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THE-EFFECTS-OF-MACROECONOMIC-FACTORS-ON-THE-NIGERIAN STOCK EXCHANGE

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ABSTRACT

The main objective of this paper is to analysis the impact of macroeconomic variables on the stock market of Nigeria. For this purpose; we have taken the data from 1986 to 2014 and applied the various tests on it. The results of analysis in this paper are showing that some variables are negative impacts on the stock exchange and some variables are positive impacts on the stock market of the Nigeria. This paper analyzed that stock market has the vital role in the economic development of economy.

KEYWORDS

Macroeconomic variables, Nigeria stock exchange, Development and Economy.

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INTRODUCTION

Robust of studies proved that macroeconomics variables have huge impact on economic transaction like capital market trading. According to Chen (1986) there had not found any satisfactory theory about the association between macroeconomics variables and financial markets. In free economy, it is seen that macroeconomic variables have the decisive role for development of economy. All the results are proving that macroeconomic variables effect on the stock exchange may be positive and may be negative. There is significant positive relationship between opportunity cost and equity market. Most of studies proved that changes in exchange rate will affect the stock prices on Nigeria stock exchange.

History of Nigeria stock exchange

First time the Nigeria stock exchange was established in 1960 and it was famous with the name of Lagos stock exchange. Nigeria stock exchange is known as the third largest stock exchange of Africa. There are 180 companies are listed here. In 1961, there were 19 companies were listed here. The trading volume of Nigeria stock exchange were 80,500 and it was raised till 250000 ponds. There are a lot of branches of companies of Nigeria in the established cities of the country .The stock exchange of Nigeria was regulated by the exchange commission. Nigeria stock exchange has the automated trading system. The ATS are being utilized for the purposes of trading. All the dealers are operating the system through server. The trading time of stock exchange started at 9.30 to 2.30. There are almost 30 branches across the country.

Stock exchange

Stock exchange is known as the backbone of the economy. For the healthy economy, there is need have the healthy stock exchange. Stock exchange is considered the best way of the trading across the world. New York stock exchange is the best stock exchange in the world because E trading are adopted by the New York stock exchange first time. E banking is the known as the best way of the trading in the world. Most of the studies have proved that stock market has the crucial role for development of the economy. It is act as the channel between internal lenders and surplus. It is very interesting topic to discuses that reason of the volatility. According to Joseph, 2002 there is association between exchange rate and stock market of Nigeria. Some studies have proved that exchange rate have also influenced on the import and export. Exchange rate influence on the foreign operations.

LITERATURE REVIEW

Apergis N and Eleftheriou S, Viewed that impact of macroeconomic variables on the stock exchange of Spain. For this purpose, employed the GARCh model .the results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[1].

Arango L E, Gonzalez A and Posada C E, Observed that impact of macroeconomic variables on the stock exchange of Italy. For this purpose, employed the GARCh model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[2].

Balvers J J, Cosimano T F and MacDonald B, Showed that impact of macroeconomic variables on the stock exchange of Germany. For this purpose, employed the Arch model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[3].

Bartram S M, Observed that impact of macroeconomic variables on the stock exchange of Turkey. For this purpose, employed the OLS model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[4].

Bohl M T, Siklos P L and Werner T, examined that impact of macroeconomic variables on the stock exchange of Italy. For this purpose, employed the multi regression equation. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[5].

Campbell J Y and Shiller R J, viewed that impact of macroeconomic variables on the stock exchange of Russia. For this purpose, employed the ECM model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[6].

Canova F and de Nicolo G, analysed that impact of macroeconomic variables on the stock exchange of Poland. For this purpose, employed the VECM model. The result of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[7].

Chan B and Lo, W, examined that impact of macroeconomic variables on the stock exchange of Sweden. For this purpose, employed the unit root model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[8].

Chen N F, Roll R and Ross S, observed that impact of macroeconomic variables on the stock exchange of Hungary. For this purpose, employed the OLS model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[9].

Czaja M, Scholz H and Wilkens M, analyzed that impact of macroeconomic variables on the stock exchange of Singapore. For this purpose, employed the GARCH model. The results of this paper is showing that there is significant negative association between macroeconomic variables and stock prices[10].

PROBLEM STATEMENT

Impact of macroeconomic variables on the stock prices of the Nigeria.

OBJECTIVES

The main purpose of this study is to analysis the relationships between major macroeconomic variables and stock market of Nigeria and also found out that there exists long relationship or short run relationship.

METHODOLOGY

We use the ordinary least square model for determine the association between Nigeria stock prices and macroeconomic variables. In this paper stock prices of Nigeria is dependent variable and macroeconomic economic variables are the independent variables. Here prices of Nigeria stock exchange are proxing by all share prices index and values of interest rate and interest rate are proxing by all-composite price index (Table No.1).

For the proper results, we have taken the data from 1986 to 2014. It is seen that in 1986 the prices of all share index were increase and in 2014 the prices were 4.1328. Within the similar periods the values of the national interest rate were 11.76% to 24.91%. In 2014 the all composite price index were raised to 2.0 and values of productivity were declined from 160.87 to 139. After the results of impact of macroeconomic variables and share prices of Nigeria, we accept the null hypothesis it is showing that there is not significant positive relationship between macroeconomic variables and stock prices (Table No.2). In Table No.3 and Figure No.1 the results of co- integration are showing that there is no co- integration in the time series.

Table No.1: Price index

S.No	Year	All-share price index	Interest rate	All composite price index	Productivity index
1	1986	127.4	11.76	2	160.87
2	1987	163.9	13	13.8	162.97
3	1988	190.8	19.3	9.8	169.29
4	1989	233.7	17.7	61.3	179.36
5	1990	325.4	24.7	44.8	183.97
6	1991	513.9	27.8	36.6	162.8
7	1992	784	20.9	23.08	179
8	1993	1107.7	31.3	48.82	169.6
9	1994	1543.9	36.08	61.4	145.6
10	1995	2206	22	76.9	144.3
11	1996	5092.3	20.78	51.7	139.3
12	1997	6992.2	20.87	14.4	138.8
13	1998	6440.6	23.33	10.3	144.3
14	1999	5672.8	21.35	11.8	133.2
15	2000	5266.5	27.18	0.3	137.8
16	2001	8112	21.56	14.6	138.3
17	2002	10963.2	21.35	16.6	146.3
18	2003	12137.8	30.18	12.2	149
19	2004	20128.8	22.89	23.9	149
20	2005	23844.6	20.83	10.08	145.8
21	2006	24085.9	19.48	11.62	145.8
22	2007	33189.4	18.8	8.62	145.8
23	2008	57990.3	18.37	6.7	89.8
24	2009	31450.9	21.16	15.2	91.2
25	2010	20827.3	23.8	12.8	117.9
26	2011	24770.6	21.87	11.9	118.3
27	2012	20731	23.22	10.4	1122.2
28	2013	28078.82	24.62	13	136.8
29	2014	41329.18	24.8	9	139

Table No.2: Stock prices

Dependent Variable: stock prices Method: Least Squares Sample: 1985 2013 Included observations: 28					
S.No	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
1	C	79780.63	16509.35	4.832456	0.0002
2	INTR	-66.7778	413.3329	-0.1616	0.874
3	INPRIX	-149.508	110.9929	-1.348	0.1902
4	INFL	-425.884	94.27733	-4.51735	0.0002
5	R-squared	0.663652 Mean dependent var	13596.38	---	---
6	Adjusted R-squared	0.611289 S.D. dependent var	14807.28	---	---
7	S.E. of regression	10351.46 Akaike info criterion	21.45509	---	---
8	Sum squared resid	2.68E+09 Schwarz criterion	21.64369	---	---
9	Log likelihood	-307.0988 Hannan-Quinn criter	21.51416	---	---
10	F -statistic	10.764523 Durbin-Watson stat	2.599477	---	---
11	Prob(F-statistic)	0.0002	---	---	---

Table No.3: The results of co- integration

		Trace	**0.05**		
S.No	**No. of CE(s)**	**Eigen value**	**Statistic**	**Critical Value**	**Prob.****
1	None	0.036928	1.015975	3.841467	0.3136
2	Trace test indicates no co-integration at the 0.05 level	---	---	---	---
3	* denotes rejection of the hypothesis at the 0.05 level	---	---	---	---
4	**MacKinnon-Haug-Michelis (1999) p-values	---	---	---	---
5	Unrestricted Co-integration Rank Test (Maximum Eigen value)	---	---	---	---
6	Hypothesized	Max-Eigen	0.05	---	---
7	No. of CE(s)	Eigen value	Statistic	Critical Value	Prob.**
8	None	0.036928	1.015975	3.841467	0.3136
9	Max-eigen value test indicates no co-integration at the 0.05 level	---	---	---	---
10	* denotes rejection of the hypothesis at the 0.05 level	---	---	---	---
11	**MacKinnon-Haug-Michelis (1999) p-values	---	---	---	---
12	Unrestricted Co-integrating Coefficients (normalized by b'*S11*b=I):	---	---	---	---
13	SER02-05	---	---	---	---
14	7.57E-05	---	---	---	---
15	Unrestricted Adjustment Coefficients (alpha):	---	---	---	---
16	D(SER02-05)	-1575.153	---	---	---

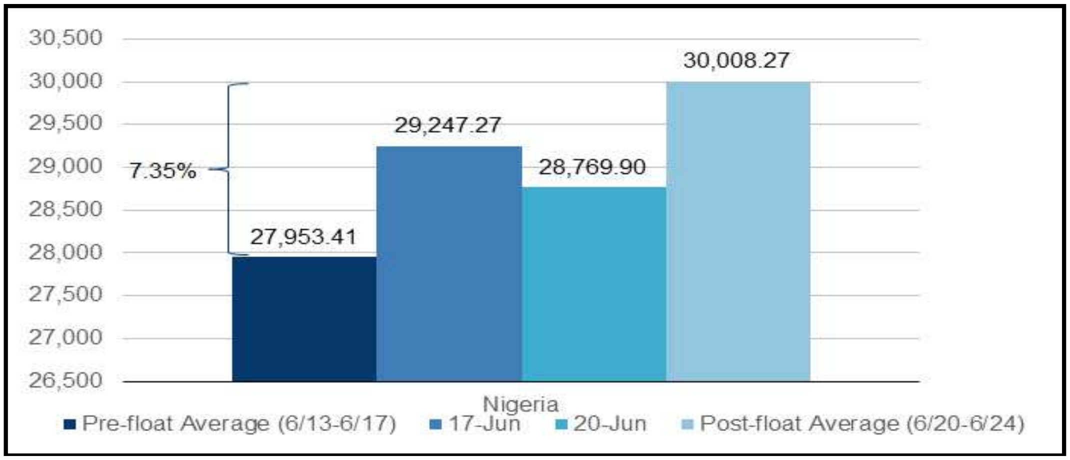

Figure No.1: Co- integration

CONCLUSION

This paper analyzed that there exists negative relation between all the macroeconomic variables and stock market of the Nigeria. For the enhancement of the level of profit, there must be need proper planning of fiscal and monetary policy makers. There is also need to boost share trading system. All the polices markers should have aimed about the reducing production cost and rising inflation cost.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

BIBLIOGRAPHY

1. Apergis N and Eleftheriou S. Interest rates, inflation and stock prices, the case of Athens Stock Exchange, *Journal of Policy Modeling,* 24(3), 2002, 231-236.
2. Arango L E, Gonzalez A and Posada C E. Returns and interest rate: A non-linear relationship in the Bogota stock market, *Applied Financial Economics,* 12(11), 2002, 835-842.
3. Balvers J J, Cosimano T F and MacDonald B. Predicting stock returns in an efficient market, *Journal of Finance,* 45(4), 1990, 1109-1128.
4. Bartram S M. The interest rate exposure of non-financial corporations, *European Financial Review*, 6(1), 2002, 101-125.
5. Bohl M T, Siklos P L and Werner T. Do central banks react to stock market? The case of the Bundes bank, *Journal of Banking and Finance,* 31(3), 2007, 719-733.
6. Campbell J Y and Shiller R J. Valuations ratios and the long-run stock market outlook, an update, *NBER*, Paper No. 8221
7. Canova F and de Nicolo G. Stock returns and real activity: A structural approach, *European Economic Review*, 39(5), 1995, 981-1015.
8. Chan B and Lo W. Financial market integration in the greater China bloc: Evidence from causality investigation of stock returns, *Asia Pacific Journal of Finance,* 3(1), 2000, 53-69.
9. Chen N F, Roll R and Ross S. Economic forces and the stock market, *Journal of Business,* 59(3), 1986, 383-403.
10. Czaja M, Scholz H and Wilkens M. Interest rate risk of German financial Institutions: The impact of level, slope and curvature of the term structure, *Review of Quantitative Finance and Accounting*, 33(1), 2009, 1-26.
11. Davis E P and Madsen J B. Productivity and equity market fundamentals: 80 years of evidence for eleven OECD countries, *Journal of International Money and Finance,* 27(8), 2008,

1261-1283.
12. Dickinson D G. Stock market integration and macroeconomic fundamentals: an empirical analysis, 1980-1995, *Applied Financial Economics,* 10(4), 2005, 261-276.
13. Dinenis E and Staikouras S K. Interest rate changes and common stock returns of financial institutions: Evidence from the UK, *European Journal of Finance,* 4(2), 1998, 113-127.
14. Erden C, Aslan C K and Erden M S. Effects of macroeconomic variables on Istanbul Stock Exchange indexes, *Applied Financial Economics,* 15, 2005, 987-994.
15. Fama E. Stock returns real activity, inflation and money, *American Economic Review*, 71(4), 1981, 545-565.
16. Ferrer R, Gonzalez C and Soto G M. Linear and non-linear interest rate exposure in Spain, *Managerial Finance,* 36(5), 2010, 431-451.
17. Garza-Garcia J G and Yu Y. International determinants of stock market performance in China: A co-integration approach, Centre for Global Finance, *University of West England,* Working Paper No. 03/10, Retrieved from www.uwe.ac.uk/bbs/research on 6/10/14, 2010.
18. Gan C, Hua A Y, Zhang J and Lee M. Macroeconomic variables and stock interactions: New Zealand evidence, *Investment Management and Financial Innovation,* 3(4), 2006, 89-101.
19. Geske R. and Roll R. The fiscal and monetary linkage between stock market returns and inflation, *Journal of Finance*, 38(1), 1983, 7-33.
20. Gjerde O and Saettem F. Casual relations among stock returns and macroeconomic variables in a small open economy, *Journal of International Financial Markets, Institutions and Money,* 9(1), 1999, 61-74.
21. Graham J R and Harvey C R. The theory and practice of corporate finance: Evidence from the field, *Journal of Financial Economics,* 60(2-3), 2001, 187-243.
22. Greenwood J and Jovanovic B. The information technology revolution and the stock market, *American Economic Review, Papers and Proceedings,* 87(3), 1999, 342-362.
23. Hall R E. Struggling to understand the stock market, *American Economic Review, Papers and Proceedings,* 91(2), 2001, 1-11.
24. Hall R E. E-capital: The link between the stock market and the labour market in the 1990's, *Brookings Papers on Economic Activity,* 31(2), 2000, 73-118.
25. Hobijn B and Jovanovic B. The information technology revolution and the stock market: Evidence, *American Economic Review,* 91(5), 2001, 1203-1220.
26. Hussainey K and Ngoc L. The impact of macroeconomic indicators on Vietnamese stock prices, *Journal of Risk Finance,* 10(4), 2009, 321-332.
27. International Monetary Fund, Asset prices and the business cycle, *World Economic Outlook*, 2000, 101-149.
28. Kiley M T. Stock prices and fundamentals in a production economy, Finance and Economics Discussion Series No. 2000-05, *Board of Governors of the Federal Reserve System,* Retrieved from www.federalreserve.gov on 18/9/14, 2000.
29. Korkeamaki T. Interest rate sensitivity of the European stock markets before and after the euro introduction, *Journal of International Financial Markets, Institutions and Money*, 21(5), 2011, 811-831.
30. Kwon C and Shin S. Co-integration and causality between macroeconomic variables and stock market returns", *Global Finance Journal*, 10(1), 1999, 71-81.
31. Kyereboah-Coleman A and Agyire-Tettey K F. Impact of macroeconomic indicators on stock market performance: The case of the Ghana Stock Exchange, *Journal of Risk Finance,* 9(4), 2008, 285-304.
32. Lobo B J. Interest rate surprises and stock prices, *Financial Review,* 37, 2002, 73-92.
33. Lynge M J and Zumwalt J K. An empirical study of the interest rate sensitivity of commercial bank returns: A multi-index

approach, *Journal of Financial and Quantitative Analysis,* 15(3), 1980, 731-742.

34. Madsen J B and Davis E P. Equity prices, productivity growth, and '*The new economy'*, FRU Paper No. 2004/11, Retrieved from, www.econ.ku.dk/FRU/WP on 18/9/14, 2004.
35. McMillan D. Time variation in the co-integrating relationship between stock prices and economic activity", *International Review of Applied Economics,* 19(3), 2005, 359-368.
36. Moya-Martineza P, Ferrer-Laperiab R and Escribano-Sotoza F. Relationship between interest rate changes and stock returns in Spain: A wavelet based approach. *Department of Accounting and Finance,* Universidad De Castila-La Mancha Working Paper No. DT-DAEF 2013/4, 2013.
37. Mukherjee T K and Naka A. Dynamic relations between macroeconomic variables and the Japanese stock market; An application of a Vector Error Correction Model, *Journal of Financial Research*, 18(2), 1995, 223-237.
38. Nasseh A and Strauss J. Stock prices and domestic and international macroeconomic activity: A co-integration approach, *Quarterly Review of Economics and Finance,* 40(2), 2000, 229-245.
39. Oertmann P, Rendu C and Zimmermann H. Interest rate risk of European financial corporations, *European Financial Management,* 6(4), 2000, 459-478.
40. Oleg D, Kajurova V and Stavarek D. Testing rational speculative bubbles in Central European stock markets, MPRA Paper No. 46582, Retrieved from www.mpra.uni-muenchen.de on 1/10/14, 2013.
41. Osuagwu E S. The effect of monetary policy on stock market performance in Nigeria, Retrieved from www.unilag.edu.ng on 19/9/14, 2013.
42. Paul S and Mallik G. Macroeconomic factors and bank financial stock prices: The Australian experience, *Economic Analysis and Policy,* 33(1), 2003, 23-30.
43. Poon S and Taylor S J. Macroeconomic factors and the UK stock market, *Journal of Business and Accounting*, 18(5), 1991, 619-636.
44. Prasad A M and Rajan M. The role of exchange and interest rate in equity valuation: A comparative study of international stock markets, *Journal of Economics and Business,* 47(5), 1995, 457-472.
45. Puah C H and Jayaraman J K. Macroeconomic activities and stock prices in a South Pacific Island economy, *International Journal of Economics and Management,* 1(2), 2007, 229-244.
46. Reilly F K, Wright D J and Johnson R R. Analysis of the interest rate sensitivity of common stocks, *Journal of Portfolio Management*, 33(3), 2007, 85-107.
47. Ryan S K and Worthington A C. Interest rate and foreign exchange rate risk in Australian banking: A GARCH-M approach, International *Journal of Applied Business and Economic Research,* 2(2), 2004, 81-103.
48. Shiller R E. Irrational Exuberance, *Cambridge, MIT Press,* 2000, 295-322.
49. Wong W K. The stock market, the theory of rational expectations, and the efficient market hypothesis, Retrieved from www.coursehero.com on 19/9/14, 2010.
50. Wongbangpo P and Sharma S C. Stock market and macroeconomic fundamental dynamic interactions: ASEAN-5 countries, *Journal of Asian Economics,* 13(1), 2002, 27-51.

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