L and Zutter, J.C. (2012), Principles of Managerial Finance, Prentice Hall, 13ed, p 287
- Hammoudeh, S. Aleisa, E. (2004). Dynamic Relationships among GCC Stock Markets and NYMEX Oil Future. *Contemporary Economic Policy*, 22(2), 250-269.
- Hartono, J. (2004). The Recency Effect of Accounting information. *GadjahMada International Journal of Business*. 6 (1) 85-116.
- Hasheesh, A. (2003). "The Role of Published Accounting Information in Predicting of Stock Prices", An Applied Study on Listed Corporations on Amman Stock Exchange, Al Basa'er Magazine/ Petra University, Amman, issue 2.
- Hobarth, M. L. (2006). Modeling the relationship between financial indicators and company performance - An empirical Study for US listed companies. France: Dissertation Vienna University of Economics and Business Administration.
- Ibrahim, M. H. (2003). Macroeconomic Forces and Capital Market Integration: AVAR Analysis for Malaysia. *Journal of the Asia Pacific Economy*, 8 (1), 19-40.
- Johnson, R. & Soenen, L. (2003). 'Indicators of successful companies'. *European Management Journal*, 21(3): 364-369.

- Jorgensen, B., Li, J. & Sadka, G. (2011). Earnings dispersion and aggregate stock returns, *Journal of Accounting and Economics*, 1-20
- Kennedy, S. J. (2003). Analysis of the influence of ROA, ROE, EPS, profit margin, asset turnover, leverage, stock return to the DER: Studies on the stocks included in the LQ-45 in Jakarta stock exchange. Graduate Thesis in Management Science FEUI.
- Khan, A. and Ikram, S. (2012). "Testing the Efficiency of Indian Stock Market Vis-À-Vis Merger and Acquisitions - A Study of Indian Banking Sector". *International Journal of Latest Trends in Finance & Economic Sciences*, 2(2):155-163
- Kukah S.T., Amoo, B. A. & Joseph R. C (2006). Analytical Framework and Empirical Analysis of Transaction Costs and Efficiency in Nigerian Capital Market. CBN: Research and Statistics Department.
- Lee, B. (2006). An Empirical Evaluation of Behavioral Models Based on Decompositions of Stock Prices. *Journal of Business*, 79(1), 393-427.
- Maku, O. E. and Atanda, A. A. (2010). Determinants of stock market performance in Nigeria: Long run analysis. *Journal of Management and Organisational Behaviour*, 1(3), 1-16.
- Malkiel, B. (2003). The efficient market hypothesis and its critics. CEPS working paper No.91
- Maysami, R. C. & Koh, T. S. (2000). A vector error correction model of the Singapore stock market. *International Review of Economics and Finance*. 9, 79-96.
- Menaje, P. M. (2012). Impact of Selected Financial Variables on Share Price of Publicly Listed Firms in the Philippines, *American International Journal of Contemporary Research*, 2(9), 98-104.
- Mishra, K. (2009). Indian Capital Market-Revisiting Market Efficiency. *Indian Journal of Capital Markets*. 2, 30-34.
- Moncla, B. and Arents-Gregory, M. (2003). 'Corporate performance management: turning strategy into action', *DM Review*, Retrieved from www.dmreview.com on December 11, 2015.
- Naj, M & Rahman, H. (1991). Stock market volatility and macroeconomic variables: International evidence. *Journal of multinational financial management* 1(3) 51-66
- Nzotta, S. M & Okereke, E. J. (2009). Financial deepening and economic development of Nigeria: An empirical investigation. *African Journal of Accounting, Economics, Finance and Banking Research* .5 (5).

- Okpara, G. (2010). Stock market prices and the random Walk Hypothesis: further evidence from Nigeria. *Journal of economics and international finance*. 2. 49-57.
- Olowe, R. A. (1999). Weak Form Efficiency of the Nigerian Stock Exchange Market: Further Evidence. *African Development Review*, 11(1): 54-68.
- Onaolapo, A. A. &Kajola, S. O. (2010). Capital Structure and Firm Performance: Evidence from Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 2(5): 70-82
- Ralph I. U &Eriki, P. O. (2001). Inflation and Stock Price Behavior: Evidence from Nigerian Stock Market. *Journal of Financial Management & Analysis*, 20(14),1-10.
- Reber, B. & Caroline F. (2006).Explaining Mispricing of Initial Public Offerings.*Applied Financial Economics*, 16(18) 1339 – 1353.
- Skousen, K., Stice, J. &Stice, E. (2007).*Intermediate Accounting*, (16th ed.) Thomson South-Western
- Somoye, R. O. C., Akintoye, I. R. and Oseni, J. E. (2009). Determinants of Equity Prices in the Stock Markets, *International Research Journal of Finance and Economics*, 30: 177-189.
- Srinivasan, P.(2012). Determinants of Equity Share Prices in India: A Panel Data Approach, *The Romanian Economic Journal*,205.
- Subasi, M.,(2011). Earnings Dispersion and the Stock Market Reaction to Aggregate Earnings News.Retrieved on December 15, 2015 from <http://ssrn.com/abstract=1837580>.
- Sudiyatno, B. Puspitasari, E. &Kartika, A. (2012). The Company's Policy, Firm Performance, and Firm Value: An Empirical Research on Indonesia Stock Exchange, *American International Journal of Contemporary Research*, 2(12), 30-40.
- Sufian, F., Chong, R. R. (2008), "Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Philippines", *Asian Academy of Management Journal of Accounting and Finance*, 4(2): 91-112
- Sunde, T. and Sanderson, A. (2009).A Review of the Determinants of Share Prices.*Journal of Social Sciences*, 5(3): 188-192
- Uddin, M. B. (2009), Determinants of market price of stock: A study on bank leasing and insurance companies of Bangladesh, *Journal of Modern Accounting and Auditing*, 5(7): 1-7.
- Zeitun, R. &Tian, G. G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 1(4): 3

Zhao, Xing-Qiu (1999). Stock prices, inflation and output: Evidence from China *Applied Economics Letters*, 6(8), 509-511.

APPENDIX

Table A2: Fixed Effect Result

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:42

Sample: 2007 -2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.322700	0.898526	4.810880	0.0000
EPS	5.239087	0.538426	9.730368	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.675501	Mean dependent var	10.94300
Adjusted R-squared	0.642724	S.D. dependent var	10.29793
S.E. of regression	6.155341	Akaike info criterion	6.567157
Sum squared resid	3750.934	Schwarz criterion	6.837205
Log likelihood	-350.1936	Hannan-Quinn criter.	6.676690
F-statistic	20.60861	Durbin-Watson stat	2.098624
Prob(F-statistic)	0.000000		

Table A3: Random Effect Result

Dependent Variable: SP

Method: Panel EGLS (Cross-section random effects)

Date: 10/07/18 Time: 07:43

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.403003	2.288647	1.923845	0.0570
EPS	5.175537	0.535623	9.662643	0.0000

Effects Specification		S.D.	Rho
Cross-section random		6.659853	0.5393
Idiosyncratic random		6.155341	0.4607

Weighted Statistics			
R-squared	0.462880	Mean dependent var	2.937563
Adjusted R-squared	0.457907	S.D. dependent var	8.373375
S.E. of regression	6.165063	Sum squared resid	4104.865
F-statistic	93.07242	Durbin-Watson stat	1.922707
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.251186	Mean dependent var	10.94300
Sum squared resid	8655.665	Durbin-Watson stat	0.911825

Table A4: Hausman Test Result

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.341443	1	0.2468

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
EPS	5.239087	5.175537	0.003011	0.2468

Table A5: Cross-section random effects test

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:46

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.322700	0.898526	4.810880	0.0000
EPS	5.239087	0.538426	9.730368	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.675501	Mean dependent var	10.94300
Adjusted R-squared	0.642724	S.D. dependent var	10.29793
S.E. of regression	6.155341	Akaike info criterion	6.567157
Sum squared resid	3750.934	Schwarz criterion	6.837205
Log likelihood	-350.1936	Hannan-Quinn criter.	6.676690
F-statistic	20.60861	Durbin-Watson stat	2.098624
Prob(F-statistic)	0.000000		

Random effect is a more appropriate model

Table A6: Fixed effect result

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:50

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.470899	1.064359	7.958684	0.0000
DPS	3.664100	1.078416	3.397669	0.0010

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.731459	Mean dependent var	10.94300
Adjusted R-squared	0.774030	S.D. dependent var	10.29793
S.E. of regression	8.147543	Akaike info criterion	7.127949
Sum squared resid	6571.864	Schwarz criterion	7.397998
Log likelihood	-381.0372	Hannan-Quinn criter.	7.237482
F-statistic	7.512988	Durbin-Watson stat	2.387291
Prob(F-statistic)	0.000000		

Table A7: Random Effect

Dependent Variable: SP
 Method: Panel EGLS (Cross-section random effects)
 Date: 10/07/18 Time: 07:50
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.795736	1.835734	4.791401	0.0000
DPS	3.182632	1.064999	2.988390	0.0035

Effects Specification

	S.D.	Rho
Cross-section random	4.743573	0.2532
Idiosyncratic random	8.147543	0.7468

Weighted Statistics

R-squared	0.072025	Mean dependent var	5.032320
Adjusted R-squared	0.063433	S.D. dependent var	8.689778
S.E. of regression	8.409654	Sum squared resid	7638.007
F-statistic	8.382464	Durbin-Watson stat	2.071782
Prob(F-statistic)	0.004586		

Unweighted Statistics

R-squared	-0.000412	Mean dependent var	10.94300
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Sum squared resid 11563.93 Durbin-Watson stat 1.368417

Table A8: Hausman Test

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.060616	1	0.0045

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DPS	3.664100	3.182632	0.028759	0.0045

Table A9: CROSS-SECTION RANDOM EFFECTS

Dependent Variable: SP
 Method: Panel Least Squares
 Date: 10/07/18 Time: 07:52
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.470899	1.064359	7.958684	0.0000
DPS	3.664100	1.078416	3.397669	0.0010

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.731459	Mean dependent var	10.94300
Adjusted R-squared	0.774030	S.D. dependent var	10.29793
S.E. of regression	8.147543	Akaike info criterion	7.127949

Sum squared resid	6571.864	Schwarz criterion	7.397998
Log likelihood	-381.0372	Hannan-Quinn criter.	7.237482
F-statistic	7.512988	Durbin-Watson stat	2.387291
Prob(F-statistic)	0.000000		

***Fixed Effect is more appropriate**

Table A10: Fixed effect result

Dependent Variable: SP
 Method: Panel Least Squares
 Date: 10/07/18 Time: 07:54
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.13220	1.114874	9.088204	0.0000
ROE	2.134956	1.999753	1.067610	0.0083

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.772388	Mean dependent var	10.94300
Adjusted R-squared	0.708993	S.D. dependent var	10.29793
S.E. of regression	8.560344	Akaike info criterion	7.226797
Sum squared resid	7254.670	Schwarz criterion	7.496845
Log likelihood	-386.4739	Hannan-Quinn criter.	7.336330
F-statistic	5.874086	Durbin-Watson stat	2.463952
Prob(F-statistic)	0.000001		

Table A11: Random Effect result

Dependent Variable: SP
 Method: Panel EGLS (Cross-section random effects)
 Date: 10/07/18 Time: 07:55
 Sample: 2007 2017

Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.22203	2.251515	4.540068	0.0000
ROE	1.898416	1.980809	0.958404	0.3400
Effects Specification				
			S.D.	Rho
Cross-section random			6.194556	0.3437
Idiosyncratic random			8.560344	0.6563
Weighted Statistics				
R-squared	0.008453	Mean dependent var		4.208813
Adjusted R-squared	-0.000728	S.D. dependent var		8.547003
S.E. of regression	8.550113	Sum squared resid		7895.278
F-statistic	0.920739	Durbin-Watson stat		2.267592
Prob(F-statistic)	0.339424			
Unweighted Statistics				
R-squared	-0.001745	Mean dependent var		10.94300
Sum squared resid	11579.34	Durbin-Watson stat		1.546138

Table A12: Hausman Test

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.741984	1	0.3890

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ROE	2.134956	1.898416	0.075407	0.3890

Table A13: Cross-section random effects test equation:

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:56

Sample: 2007 2017

Periods included: 11

Cross-sections included: 10

Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.13220	1.114874	9.088204	0.0000
ROE	2.134956	1.999753	1.067610	0.0083

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.772388	Mean dependent var	10.94300
Adjusted R-squared	0.708993	S.D. dependent var	10.29793
S.E. of regression	8.560344	Akaike info criterion	7.226797
Sum squared resid	7254.670	Schwarz criterion	7.496845
Log likelihood	-386.4739	Hannan-Quinn criter.	7.336330
F-statistic	5.874086	Durbin-Watson stat	2.463952
Prob(F-statistic)	0.000001		

* **Random Effect is more appropriate**

Model 4

Table A14: Fixed Effect Result

Dependent Variable: SP

Method: Panel Least Squares

Date: 10/07/18 Time: 07:57

Sample: 2007 2017

Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.51951	1.111794	11.26064	0.0000
PER	-9.372403	4.565503	-2.052874	0.0427
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.791083	Mean dependent var		10.94300
Adjusted R-squared	0.729577	S.D. dependent var		10.29793
S.E. of regression	8.431885	Akaike info criterion		7.196557
Sum squared resid	7038.571	Schwarz criterion		7.466605
Log likelihood	-384.8106	Hannan-Quinn criter.		7.306090
F-statistic	6.358384	Durbin-Watson stat		2.338685
Prob(F-statistic)	0.000000			

Table A15: Random Effect Result

Dependent Variable: SP
 Method: Panel EGLS (Cross-section random effects)
 Date: 10/07/18 Time: 07:58
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.70468	2.052086	6.191101	0.0000
PER	-10.47320	4.453184	-2.351845	0.0205
Effects Specification				
			S.D.	Rho
Cross-section random			5.480541	0.2970
Idiosyncratic random			8.431885	0.7030
Weighted Statistics				

R-squared	0.048635	Mean dependent var	4.604901
Adjusted R-squared	0.039826	S.D. dependent var	8.612792
S.E. of regression	8.439541	Sum squared resid	7692.393
F-statistic	5.521141	Durbin-Watson stat	2.126943
Prob(F-statistic)	0.020605		

Unweighted Statistics

R-squared	0.073323	Mean dependent var	10.94300
Sum squared resid	10711.62	Durbin-Watson stat	1.527433

Table A16: Hausman Test result

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.196236	1	0.2741

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
PER	-9.372403	-10.473198	1.012968	0.2741

Table A17: Cross-section random effects test

Dependent Variable: SP
 Method: Panel Least Squares
 Date: 10/07/18 Time: 07:58
 Sample: 2007 2017
 Periods included: 11
 Cross-sections included: 10
 Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.51951	1.111794	11.26064	0.0000

PER	-9.372403	4.565503	-2.052874	0.0427
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Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.791083	Mean dependent var	10.94300
Adjusted R-squared	0.729577	S.D. dependent var	10.29793
S.E. of regression	8.431885	Akaike info criterion	7.196557
Sum squared resid	7038.571	Schwarz criterion	7.466605
Log likelihood	-384.8106	Hannan-Quinn criter.	7.306090
F-statistic	6.358384	Durbin-Watson stat	2.338685
Prob(F-statistic)	0.000000		

*** Random Effect is more appropriate**