Time Series Model of Nigeria's External Reserves

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---ABSTRACT---
This Research work is about the Time Series Analysis of the Nigeria's External Reserves from 1960-2008. The data used is a Secondary data collected from the Central Bank of Nigeria 50 Years special anniversary Bulletin. The data was analyzed using SPSS 19.0 version. The trend of the raw data shows non-stationary, plunge or drain, and a downhill in nature. The stationary of the data was achieved after second difference. ARIMA 1,2,2 was the ARIMA model that best fitted the data collected. The value of the R^2 adjusted was 0.643, and the significant level of the data was 0.000, which means that the data from 1960-2008 was significant at the 0.05 significance level. As a result of the plunge or drain in the Nigeria's External Reserves it is therefore, recommended and a call on all Nigerian standing firmly on our ground to demand for fairness, justice and equality for all. Henceforth, our leaders, should be taking the bull by the horns by employing into office those that have a semblance of peoples' interest at heart.

KEYWORDS: Time series, model, external reserves, Autoregressive, Moving Average
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I.   INTRODUCTION

An appropriate exchange rate regime provides the anchor for low and sustainable inflation and macroeconomic stability which is crucial for a well-functioning economy. Low inflation is of course, not an end in itself, but simply a means to an end. The ultimate end, being advancement to the economic well-being of the Nigerians. Against this background, the commitment of the central bank of Nigeria (CBN) is to contribute to the economic well-being of all Nigerians through the conduct and implementation of sound monetary management in Nigeria is the exchange rates. Of course the achievement of an optimal exchange rate regime by itself may not be an adequate guarantee for the best macroeconomic outcome for Nigeria. Experience has shown that good fiscal and structural policies are also essential for the sustenance of a well functioning economy (Soludo,2005).the economic performance of sub-Saharan Africa over the past two decades has been rather poor compared with other developing regions (kandil and Mirzaie,2003). Real per capital income has risen little and has even declined in some countries, while inflation has proved difficult to control. A closer examination of individual country results reveals, however, which provides evidence on the existence of an empirical relationship between the rate of inflation and the level of the real exchange rate in selected Latin American and Asian countries and advanced industrialized economies. As a follow to the analytical framework provided by Kamin (1997), this study is designed to examine the foreign exchange market rate in Nigeria with the view of investigating the relationship between the exchange rate and some macroeconomic variables

1.2   PURPOSE OF THE STUDY
The objectives of the study are as follows:
1) To see the path (trend) of Nigeria's external reserves from 1960-2008
2) To evaluate the rationale for holding external reserves
3) To construct ARIMA model and to know which order of the model best fit the data.
4) To forecast into the future of Nigeria's external reserves
5) To evaluate the challenges of managing external reserves

1.3   SIGNIFICANCE OF THE STUDY
The significance of this study is as follows,
1) It would provide an empirical effect of exchange rate on the economic growth;
2) it would contribute to existing literature by identifying the major factors that are responsible for the spread between the official and parallel foreign exchange market rates in Nigeria;
3) lastly, it would provide policy recommendations to policy makers on ways to resuscitate the foreign exchange market in Nigeria.

2.1   RATIONALE FOR HOLDING RESERVES

Global Official Reserves have increased significantly and quite rapidly in recent years. This phenomenal growth is a reflection of the enormous importance countries attach to holding an adequate level of international reserves. The reasons for holding reserves include the following:

[1] ToSafeguard the Value of the Domestic Currency Foreign reserves are held as formal backing for the domestic currency. This use of reserves was at its height under the gold standard, and survived after the Second World War under the Breton Woods System. After the Breton Woods System, the use of foreign exchange reserves to back and provide confidence in domestic currency replaced the gold. Nevertheless, for most developed countries this is not, these days, the prime use of reserves.

[2] Timely meeting of international payment obligations: The need to finance international trade gives rise to demand for liquid reserves that can readily be used to settle trade obligations, for example to pay for imports. While this is typically done through

[3] Commercial banks, in many developing countries, including Nigeria, the Central Bank actually provides the foreign exchange through auction sessions at which authorized dealers buy foreign exchange on behalf of importers. In industrialized countries where the manufacturing sector produces for export markets, the transaction need for holding reserves is less important

[4] Wealth Accumulation: Some Central Banks use the external reserve portfolio as a store of value to accumulate excess wealth for future consumption purposes. Such central banks would segregate the reserve portfolio into a liquidity tranche and a wealth tranche, with the latter including longer-term securities such as bonds and equities and managed against a different benchmark emphasizing return maximization.

[5] Intervention by the Monetary Authority Foreign exchange reserves can be used to manage the exchange rate, in addition to enabling an orderly absorption of international money and capital flows. The monetary authorities attempt to control the money supply as well as achieve a balance between demand for and supply of foreign exchange through intervention (i.e. offering to buy or sell foreign currency to banks) in the foreign exchange markets. When CBN sells foreign exchange to commercial banks, its level of reserves declines by the amount of the sale while the domestic money supply (in naira) also declines by the naira equivalent of the sale. Conversely, when the CBN purchases foreign exchange from the banks, its level of reserves increases while it credits the accounts of the banks with the naira equivalent, thus increasing the domestic money supply.

[6] To Boost a Country's Credit Worthiness, External reserves provide a cushion at a time when access to the international capital market is difficult or not possible. A respectable level of international reserves improves a Country's credit worthiness and reputation by enabling a regular servicing of the external debt thereby avoiding the payment of penalty and charges. Furthermore, a Country's usable foreign exchange reserve is an important variable in the country risk models used by credit rating agencies and international financial institutions.

[7] To Provide a fall back for the " Rainy Day"; Economies of nations sometimes experience drop in revenue and would need to fall back on their savings as a life line. A good external reserves position would readily provide this cushion and facilitate the recovery of such economies.

[8] To Provide a Buffer Against External Shocks: External shocks refer to events that suddenly throw a Country's external position into disequilibrium. These may include terms of trade shocks or unforeseen emergencies and natural disasters. An adequate external reserve position helps a country to adjust quickly to such shocks without recourse to costly external financing.

2.2   CHALLENGESOF MANAGING EXTERNAL RESERVES
2.2.1 Volatility of Foreign Exchange Inflow

Nigeria's dependence on oil for over 90% of its foreign exchange earnings makes its capital account vulnerable to the fluctuations in crude oil prices. This, in addition to its high import bills contributed to the fluctuations in the level of reserves over the years and consequently the way the reserves are being managed. During the oil boom of the mid-seventies which has resulted in the buildup of reserves, the external reserves were diversified into an array of financial instruments including foreign government bonds and treasury bills, foreign government guaranteed securities, special drawing rights (SDRs), fixed term deposits, call accounts and current accounts. This provided significant investment income as well as liquidity. However, during the glut in the global oil market which led to collapse in the crude oil prices and consequently a drawdown in the reserves,

the reserves were held mainly in current accounts and treasury bills. This underscored the need to diversify the sources of foreign exchange inflow of the country.

2.3   SEQUENCE PLOT
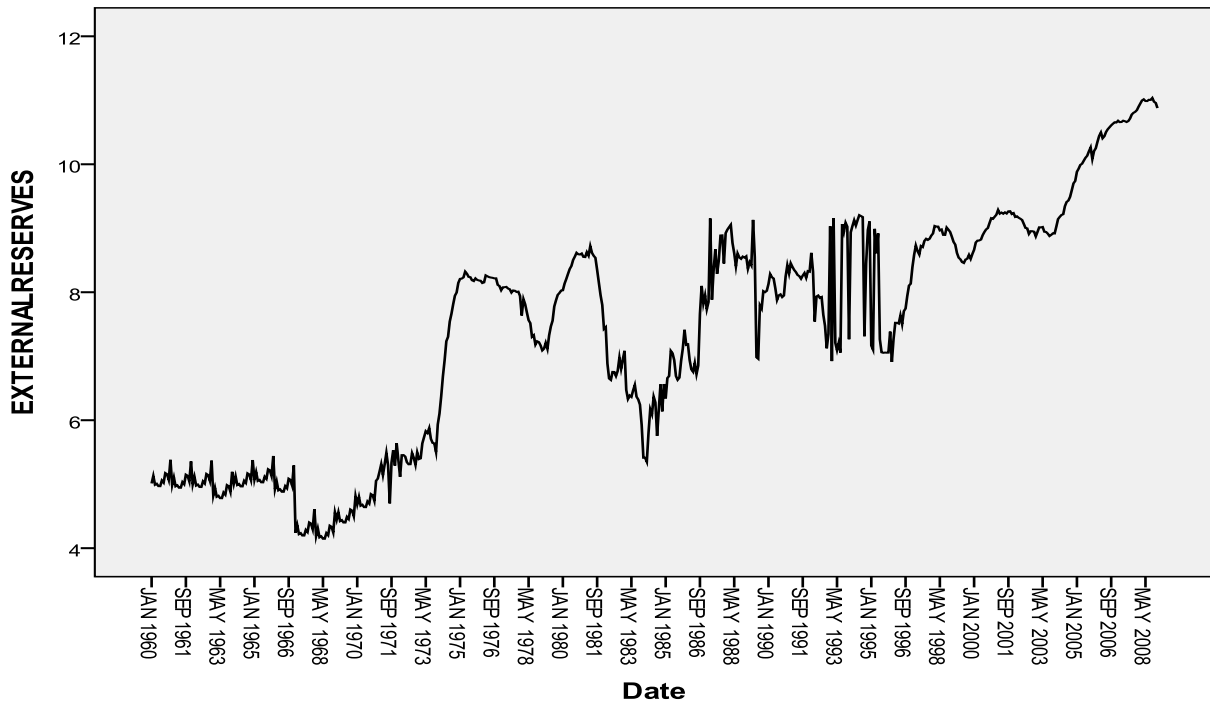
Transforms: natural log

The sequence plot was carried out in order to see the path f0llows of the Nigeria's External Reserves between the period of 1960-2008. The raw data was plotted first which shows some element of non-stationary. The data was subjected to a differencing test as shown below. After the second difference, the stationary of the data was achieved.
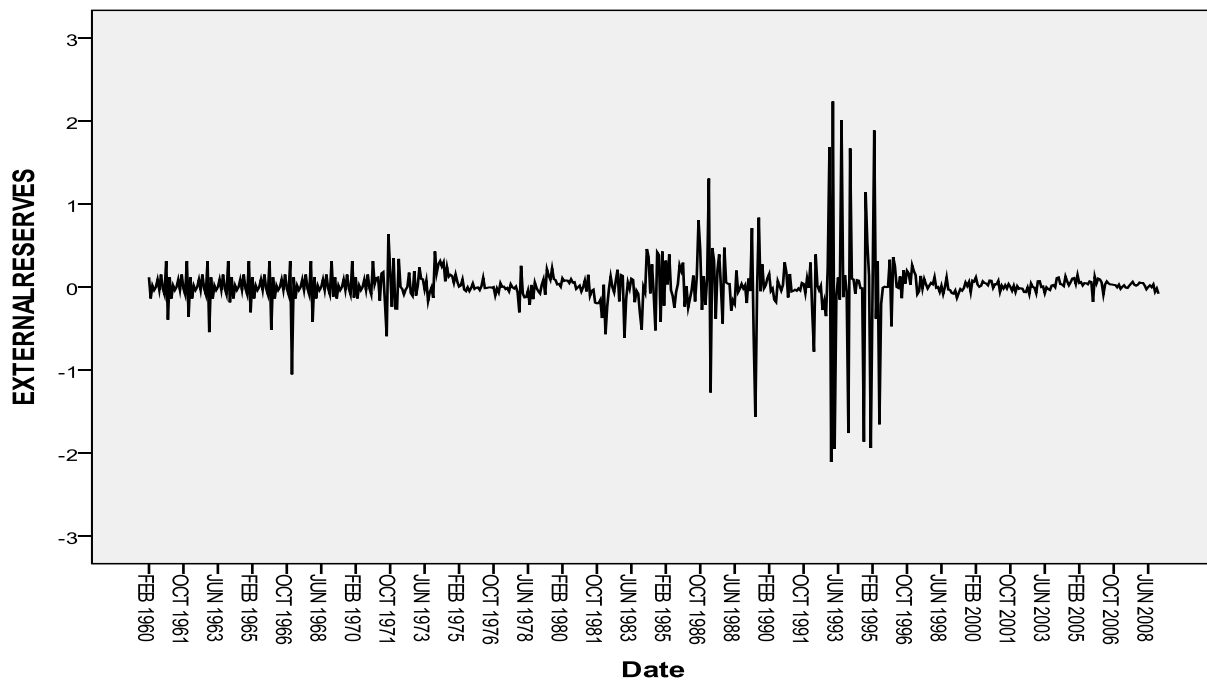
Transforms: natural log, difference(1)

3.1 AUTOCORRELATION FUNCTION (ACF) AND PARTIAL AUTOCORRELATION FUNCTION (PACF)

Autocorrelations
Series:EXTERNALRESERVES

Lag	Autocorrelation	Std. Error[a]	Box-Ljung Statistic		
			Value	df	Sig.[b]
1	-.632	.041	235.218	1	.000
2	.158	.041	250.030	2	.000
3	-.002	.041	250.032	3	.000
4	-.164	.041	265.868	4	.000
5	.280	.041	312.478	5	.000
6	-.227	.041	343.197	6	.000
7	.154	.041	357.347	7	.000
8	-.107	.041	364.193	8	.000
9	-.006	.041	364.215	9	.000
10	.167	.041	380.889	10	.000
11	-.231	.041	412.747	11	.000
12	.160	.041	428.059	12	.000
13	-.087	.041	432.662	13	.000
14	.073	.041	435.910	14	.000
15	-.039	.041	436.831	15	.000
16	.018	.041	437.034	16	.000

a. The underlying process assumed is independence (white noise).
b. Based on the asymptotic chi-square approximation.

3.2 FITTING OF ARIMA MODEL

In order to select the best ARIMA model that best fit the data at hand, the researcher carried out a series of iteration mixed test of the information supply by the AR, and the MA graph. The information taken from the Seventh iteration is shown in the table below.

TABLE 3

ARIMA MODEL	STATIONARY R^2	BIC	P VALUE	Q STATISTICS
1,2,1	0.639	14.347	0.000	70.848
1,2,2	0.643	14.349	0.000	59.949
1,2,3	0.643	14.362	0.000	59.538
2,2,1	0.640	14.356	0.000	67.559
2,2,2	0.642	14.364	0.000	64.705
2,2,3	0.644	14.371	0.000	62.155
4,2,4	0.661	14.361	0.000	32.107

Following the information given in the table above, ARIMA (1,2,2) is the model selected as the best model that best fit the data at hand having the highest Stationary R^2 and the smallest Bayesian Information Criteria (BIC)

4.1 SUMMARY MODEL

The summary of the model selected for the data is shown below:

Model Fit

Fit Statistic	Mean	SE	Minimum	Maximum	Percentile						
					5	10	25	50	75	90	95
Stationary R-squared	.642	.	.642	.642	.642	.642	.642	.642	.642	.642	.642
R-squared	.988		.988	.988	.988	.988	.988	.988	.988	.988	.988
RMSE	1280.034		1280.034	1280.034	1280.034	1280.034	1280.034	1280.034	1280.034	1280.034	1280.034
MAPE	26.352		26.352	26.352	26.352	26.352	26.352	26.352	26.352	26.352	26.352
MaxAPE	594.128		594.128	594.128	594.128	594.128	594.128	594.128	594.128	594.128	594.128
MAE	568.205		568.205	568.205	568.205	568.205	568.205	568.205	568.205	568.205	568.205
MaxAE	8271.339		8271.339	8271.339	8271.339	8271.339	8271.339	8271.339	8271.339	8271.339	8271.339
Normalized BIC	14.364		14.364	14.364	14.364	14.364	14.364	14.364	14.364	14.364	14.364

Residual ACF Summary

Lag	Mean	SE	Minimum	Maximum	Percentile 5	10	25	50	75	90	95
Lag 1	-.005	.	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005
Lag 2	-.057	.	-.057	-.057	-.057	-.057	-.057	-.057	-.057	-.057	-.057
Lag 3	-.140	.	-.140	-.140	-.140	-.140	-.140	-.140	-.140	-.140	-.140
Lag 4	.020	.	.020	.020	.020	.020	.020	.020	.020	.020	.020
Lag 5	.185	.	.185	.185	.185	.185	.185	.185	.185	.185	.185
Lag 6	.059	.	.059	.059	.059	.059	.059	.059	.059	.059	.059
Lag 7	.049	.	.049	.049	.049	.049	.049	.049	.049	.049	.049
Lag 8	-.077	.	-.077	-.077	-.077	-.077	-.077	-.077	-.077	-.077	-.077
Lag 9	.010	.	.010	.010	.010	.010	.010	.010	.010	.010	.010
Lag 10	.086	.	.086	.086	.086	.086	.086	.086	.086	.086	.086
Lag 11	-.127	.	-.127	-.127	-.127	-.127	-.127	-.127	-.127	-.127	-.127
Lag 12	-.001	.	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001
Lag 13	.037	.	.037	.037	.037	.037	.037	.037	.037	.037	.037
Lag 14	.080	.	.080	.080	.080	.080	.080	.080	.080	.080	.080
Lag 15	-.030	.	-.030	-.030	-.030	-.030	-.030	-.030	-.030	-.030	-.030
Lag 16	-.006	.	-.006	-.006	-.006	-.006	-.006	-.006	-.006	-.006	-.006
Lag 17	-.077	.	-.077	-.077	-.077	-.077	-.077	-.077	-.077	-.077	-.077
Lag 18	-.031	.	-.031	-.031	-.031	-.031	-.031	-.031	-.031	-.031	-.031
Lag 19	.134	.	.134	.134	.134	.134	.134	.134	.134	.134	.134
Lag 20	.020	.	.020	.020	.020	.020	.020	.020	.020	.020	.020
Lag 21	.011	.	.011	.011	.011	.011	.011	.011	.011	.011	.011
Lag 22	-.072	.	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072
Lag 23	-.009	.	-.009	-.009	-.009	-.009	-.009	-.009	-.009	-.009	-.009
Lag 24	-.008	.	-.008	-.008	-.008	-.008	-.008	-.008	-.008	-.008	-.008

ARIMA Model Parameters

					Estimate	SE	t	Sig.
EXTERNALRESERVES-Model_1	EXTERNALRESERVES	No Transformation	Constant		1.031	1.195	.863	.389
			AR	Lag 1	.161	.875	.184	.854
			Difference		2			
			MA	Lag 1	1.479	.874	1.693	.091
				Lag 2	-.528	1.165	-.453	.651
				Lag 3	.031	.316	.098	.922

The model fitted for the data is given below:
$Y_t = 1.031y_{t-1}-, \varepsilon_t = 1.479\varepsilon_{t-1} -0.528\varepsilon_{t-2}$
The ARMA model for the stationary data, i.e, ARMA process of order (1,2) is given below:
$Y_t -1.031 = \varepsilon_t -1.479 + 0.528.$
Where they$_t$ and the ε_t stands for the stationary data of the AR and the MA model respectively.

4.2   FORECASTING
As part of this research objectives, which include to know the future amount of the Nigeria's External Reserves, the following forecast for Five years were projected on Monthly bases.

MODEL	VAR00001-MODEL_1 F0RECAST	UCL	LCL
JAN 2009	55506.51	57993.11	53019.91
FEB 2009	56104.92	59102.79	53107.05
MAR 2009	57157.92	60617.15	53698.69
APR 2009	5.72E4	6.11E4	5.33E4
MAY 2009	57724.42	62022.16	53426.68
JUN 2009	52115.92	62807.03	53424.82
JUL 2009	5.87E4	6137E4	5.36E4
AUG 2009	59471.87	64919.07	54024.66
SEP 2009	60019.83	65833.87	54204.19
OCT 2009	6.06E4	6.68E4	5.44E4
NOV 2009	61124.09	67661.26	54586.91
DEC 2009	61550.53	68444.53	54656.54
JAN 2010	61942.83	69195.72	54689.95

FEB 2010	62541.24	70147.69	54934.79
MAR 2010	63594.24	71553.54	55634.94
APR 2010	6.37E4	7120E4	5.54E4
MAY 2010	64160.74	72825.15	55496.33
JUN 2010	64552.24	73569.55	55534.94
JUL 2010	6.51E4	7.45E4	5.57E4
AUG 2010	6598.19	75633.21	76183.16
SEP 2010	66455.35	76535.59	56375.11
OCT 2010	6.70E4	7.75E4	5.66E4
NOV 2010	67560.41	78354.55	56766.26
DEC 2010	67986.85	79139.91	76833.76
JAN 2011	68379.15	79895.80	56862.51
FEB 2011	68977.56	80856.09	5709.03
MAR 2011	70030.56	82272.61	57788.51
APR 2011	7.01E4	8.27E4	5.75E4
MAY 2011	70597.06	83571.36	57622.76
JUN 2011	70988.56	84331.69	87645.44
JUL 2011	7.15E4	8.52E4	5.78E4
AUG 2011	72344.51	86430.94	58258.04
SEP 2011	72891 67	87352.66	58430.68
OCT 2011	7.35E4	8.83E4	5.86E4
NOV 2011	73996.73	89212.78	58780.67
DEC 2011	74423.17	90019.79	58826.56
JAN 2012	74815.47	90797.45	48833.50
FEB 2012	75413.88	91780.46	59047.27
MAR 2012	76466.88	93220.16	59713.60
APR 2012	7.65E4	9.37E4	5.94E4
MAY 2012	77033.38	94566.36	59500.40
JUN 2012	7744.88	95350.89	59498.88
JUL 2012	7.80E4	9.63E4	5.97E4
AUG 2012	78780.83	97499.28	60062.38
SEP 2012	79327.99	98445.87	60210.11
OCT 2012	7.99E4	9.94E4	6.04E4
NOV 2012	80433.05	1.00E5	60509.88
DEC 2012	80859.49	1.01E5	60530.46
JAN 2013	81251.79	1.02E5	60512.04
FEB 2013	81550.20	1.03E5	60700.52
MAR 2013	82903.20	1.04E5	61341.25
APR 2013	8.30E4	1.05E5	6.10E4
MAY 2013	83469.70	1.06E5	61076.73
JUN 2013	83861.20	1.07E5	61049.50
JUL 2013	8.44E4	1.08E5	6112E4
AUG 2013	85217.15	1.09E5	61561.53
SEP 2013	85764.31	1.10E5	61683.E5
OCT 2013	8.63E4	1.11E5	6.18E4
NOV 2013	86869.37	1.12E5	61931.84
DEC 2013	87295.81	1.13E5	61926.71

The graph below shows the past, present, and the future path follows of the Nigeria's External Reserves. The graph indicates that, the Nigeria's External Reserves will be on the increasing state for the period of the Five years (the forecast).
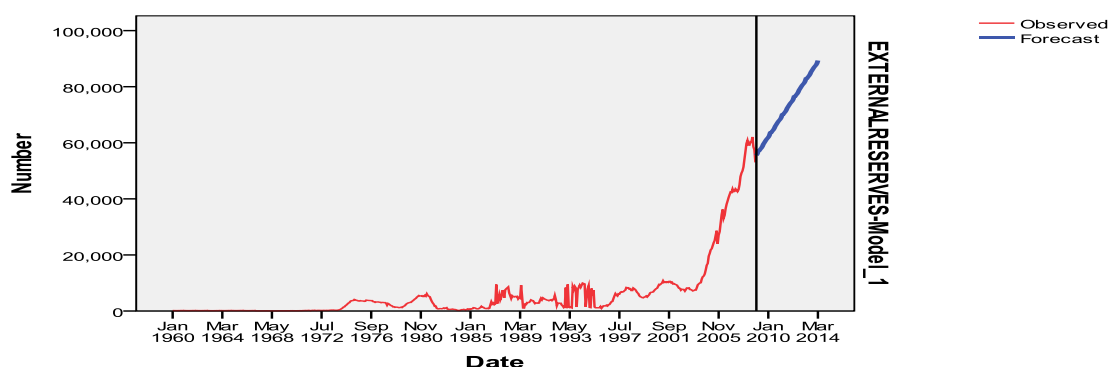
4.3 SUMMARY OF THE FINDINGS

Base on the presentation and the analysis of the data collected the following conclusions were drawn.

[1] The trend of Nigeria's External Reserves shows non-stationary , plunge or drain, and downhill trend. The stationary of the data was achieved after the second difference

[2] The order of the model that best fitted the data at hand are: Autoregressive of order $1(AR_1)$, and Moving average of order $2(MA_2)$.

[3] The ARMA model that best fitted the data was ARMA (1,2) while the ARIMA model that best fitted the data was ARIMA (1,2,2)

[4] 4.Thefitted model has an R^2 value of 0.643, and the significant level (p value) was 0.0000 this means that the data collected is significant at the 0.05 significance level.

[5] The forecasting of Five Years interval shows an increasing state of the Nigeria's External Reserves.

4.4 RECOMMENDATION

The plunge or drain in our foreign reserves was as a result of inefficient and incapable hands that champion and run the nation's affairs.Of course it is expected, that the ever downhill trend of the economy will continue expect this conservative idea is reversed. The truth of the matter, we all know what brought our problem, why the economy has been on decline ever since independence that the colonial master left our shores, and the selfish, inefficient and ineffective black hands wrongfully assumed leadership. Sensitivity, efficient and capable hands are what should be on deck to steer this massive ship around. And to run things like the way White man did years before independence providing adequate basic necessities of life, such as clean pipe-borne water, good and well tarred roads, etc. We should stand firmly on our ground to demand for fairness, justice and equality for all from our leaders, although that means taking the bull by the horns and installing into office those that have a resemblance of our people's interest at heart.

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[20] APPENDIX

Nigeria's Total External Reserves Position (US$ Million)

Year	January	February	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.
1960	150.23	168.91	147.12	149.45	143.93	143.85	157.20	152.03	176.60	173.58	159.03	217.32

1961	146.59	164.82	143.55	145.83	140.44	140.36	153.39	148.35	172.32	172.32	169.37	212.05
1962	148.29	166.73	145.22	147.52	142.07	141.99	155.16	150.07	174.32	171.33	156.97	214.51
1963	124.51	139.99	121.93	123.87	119.29	119.22	130.29	126.01	146.37	143.86	131.80	180.12
1964	149.65	168.25	146.55	148.87	143.37	143.29	156.59	155.44	175.91	172.90	158.41	216.48
1965	159.52	179.36	156.22	158.70	152.83	152.74	166.92	161.44	187.52	184.31	168.87	230.77
1966	137.61	154.73	134.77	136.90	131.84	131.77	144.00	139.27	161.77	159.00	145.68	199.07
1967	69.45	78.09	68.01	69.09	66.54	66.57	72.67	17.28	81.64	80.24	73.52	100.46
1968	66.02	74.23	64.66	65.68	63.25	63.22	69.09	66.82	77.61	76.28	69.89	195.51
1969	85.11	95.70	83.35	84.67	81.54	81.49	89.06	86.13	100.05	98.34	90.10	123.12
1970	108.24	121.70	106.00	107.68	103.70	103.64	113.26	109.54	127.06	125.06	114.58	156.58
1971	161.94	180.40	202.62	171.64	202.22	242.16	199.00	109.96	208.16	251.82	198.50	28138
1972	216.70	166.60	233.80	234.00	228.60	209.08	202.54	202.78	241.10	223.72	201.00	243.58
1973	219.65	222.01	280.98	309.72	339.78	330.10	356.30	301.37	202.93	218.77	246.14	377.98
1974	447.00	587.20	802.30	1029.50	1386.50	1484.80	1884.70	2133.10	2472.20	2823.60	2969.20	3452.30
1975	3674.40	3690.30	3757.20	4115.70	3985.10	3789.50	3774.30	3593.80	3549.40	3702.00	3615.00	3583.70
1976	3569.10	3441.30	3475.30	3881.00	3823.40	3773.40	3751.20	3734.70	3703.70	3704.40	3344.60	3286.30
1977	3076.90	3220.40	3224.70	3241.20	3159.90	3124.30	2965.20	3064.60	3051.10	2993.70	3001.70	2814.50
1978	2073.20	2676.10	2470.20	2179.70	1926.10	1840.90	1485.80	1523.50	1315.50	1385.50	1367.50	1298.90
1979	1200.90	1233.40	1351.10	1231.20	1522.20	1748.70	1910.00	2388.60	2628.40	2858.70	2946.60	3059.80
1980	3072.40	3412.70	3667.10	3970.10	4288.00	4496.40	4937.60	5206.60	5524.00	5395.00	5374.10	5462.00
1981	5177.90	5163.60	5572,10	5283.30	6123.10	5515.10	5268.20	5105.20	4224.80	3467.80	2852.10	2441.60
1982	1679.90	1726.60	977.40	773.80	756.70	858.30	857.30	804.50	871.50	1072.80	902.20	1043.30
1983	1193.60	647.00	562.20	593.50	580.60	641.90	699.80	582.70	557.20	513.90	374.60	224.40

1984	224.40	210.80	333.10	478.40	443.00	582.50	532.90	315.90	479.90	705.60	463.10	710.10
1985	567.10	779.40	804.30	1191.90	1148.60	1031.60	804.70	758.00	784.00	1017.70	1236.50	1657.90
1986	1308.90	1320.30	1030.80	893.10	859.70	986.20	828.80	948.10	2120.05	3292.00	2497.50	2836.60
1987	2287.02	2558.10	9449.51	2651.80	4241.67	5831.55	3976.60	4889.00	7237.74	7255.09	4671.60	7504.59
1988	7925.66	8240.60	8555.53	6438.41	5458.61	4478.81	5458.61	5132.01	5024.17	5204.93	5120.37	5229.10
1989	4310.46	4769.78	4540.12	9236.52	5157.92	1079.31	1053.73	2430.32	2309.66	3033.53	2984.25	3047.62
1990	3386.77	3960.74	3770.03	3696.20	3170.34	2644.47	2839.61	2884.81	2762.12	2828.85	3807.81	4541.45
1991	4003.75	4682.28	4428.32	4222.38	4085.36	3902.19	3833.02	3681.72	3869.67	4023.91	3738.14	4149.30
1992	4109.65	5517.36	4109.65	1885.96	2789.49	2834.30	2727.33	2764.40	2095.33	1762.82	1241.03	1554.61
1993	8365.69	1016.36	9505.26	1351.74	1206.16	1351.39	1161.48	8647.24	7651.78	8830.28	8307.10	1429.59
1994	7596.17	8388.87	9181.57	8466.90	9207.54	9948.17	9803.26	9658.35	14997.92	4689.69	7881.47	9009.11
1995	1295.18	1217.14	8028.99	5481.87	7478.68	1429.44	1165.48	1156.85	1161.17	1159.01	1160.09	1611.11
1996	1002.95	1437.33	1849.15	1848.10	1825.34	2072.76	1817.06	2218.05	2310.06	2808.98	3307.90	3403.91
1997	4480.52	5352.18	6180.59	5664.65	5372.50	6141.33	6038.96	6645.60	6773.48	6750.37	6869.71	7222.22
1998	7464.73	8402.39	8319.60	8318.31	7836.21	7947.26	7305.16	7298.06	8192.32	7933.69	7651.50	7107.50
1999	6549.60	6274.90	5507.10	5115.10	4988.90	4772.30	4708.20	4771.00	5032.10	5343.50	5021.90	5424.60
2000	5789.20	6494.80	6682.80	6692.60	6786.80	7272.40	7634.90	7958.60	8118.10	8788.50	9484.40	9386.10
2001	9705	10016.25	10787.5	10176.3	10353.7	10166.7	10389.9	10204	10563.9	10581.68	10117.8	10267.1
2002	9668.78	9768.47	9546.1	9403.4	9226.3	8674.7	8143.03	8089.2	7424	7741.9	7737.1	7681.1
20	7134.	7655	8226	8216.	8269.	7673.	7643	744	717	730	748	7467

03	42	.06	.16	82	57	09	.95	8.96	0.46	5.87	9.55	.78
2004	8324	9352.4	9684.49	9975.91	10083.87	11441.36	12228.31	12282.4	13222.9	14657	16345.4	16955.02
2005	19592.64	20554.09	21807.98	22210.2	23290.5	24367.12	25161.6	26951.24	28638.24	23921.01	27075.63	28279.06
2006	31317.94	34319.11	36201.54	33063.87	34094.35	36479	38074.22	39247.82	40457.86	41477.69	42441.55	42298.11
2007	43510.78	42550.61	42633.86	43530.55	43168.67	42626.20	43263.88	45010.40	47930.22	49209.74	49963.62	51333.15
2008	54215.79	56908.42	59756.51	60815.85	59180.14	59157.15	60342.13	60201.74	62081.86	58534.15	57480.50	53000.36