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Using the cointegration error correction approach on annual data for the period 1970-2002 we estimated a money demand function for Nigeria and examined some stability issues. We observed that generally, the demand function for real balance in Nigeria could be described as stable over our sample period. Hence, we argued that reform measures introduced since the mid 1980s seems not to have significantly altered the demand function for money in Nigeria. The finding agrees with the proposition in the literature that if trend is taken into consideration, the money demand function is relatively stable. Such a finding implies that monetary policy in Nigeria could be effective in achieving stabilization objective since the stability of money demand function is crucial to the formulation of monetary policy.

***Key words**: Money demand stability, cointegration, stabilization.*

***JEL Classification Numbers**: E41, E52*

1 Introduction

A recurring debate in the literature on the effectiveness of monetary policy to stabilize the Nigerian economy in terms of price stability and subsequently stimulating economic growth is the nature and stability of the demand for money function. This debate started in the early 1970s amongst a group of scholars within the Lagos-Ibadan-Ife axis and was popularly called the 'TATOO' debate, an acronym coined from the initials of the major debaters of those days (see for instance Ajayi, 1974, 1977; Odama, 1974; Ojo, 1974, and Teriba, 1974). As lively as the debate was, the issue is still inconclusive. Two broad events seem to have dimmed the relevance of the debate carried out in those days. The first is the array of estimation techniques and test procedures available to researchers since the debate fettered in the early 1980s. The second is the development in the financial sector since the mid-1980s which may suggest some instability in the demand for money function in Nigeria. The first event have led to the re-examination of the nature and stability of the demand for money function using error correction methods

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(see for instance Teriba,1992 and Nwaobi, 2004), system of demand equation approach based on utility maximization (see for instance Alayande, 2004), and so on[1].

Since the economic reform measures started, several studies have been carried out on the demand for money in Nigeria though not all made explicit attempts at investigating the stability of the money demand function. Asogu and Mordi (1987) examined the monetary sector in general to uncover some of the main determinants of the money demand function. Ikhide and Fajingbesi (1998) also examined whether deregulation of interest rate in Nigeria under the economic reform programme has any significant impact on the demand for money in Nigeria. Studies like Essien, Onwioduokit, and Osho (1996) dwelt extensively on issues relating to money demand in a liberalizing but heavily indebted economy using Nigeria as case study. Essien, Onwioduokit, and Osho (1996) study observed that indebtedness could signal to private economic agents the direction of government fiscal and monetary policy which in turn influences the demand for money in the domestic economy. Audu (1988) represents one of the first post-regulation era efforts to examine the stability of money demand function. Using selected West African countries, the study observed mixed results but was quick to observe a stable money demand relationship for Nigeria.

The study by Nwaobi (2002) has also made efforts to examine the stability of the demand for money in Nigeria. Using a relatively simple model that specifies a vector valued autoregressive process (VAR),the money demand function was found to be stable and the author suggests that income is an appropriate scale variable in the estimation of money demand function in Nigeria. In another study, Anoruo (2002) explores the stability of the M2 money demand function in Nigeria during the Structural Adjustment Program (SAP) period. In the study it was observed that the M2 money demand function in Nigeria is stable for the study period. Further it was argued that M2 is a viable monetary policy tool that could be used to stimulate economic activity in Nigeria.

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[1] *Other studies include those by Oresotu and Mordi (1992), Jimoh (1990) and Ajewole (1988) amongst several. The focus of this paper is not to undertake a survey of the literature, however, detailed review of the literature and the methodology adopted and derived findings of these and other studies can be found in Alayande (2004).*

The issue of the stability of the demand for money is still inconclusive. This paper is an attempt to contribute to this renewed debate on the stability of the demand for money in Nigeria. We will not be preoccupied with the nature of the form of the demand for money nor will we bother about establishing a micro foundation for the demand for money in Nigeria. Basically, the objective of this paper is to examine whether the demand for money function in Nigeria is stable and if not, we examine if financial innovations, defined as the massive reforms that have occurred in the financial sector since the mid 1980s, has contributed to such instability. The remainder of the paper is arranged as follows. Section 2 presents a brief theoretical construct for money demand function while section 3 discusses some plausible factors that may affect the demand for real balances in Nigeria. Section 4 discusses the data used in the analysis while section 5 presents the estimating demand function for real balance and some stability issues are discussed in section 6. Section 7 concludes the paper.

II Brief Theoretical Construct for Money Demand Function.

Several attempts have been made to "resolve" the short-run money demand instability problems through the use of different definitions of money such as money divisia index, inclusion of some explanatory variable such as dummy variables, money own rate, wealth, risk, financial innovation, and *m*-policy regime shifts, and using sector specific models such as households and firms models. Observers are quick to point out that the estimated relationship between money and other variables may not represent only money demand model, but complex interaction between money demand and money supply equations. This is because the common assumption of the constancy of money supply is wrong in reality. However, what is generally agreed upon in the literature is that an active monetary policy requires stable short -run relationships.

It is argued in the literature that estimated (short run) money demand relationships are a key ingredient in the formulation of monetary policy (see Judd and Scadding, 1982). It is also been argued in recent literature that financial innovations could have rendered the money demand relationship unstable (see Gerlach-Kristen, 2001). Based on this, it is opined that, intermediate monetary targeting-a policy that is based on the

predictability of money demand — can be described as an unreliable and consequently dubious policy procedure to follow. In the broad sense, the demand for money (or money velocity) is determined by two sets of variables:

i. Economic determinants.
ii. Long-term institutional factors affecting role of money and financial sector.

The economic determinants include Current income, permanent income, wealth, and consumption (as scale variables). Other economic determinants include Long-term interest rate, short-term interest rate, foreign interest rate, expected inflation, stock market return, own rate of money (opportunity cost variables), interest rate and inflation risk (risk aversion) amongst others. The institutional factors are factors that affect financial innovation such as technological change in the financial sector (e.g., ATM machines) which may lead to a reduction in money demand over time. In general, institutional factors are factors that affect financial development over time.

Empirical evidence suggests major problems with identifying stable short-run relationships. It is argued that what is generally called the short-run function appears not structural at all. It is rather an ill understood, quasi-reduced form characterizing the mutual dynamic interaction of the money supply and the variables on which the demand for money depends in the long run (Laidler 1993). There are many theoretical approaches to the demand for money. It should be observed that they are generally plausible but ad hoc hypotheses, not derived from a fundamental micro model of money. This approach is also followed in this paper. An extensive literature exists on the appropriate form of the short-run money demand function (see Alayande 2004). Common specifications are the (partial) adjustment models, cointegration/error correction models and buffer stock models. On the contrary, empirical evidence tends to suggest the long-run demand-for-money function is indeed a stable structural relationship irrespective of the institutional change particularly if trend is taking into consideration.

III. Factors Affecting Short Run Demand for Money in Nigeria.

We can divide the factors affecting the demand for money in Nigeria into two broad groups First we have the traditional factors and second, we have the country specific factors. The traditional factors affecting (nominal) money balance include real income [as real income rises, households (and firms) make more transactions and money demand increases], nominal interest rate [the opportunity cost of holding money is the nominal interest rate. By holding money, one foregoes both the real interest rate earned on other assets, and one incurs the loss in purchasing power owing to inflation], and prices [at higher nominal prices, one needs to hold more naira to obtain the same amount of transactions services]. Another traditional determinant is technological change in the financial sector which may lead to a change in money demand. This is captured by a trend variable.

There are expected to be some determinants that are important because of some peculiarities in a country. For instance, the bond market is generally underdeveloped in Nigeria and we would not expect interest rate spread [defined as the bond yield minus the deposit rate] to be an influential variable in the demand function. However, since the economic reform programme started in Nigeria in the Mid-1980s, the country has witnessed huge capital flight. This has resulted in severe pressures on money demand to finance foreign exchange demand. Hence, to capture the influence of such capital flows on money demand we include the rate of depreciation of the naira vis-à-vis the US dollars in the demand equation. There is little or no evidence to suggest that capital movement out of Nigeria is to take advantage of interest disparity. Rather, the continuous and persistent depreciation of the naira acts as a major incentive to hold asset in foreign currency. Hence, we believe if capital flows is to affect the demand for real money it will be more likely to come from the behavior of the exchange rate rather than to take advantage of interest rate disparity. This justifies the exclusion of interest disparity in the equation. We make the proposition that financial deregulation which commenced in the mid 1980s have led to massive innovations in the financial sector which is capable of affecting the stability of the demand for money in Nigeria. Hence, a 'reform' dummy is included in the equation. A trend is included to capture the effect of technological growth and other extraneous factors.

IV Data

In this paper, we use annual data from 1970 to 2002 to study the demand for money. Annual data are employed for two principal reasons. The first is that quarterly series for GDP does not exist. Second is that for the period 1970 to 1986, many of the series had little or no quarterly variation due to the regulation of prices. The period 1970-1997 is used for estimation while the last five years are excluded for out of sample forecast. Stability of the estimated equation, as, for example, indicated by a good out-of-sample forecasting ability, is of crucial importance in the context of identifying a demand for money equation. The dependent variable is an actual monetary aggregate. A regression explaining actual money can only be interpreted as a demand for money, if the quantity movements on the money market are exclusively due to changes in money supply. Reflecting these important considerations, it is important that some annual observations be reserved for an out-of-sample stability analysis. In other words, the estimation period will be less than the total sample period such that some ending-years of the data are excluded for out-of-sample forecast. All the data are sourced from publications of the Central Bank of Nigeria.

V Estimating Demand for Money

In this paper, I follow the econometric methodology proposed by Clements and Mizon (1991) and also advanced by Hendry and Mizon (1993) which is a two-step procedure. Some of the reasons for the choice of this approach is that, first, it is generally argued that most economic series are not stationary in levels and as such direct application of least squares technique could give spurious results. In other words, correct inference will depend on the stationarity of the data. The second reason is that, given that the relevant series are not stationarity but have a common trend, then it may be possible to use the same equation to estimate both the short run and the long run models by estimating the error correction representation of the cointegrated series. The first step involves the estimation of the long-run equilibrium of the variables, the cointegrating vector, and in the second step this information is included into a model of short-run dynamics as an error correction term. A number of alternative ways to estimate the

cointegration vector(s) have been proposed. We employ the reduced-rank procedure popularized by Johansen (1988) and Johansen and Juselius (1990). The general form of the short-run dynamic model is given as

$$a(L)\Delta \ln\left(\frac{M}{P}\right) = b(L)\Delta Z + \beta ECM_{-1} + \mu \text{ - - - - - (1)}$$

where, M is nominal broad money (M2), P is the price level (consumer price index), Z is a vector of predetermined and exogenous variables and *ECM* is the gap between actual value and long-run value of money demand (i.e. the residual from the long run static model, usually called the error correction term). $a(L)$ and $b(L)$ are the familiar lag polynomials, β is an adjustment parameter, μ is the disturbance term and Δ implies first difference. The vector Z contains the following variables:

ln (*y*): the logarithm of real GDP;

r: nominal interest rate in percentage;

Δln (*e*): the rate of exchange rate depreciation[1];

REFORM: a dummy for the post-reform period (1986 onwards);

Trend: a measure of technological progress.

V.1 Testing for Unit Roots

Since correct inference will depend on the statistical properties of the data, particularly stationarity, a unit root test is conducted on the relevant series ($\ln(M/P)$, $\ln y$, r, $\Delta \ln e$). Table 1 displays the results of the Augmented Dickey-Fuller Tests (including a constant and a time trend) for the sample period 1970 to 2002. The decision on the lag length was taken for each variable individually. Starting with a second-order lag specification, we perform a *t*-test on the last lag. If it was insignificant the model is re-estimated with one lag less. Table 1 shows that the log of real GDP and interest rate are not stationary series at 95 percent[2]. Real money balance and rate of exchange rate depreciation were observed to be stationary series.

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[1] *A more appropriate variable would have been the rate of parallel exchange rate depreciation. However the data for this series before 1986 are quite unreliable. In this definition, a positive value implies depreciation of the exchange rate.*

[2] *However, the log of real GDP could be described as stationary at 90 per cent.*

Table 1

ADF *t*-statistics				
	Levels	ADF Lag	1st Diff	ADF Lag
ln M/P	-3.1617**	1	-3.7554**	0
ln *y*	-2.8545	0	-5.0646**	0
R	-1.5635	0	-5.8646**	1
Δln *e*	-4.7466**	0	-7.4352**	1

** Reject the hypothesis of existence of unit root at 95%.

Figure 1

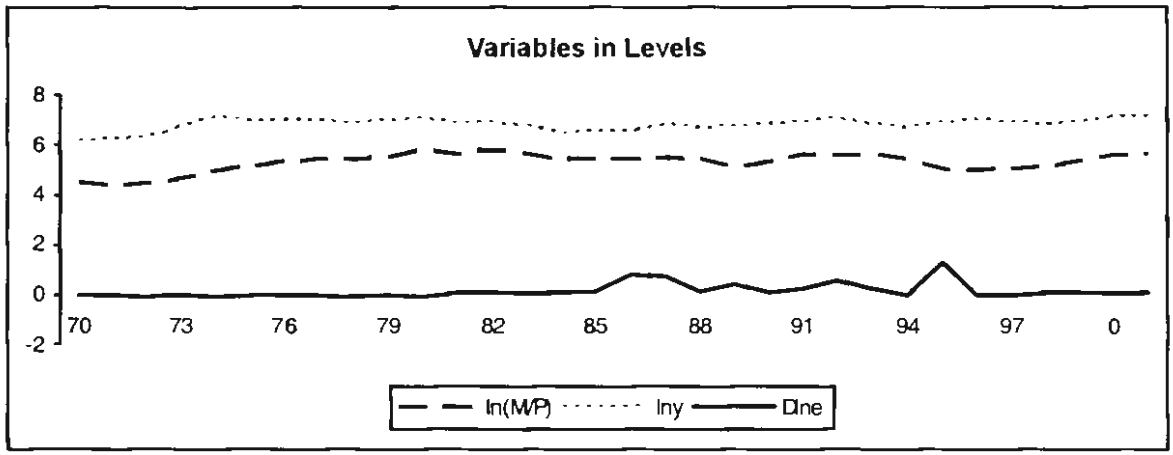
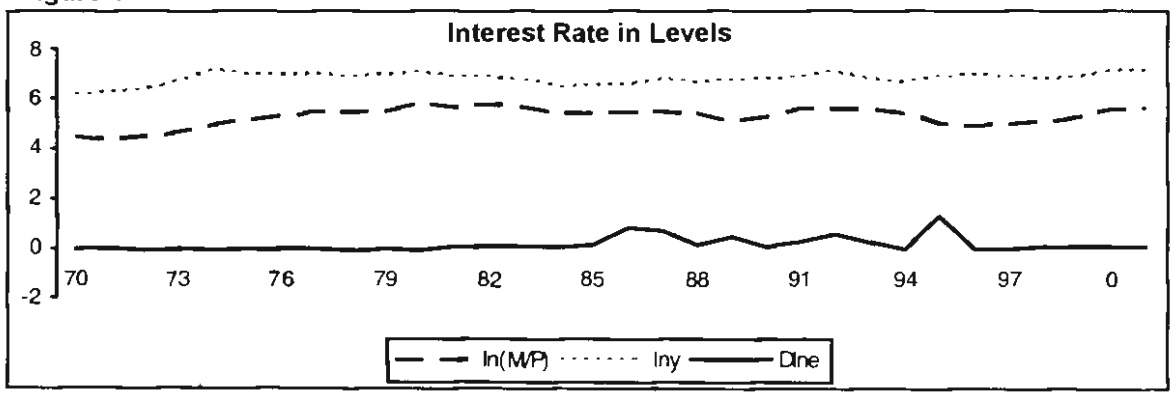


Figure 2



V.2 Co-integration Test

Another controversial issue in the literature on the subject is the issue of which variable should be treated as endogenous. The argument is that endogeneity could depend on the monetary regime in place at a given period. Hence, due to the evidence of unit root in some of the series, we proceed to examine if any long run relationship exist in the system. This is done by testing for co-integration using the Johansen and Juselius (1993) procedure. However, it is argued in the literature that since money, prices, income, and time trend grow smoothly over time, it may be difficult for the Johansen procedure to identify the number of co-integrating vector in a finite sample. Hence, it is suggested that one way out is to make the assumption that the demand for money is the demand for real balance [which reduces the number of parameters to be estimated] and then use the Doornik and Hendry (1997) correction for the trace statistics [see Gerlach_Kristen, 2001)]. From the unit root tests we observed that both the natural logarithm of real GDP and nominal interest rate are non stationary in levels, hence we test the null of at most one cointegrating vector. A trend is included in the co-integrating vector. The results are presented in Table 2. We reject the hypothesis of no co-integrating vector and interpret this as evidence of one co-integrating vector.

Table 2. Cointegation Test

No.of cointegrating vectors (Null)	Maximum eigen-value statistics (MES)	MES with small sample correction	Trace Statistics (TS)	TS with small sample correction
R = 0	23.46*	19.46*	28.92*	26.01*
R<=1	11.21	9.46	22.51	19.77

* Denotes significant at 95 per cent

Based on the evidence of the rejection of the null of no co-integrating vector in the system, we proceed to estimate our error correction model. The preferred model is reported in Table 3.

Table 3. Short Run Error Correction Model
Dependent Variable: (ln(M2/P)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004	0.059	-0.070	0.945
(ln(M2/P)-1	0.466	0.137	3.394	0.003
(ln(M2/P)-2	-0.232	0.145	-1.605	0.124
(ln(Y)	0.505	0.141	3.593	0.002
(r-1	0.020	0.005	4.024	0.001
((ln(e)-2	-0.100	0.057	-1.746	0.096
DUMMY	-0.160	0.087	-1.829	0.082
TREND	0.006	0.005	1.164	0.258
ECM-1	-0.192	0.073	-2.647	0.016
R-squared	0.71	Mean dependent var		0.041
Adjusted R-squared	0.60	S.D. dependent var		0.177
S.E. of regression	0.111	Akaike info criterion		-1.293
Sum squared resid	0.250	Schwarz criterion		-0.869
Log likelihood	27.74	F-statistic		6.285
Durbin-Watson stat	1.94	Prob(F-statistic)		0.0004

See definition of variables in section 5.0

V.3 Interpretation of Short Run Model

From Table 3 we observed that the first period lag of real money balance, current change in income, one period lag of interest rate and the error correction term are significant at 95 percent in explaining short run movements in real balance. The reform dummy was observed to be significant at 90 percent. The time trend is insignificant but retained as its exclusion caused the dummy to be insignificant and the disturbance term showed evidence of serial correlation. This is also the case with the two period lag of real balance. Its exclusion worsened the fit of the model. We observed that about 70 percent of the short run variation in real balance is explained by the included fundamentals. In the following section, we proceed to investigate the stability of the preferred short run model.

VI Stability Analysis

First we examine the model for stability by examining the recursive residuals of the estimate. Figure 3 shows that in 1989 the recursive residual went beyond the ± 2 s.e. bound. The 1987 and 1997 figures were also close to the bounds. However, in general the residuals were within the bounds.

Figure 3

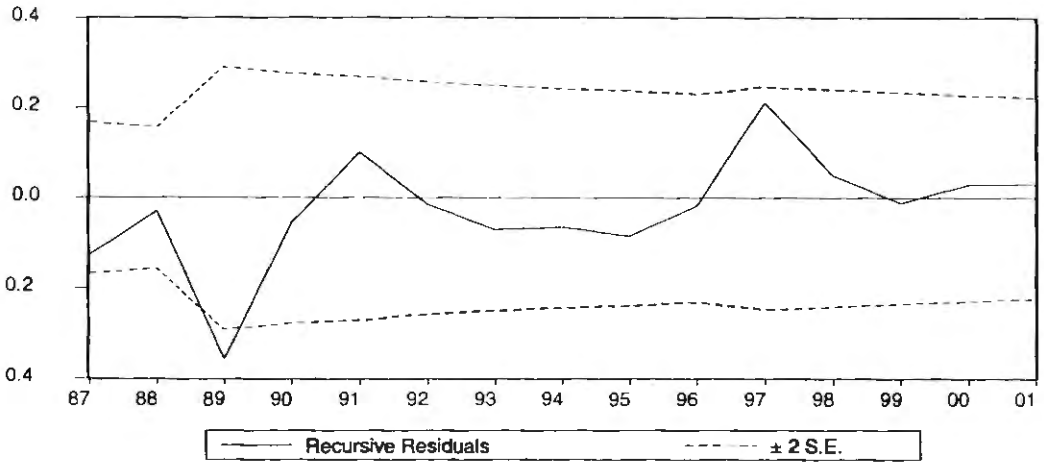
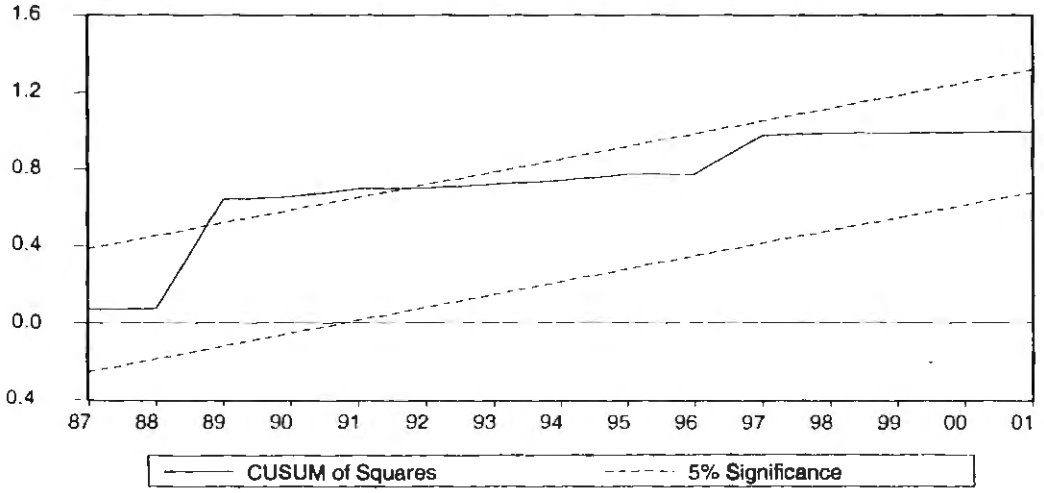


Figure 4



The CUSUM of squares tests gives a similar result [see figure 4]. The 1989 statistics was beyond the 5 percent significance level. Also, the 1997 statistic was close to the 5 percent significance bound. The other values were within the 5 percent bound. Figure 5 presents the graph of the residual, actual, and fitted values of the model. Again, the 1989 value was the only exceptional value in terms of significant deviation between actual and fitted value.

Figure 5

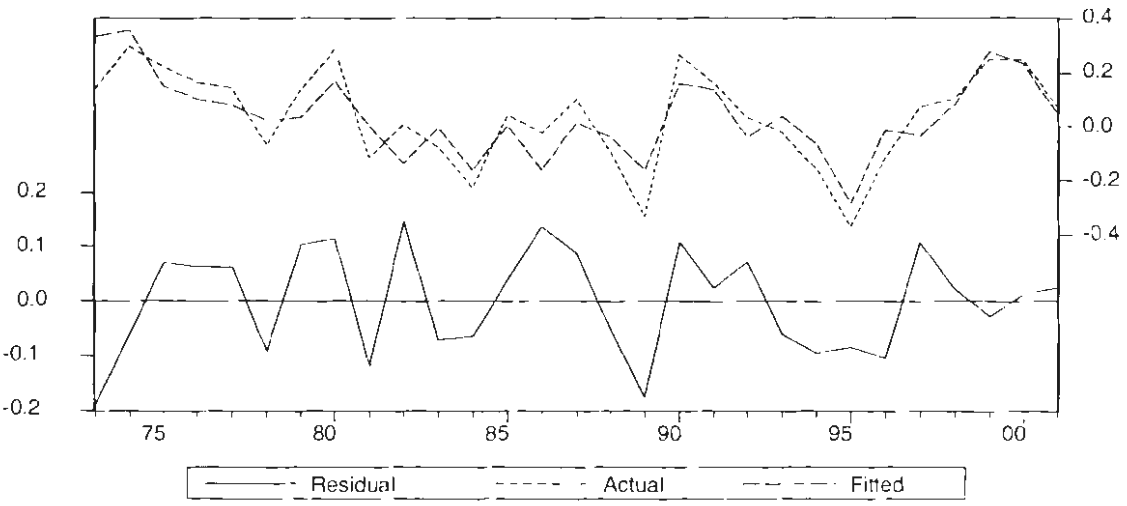
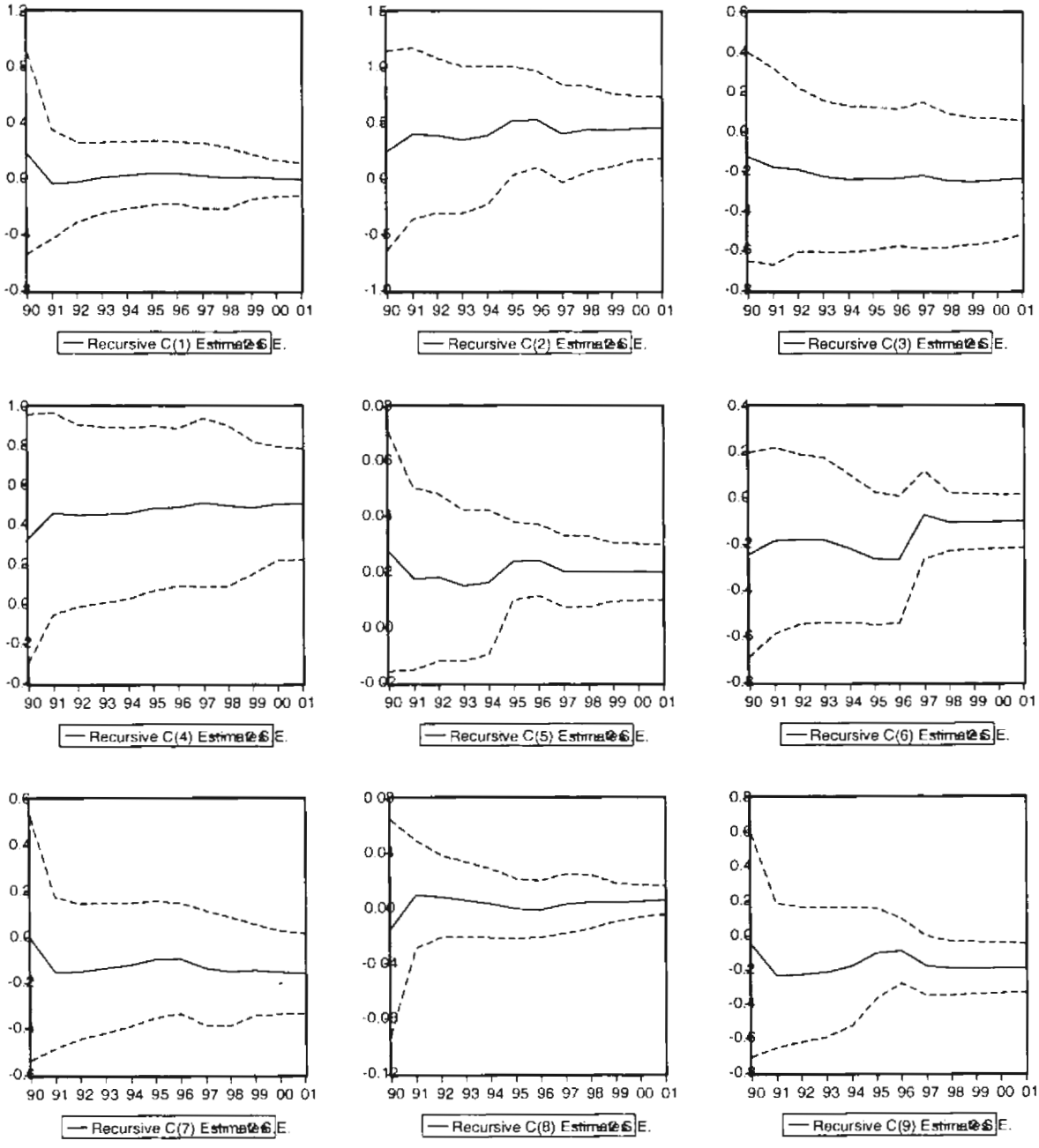


Figure 6. Recursive Coefficients



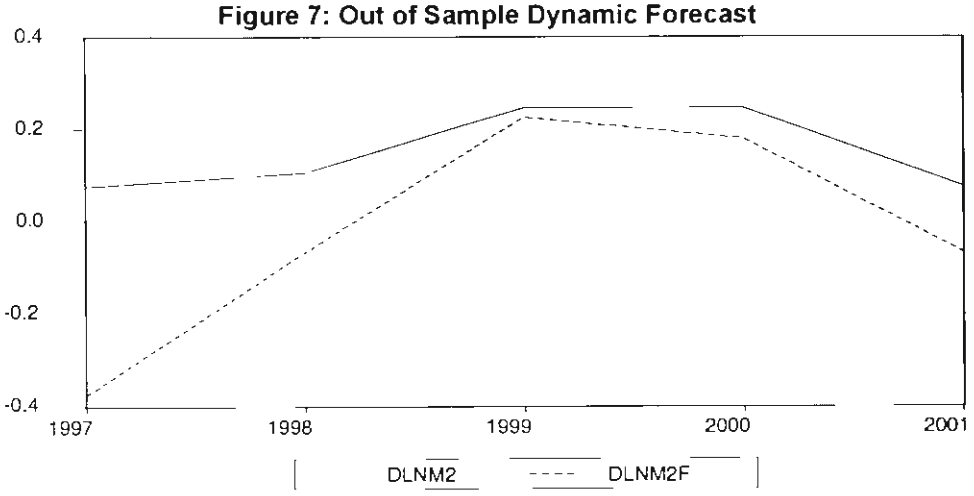
In figure 6 we examine the stability of the coefficients as reported in Table 3. C(1) represents the constant, C(2) represents the one period lag of real balance and so on. In other words, the graphs in Figure 6 follow the coefficient reporting format in Table 3 starting with the constant term. We observed from Figure 6 that all the coefficients were generally stable. The recursive estimate started from 1990 due to degree of freedom problem. However we could observe that the significant deviation between actual and fitted value observed in 1997 was due mainly to exchange rate depreciation [see recursive C(6) estimate in figure 6]. This was due to the drastic devaluation of the exchange rate in 1995. However, in general the coefficients could be described as stable over the sample period. The model was re-estimated for the period 1970 to 1996 and used to forecast the out-of-sample period 1997 to 2002. The Chow forecast test is reported in Table 4. We observe that both the F-form and the log likelihood tests indicate a good out-of-sample forecast. Figure 7 presents the graph of the dynamic forecast for the period 1997 to 2002 when the period 1970 to 1996 is used for estimation. The major divergent could be observed in 1997 (forecast is the dotted line). Hence, apart from the drastic devaluation of 1995 which caused a major divergent in 1997, the out of sample forecast was relatively good[1].

[1] *Actually, the root mean squared error is 0.23, mean absolute error is 0.17, while the Theil inequality coefficient is 0.59 with a bias proportion of 0.57.*

Table 4. Out of Sample Forecast

Chow Forecast Test: Forecast from 1997 to 2002			
F-statistic	0.749435	Probability	0.599130
Log likelihood ratio	6.466794	Probability	0.263409

Figure 7: Out of Sample Dynamic Forecast



VII Concluding Remarks

Using the cointegration error correction approach on annual data we estimated a money demand function for Nigeria and examined some stability issues. We observed that generally, the demand function for real balance in Nigeria could be described as stable over our sample period. We argued that financial innovations introduced since the reform era has not significantly altered the stability of the demand for real balance in Nigeria particularly in the presence of trend variable. Hence, such a finding implies that monetary policy in Nigeria could be effective in achieving stabilization objectives. The stability of money demand function is crucial to the formulation of monetary policy. It should be observed that the results derived in this study are subject to some limitations. Of paramount importance is the frequency of the data employed. Using higher frequency

data will obviously better capture the dynamics of short run movements in real balance. However, the absence of such data for GDP and the regulated regime in terms of interest rate and exchange rate prior to 1986 will impose some restrictions on the use of higher frequency data. In sum we conclude that reform measures introduced in the mid 1980s seems not to have altered the nature of the demand function for money in Nigeria.

REFERENCES

Adejugbe, M. O. A. (1988) "The Demand for Money in Nigeria". *Nigerian Journal of Economics and Social Studies* 30(2): 215-229.

Afolabi, J.A. (1987) .Short-run Demand for Money in Nigeria: A Theoretical Observation., *Nigerian Journal of Economic and Social Studies*, 29(2): 247-254.

Ajayi, S.I. (1974) The Demand for Money in the Nigerian Economy: Comments and Extension., *Nigerian Journal of Economic and Social Studies*, 16(1):165-173.

Ajayi, S.I. (1977), "Some Empirical Evidence on the Demand for Nigeria in Nigeria," *American Economist*, 21, No.1, 51-54.

Ajewole, J. A. (1989) "Some Evidences on Demand for Money In Nigeria: A Test of McKinnon Model of Demand for Money in Developing Economies" *Journal of Savings and Development*. 13 (2)

Alayande, B. A. (2004*). The Demand for Money in Nigeria: A Microfoundation Approach*. Ph.D. Thesis Submitted to the Department of Economics, University of Ibadan, Ibadan, Nigeria.

Anoruo, Emmanuel, (2002) "Stability of the Nigerian M2 Money Demand Function in the SAP Period." *Economics Bulletin*, Vol. 14, No. 3 pp. 1?9

Asogu, J.O. and C.N.O. Mordi (1987) .An Econometric Model of the Nigerian Monetary Sector: Outline and Preliminary Results, Mimeo, Central Bank of Nigeria.

Audu, M.M. (1988) Stability of Demand for Money Functions in Selected West African Countries (1960 . 1987), Unpublished M.Sc. Thesis, Department of Economics, University of Lagos.

Clements. M.P. and G.E. Mizon (1991), "Empirical Analysis of Macroeconomic Time Series", *European Economic Review* 35: 887-932.

Doornik, J. A. and D. F. Hendry (1997) *Modelling Dynamic Systems Using PcFiml 9.0 for Windows*. London.

Essien, E.A., E.A. Onwioduokit and E.T. Osho (1996) .Demand for Money in a Debt-Constrained Economy: A Case Study of Nigeria., *CBN Economic and Financial Review*; June, 34(2): 579 . 605.

Fakiyesi, T. (1980) .Demand for Money in Nigeria: Analysis of the Distributed Lag Structure., *Nigerian Journal of Economic and Social Studies*, 22:23:39.

Gerlaeh_Kristen, P. (2001)"The Demand for Money in Switzerland 1936-1995". *Schweiz. Zeitschrift fur Volkswirtschaft und Statistik*. 137 (4): 535-554.

Hendry, D.F. and G.E. Mizon (1993), "Evaluating Dynamic Eeonometrie Models by Encompassing the VAR", in: P.C.B. Phillips (ed.), *Models, Methods, and Applications of Econometrics*, Cambridge (Mass.): Blackwell: 272-300.

Ikhide, S.I, and Fajingbesi A. (1998) Interest Rate Deregulation and the Demand for Money Function: Evidence from Seleeted African Countries, *RISEC*, Vol. 45, No.4, pp.785-804.

Iyoha, M.A. (1976) .The Demand for Money in Nigeria., *Nigerian Journal of Social and Economic Studies*, 11(3): 386 . 396.

Jimoh, A. (1990) "The Demand for Money and the Channels of Monetary Shock Transmission in Nigeria." *The Nigerian Journal of Economics and Social Studies* 32 (1).

Johansen, S (1988), "Statistical Analysis of Cointegration Vectors", *Journal of Economic Dynamics and Control* 12: 231-254.

Johansen, S. and K. Juselius (1990), "Maximum Likelihood Estimation and Inference on Cointegration - With Applications to the Demand for Money", *Oxford Bulletin of Economics and Statistics* 52:169-210.

Judd, John P., and John L. Scadding (1982). "The Search for a Stable Money Demand Function: A Survey of the Post-1973 Literature," *Journal of Economic Literature* (September1982): 993-1023.

Laidler, D.E.W. (1993), *The Demand for Money*, 4th ed., New York: Harper Collins College Publishers.

Lewis, M.K and P.D. Mizen, (2000) *Monetary Economics*. Oxford Univ. Press.

Nwaobi, G .C. (1999) .Money and Output Interaction in Nigeria: An Econometric Investigation Using Multivariate cointegration Technique .Central Bank of Nigeria Economic and Financial Review, vol. 37 number 3, September: 44-75

Nwaobi, Godwin (2002). *"A vector error correction and nonnested modeling of money demand function in Nigeria," Economics Bulletin*, Economics Bulletin, vol. 3, pages 1-8.

Nwaobi, Godwin (2004). *"Money and output interaction in Nigeria: an econometric investigation using multivariate cointegration technique," Economics Bulletin, Economics Bulletin*, vol. 3(30), pages 1-10.

Odama, J.S. (1974) .The Demand For Money in the Nigerian Economy: A Comment., *Nigerian Journal of Economic and Social Studies*, 16(1): 175 . 178.

Ojo, O. (1974) .The Demand for Money in the Nigerian Economy: Some Comments., *Nigerian Journal of Economic and Social Studies*, 16(1): 149 . 152.

Oresotu, M. O. and C. N. O. Mordi (1992) "The Demand for Money Function in Nigeria: An Empirical Investigation. *Central Bank of Nigeria Economic and Financial Review*. 30(1)

Teriba, A. O. (1992) "Modelling the Demand for Money in Nigeria: An Application of Co-integration and Error Correction Techniques (1960-1989). Unpublished M.Phil Applied Econometrics Paper Submitted to the Faculty of Economics and Politics, University of Cambridge.

Teriba, A. O. (1996) "Demand for Money and Monetary Policy in Nigeria." Final Report Submitted to the African Economic Research Consortium (May). Nairobi, Kenya.

Teriba, O. (1974) .The Demand for Money in the Nigerian Economy: Some Methodological Issues and Further Evidence., *Nigerian Journal of Economic and Social Studies*, 16(1): 153-163.