Economic and Financial Review

Volume 30 | Number 3 Article 1

9-1992

Current Monetary and Banking Policies in Nigeria and the Prospects in the Third Republic

V. A. Odozi
Central Bank of Nigeria

CURRENT MONETARY AND BANKING POLICIES IN NIGERIA AND THE PROSPECTS IN THE THIRD REPUBLIC

V.A. ODOZI*

This paper reviewed and appraised the conduct of monetary and banking policies in Nigeria in the recent past, and charts a credible prognosis of future monetary policy directions, come the Third Republic. As a background information, the paper reviewed the conceptual, analytical and institutional framework for the conduct of monetary and banking policies in general, noting the widespread consensus that efficient management of money stock and the related price variables are vital instruments for inducing investment and growth of any economy. An overview of recent monetary and banking policies in Nigeria acknowledged the innovative initiatives taken so far to reform the financial system and monetary management approach in general, but regrets the relative ineffectiveness as reflected by the outcome of intermediate policy targets.

Of major concern were the rapid expansion in money supply over time, which fuelled inflationary pressures, high interest rates structure and depreciated exchange rates of the Naira vis-a-vis other traded currencies. Among the underlying factors which undermined monetary policy pursuits were excessive growth in domestic credit especially to government, lack of timely data which could guide timely response of monetary authorities to any development, inadequate monitoring of the financial system, given the rapid expansion in the number of intermediaries and above all, the unpredictable conduct of fiscal policies, which tended to compromise most of the monetary policy initiatives. These problems may continue to pose challenges to future monetary and banking policies, in addition to the need to create macroeconomic incentives of appropriate interest and exchange rates which are conducive to investment and growth. In conclusion, the paper noted that although Nigeria may continue to contend with these problems in the Third Republic, especially that of fiscal deficit,, pressures on domestic price level, balance of payments and depreciating naira exchangee rate a more stable regime would emerge in the medium term. This calls for fine-tuning of current policies, close collaboration among policy design and implementing institutions, and a better understanding of how market-oriented policies work.

* V.A. Odozi is the Deputy Governor, Domestic Monetary & Banking Policy, Central Bank of Nieria

Financial deregulation in Nigeria over the last few years, has tended to accentuate the traditional controversy that surrounds the conduct of monetary policy, especially in periods of monetary restraint. Unlike in the pre-SAP era, monetary policy since 1986 has had to take into account not only the traditional trade-off between short-term growth and domestic price stability, but also the impact of monetary measures on both domestic interest rates and the naira exchange rate. In addition, the task of the monetary authorities has been compounded by the pressures created by the government budget which have generally weakened the restrictive posture of monetary policy. However, major institutional reforms have taken place in the money market in particular, which are expected to bring about a gradual improvement in the effectiveness of monetary policy.

The purpose of this paper is to articulate the current approach to monetary policy management in Nigeria and the future direction of policy, and to examine the prospects for greater effectiveness of monetary policy in the Third Republic. The paper is in four parts. Part I discusses some conceptual issues in monetary management. Part II examines the institutional structures for monetary policy formulation and implementation in Nigeria. Part III focuses on the review and appraisal of policy while Part IV examines the challenges of monetary and banking policies for the future and Part V presents the concluding remarks.

PART I

CONCEPTUAL ISSUES IN MONETARY MANAGEMENT

Before proceeding to the main issues in this part of the paper, some preliminary remarks on the state of the art as regards monetary theory and practice is in order. In particular, it seems necessary to stress that lively controversy over issues of interest to policy makers continues among the major schools of thought in macro-economics. Among the areas of on-going debate are the nature of the impact of money stock changes on nominal and real incomes in the short as well as the long-run, the question of whether the supply of money is subject to the control of the monetary authorities or whether it adjusts passively to demand, the issue of what the transmission channel of monetary policy is and the debate over whether monetary policy should be based on a fixed rule or whether it should instead be a matter of complete discretion of the monetary authorities. There are also the issues of the scope for trade-offs in macro economic variables and objectives and the relative efficacy of monetary versus fiscal policies.

However, on a number of crucial issues, there seems to be enough convergence of views to provide some guidance to policy makers. For example, apart from the new classical school, most others agree that money stock changes significantly affect nominal and real income in the short-run. Over the long-run, the consensus appears to be that the main effect of money stock changes is on the price level. It also seems clear that movements in money supply impact on nominal and real interest rates in the short term and that movements in real interest rates influence savings and investment. Furthermore, to the extent that variations in money supply growth cause variations in inflation and affect inflationary expectations, the exchange rate will also respond in some way to monetary actions.

(a) Objectives of Monetary Policy

In the formulation of monetary policy, therefore, some attention has to be given to the likely impact of policy actions on inflation, exchange rate and/or the balance of payments, investment and growth. In addition, the overall state of the financial markets is also of great relevance. In order to facilitate the presentation in Parts III and IV of the paper the critical linkages are reviewed here.

(i) Inflation

Domestic price stability may be regarded as the most critical goal of monetary policy. This is so for two reasons. First, low and stable inflation rates facilitate the attainment of the major goals of macro-economic policy such as growth and allocative efficiency. Second, monetary policy has its most enduring effect on inflation. Its impact on nominal and real output is largely short-term. However, these statements do not imply that inflation has only monetary causes. In Nigeria, weather-induced variations in food supplies have without doubt been a major non-monetary factor in the movement of the price level. The relatively large and persistent naira depreciation in the last few years has been a significant contributory factor owing to the high import dependency of the country. Nigeria's inflation especially in recent years could, therefore, have been significantly cost-push in origin. Nevertheless, an inappropriate monetary policy regime could reinforce the cost-push pressures and make matters worse by not producing the necessary positive impact on domestic output.

(ii) Exchange Rate

The exchange rate could be influenced by monetary impulses in a variety of ways. First, an inflationary expansion of money supply could cause the exchange rate to depreciate and deviate from its equilibrium purchasing power parity (ppp) value relative to other countries. Second, excessive monetary expansion could, by raising inflationary expectations, induce speculative activity against a currency and cause its depreciation ahead of the actual rise in the price level. Third, excessive monetary expansion could, by inducing excessive absorption put pressure on the balance of payments. Under a freely floating exchange rate regime, the overall effect of deficits in the balance of payments in the short-run , would be mainly a depreciation in the domestic currency.

(iii) Interest Rate

Monetary policy seeks to influence not only the availability but also the cost of credit. Hence the direction and magnitude of changes in market interest rates constitute a primary interest of monetary policy. The objective in this regard often is to maintain the indicative market rate or rates within a range compatible with other objectives of policy such as growth. In effect, this means undertaking interest rates targeting along side money supply targeting - a difficult combination which is of current relevance in Nigeria.

(iv) Investment and Growth

In conditions of substantial idle capacity and low underlying inflation, monetary policy could, in the Keynesian framework, be employed to stimulate aggregate demand and output in the short-run. This could be done by, for example, inducing a fall in interest rates and thereby stimulating the demand for interest rate sensitive consumption goods as well as private investment demand. For long-term growth, however, monetary policy could best be of service by seeking to maintain price stability. With a relatively low inflation rate, real interest rates could be maintained at relatively low and positive levels conducive to both savings and investment as well as stable exchange rates. In Nigeria, sectoral credit guidelines continue to be employed to promote the growth objective. The aim of this tool of monetary policy is to ensure a significant share of total bank credit to sectors considered vital for long-term growth.

In sum, the paramount all-embracing objective of monetary policy could be said to be stable economic growth. However, as the foregoing discussion makes clear, the major role of monetary policy lies in maintaining domestic and external sector stability and thereby creating the macroeconomic conditions for long-term growth.

(b) Conduct of Monetary Policy

The conduct of monetary policy is generally undertaken in three stages which are closely inter-related. These are the policy formulation, implementation and review stages. The tasks involved in policy formulation are essentially those of appraising the recent past and the present, making some projections of the likely future trends in the absence of policy changes and presenting a range of options in the form of policy targets. The implementation stage concerns the execution of the relevant measures, while the review covers the developments in the ultimate targets of policy such as output and employment, the general price level and the balance of payments, as well as the movements in intermediate target variables such as the money stock, bank credit and interest rates.

The policy options or alternative financial programmes are obtained from statistical exercises and aimed at providing estimates of the rates of money supply growth required to support economic growth along its potential path at stable prices and sustainable balance of payments. As an initial step to obtaining the desired or absorbable level of money supply, the demand for money in the coming year is estimated and the estimate employed as a limit on the supply of money. In equating the demand for and supply of money, excess or inflationary aggregate demand is avoided and monetary growth as such ceases to be a cause of inflation.

With the desired level of money supply determined, estimates of the desired level of credit are obtained on the basis of estimates of the other components of the so-called balance sheet equation. These components are private sector credit, government sector credit, net foreign assets and other assets, each of these being the consolidation of the balance sheets of the Central Bank and the commercial and merchant banks. Two of these components, namely, government sector credit and net foreign assets are policy variables whose levels set upper limits on the programme level of private sector credit. The lower the level of Government sector deficit financed by the banking system, ceteris paribus, the higher private sector credit could grow without causing an excessive growth of the money stock.

Expressed symbolically,

$\Delta\ M2 = \Delta\ Pc + Gc + \Delta\ NFA + \Delta\ OA$

Where M2 = Broad money

Pc = Private sector credit

Gc = Government sector credit

NFA = Net foreign assets

Δ OA = Other assets

Δ = Change in

The framework described above applied under the regime of monetary management based on direct instruments, which, as may be recalled, relied mainly on the use of credit ceilings. With the gradual shift to the indirect system of monetary management, a different approach to the design of monetary policy has become appropriate. Under the new arrangement, the focus of Central Bank control shifts from banking system credit to bank reserve balances.

The first step in the process of policy design still remains that of estimating the level of money supply compatible with growth at stable prices. The next step consists of making a forecast of money supply based on specified changes in the balance sheet of the Central Bank. The latter estimate when set against the desired growth of money supply, provides the target for monetary policy. In the more typical case, the estimates will yield a monetary growth path indicating an excess of money supply over demand as against the desired zero excess supply of money. Having obtained an estimate of the likely level of excess money supply, the next step would be to derive the level of primary or base money associated with the projected excess money supply and consequently the level of bank reserves that needs to be injected or drained from the system to keep money supply growth along the desired path. The exercise also involves the setting of appropriate ranges for short-term interest rates which are pivotal to the entire structure of interest rates. In this regard, however, certain conventions and experiences are crucial and these will evolve only gradually.

A discussion of policy instruments, which in the more common regime of indirect monetary control is open-market operations, would be inappropriate at this point. Suffice it to say that the success of the system would depend on the effective use of this instrument by the Central Bank. This in turn depends critically on the degree to which the financing of Government could be kept separate from the Central Bank's reserve management function. Also important is the existence in the financial system of an active secondary market in short-term securities.

PART II.
INSTITUTIONAL FRAMEWORK

The institutional arrangements within which monetary policy is formulated and implemented determine not only its form or character but also its effectiveness to an important degree. These arrangements are the focus of this part of the paper. In particular, we will examine the authority and role of the Central Bank, the formal and informal structures for co-ordinating monetary and fiscal policies and the financial system as it relates to monetary policy.

The Monetary Authorities

The monetary authorities in Nigeria currently comprise the Central Bank of Nigeria and the Ministry of Finance both of which are agencies of the Federal Government. While the Central Bank exercises primary responsibility for articulating, implementing and appraising monetary policy, the Bank's authority is exercised subject to appropriate consultation with the Government which has the legal power to override the Bank's proposals or actions. Prior to 1988, Central Bank's policy actions in response to developments and policy proposals in the context of the annual budget exercise of the Federal Government was presented to the Government through the Minister of Finance. Since then, the Bank's initiatives, in line with the autonomous status granted to it are channelled through the Presidency. It is pertinent to note here, that Central Bank's autonomy is by no means unlimited. Since the Government rather than the Central Bank has overall responsibility for the economy, there will be times when the priorities of the Government may not be entirely consistent with the thrust of monetary policy as viewed by the Central Bank. However, it remains true that the Government places great weight on the judgements of the Central Bank on macroeconomic policy generally.

In the current Nigerian setting, the success of monetary policy hinges crucially on the extent to which the budgetary programme of the Federal Government can be harmonised with the goals of monetary policy. This is due to the critical role of the Government in the economy and for this reason, the Government has continued to be the largest source of liquidity growth in the system. The co-ordination of monetary and fiscal policy targets over the years has been undertaken within the framework of inter-agency meetings of the economic ministries and departments, the Central Bank and a number of public sector organisations. At these high-level meetings, Government revenue projections, expenditure plans and policies, as well as the overall level of budget deficit/surplus and mode of financing, as the case may be, are considered and proposals forwarded to Government. This framework has worked reasonably well at the policy formulation stage. However, closer co-ordination at the policy implementation stage is desirable and will become more vital to the success of monetary policy.

The Financial System

The structure and investment behaviour of institutions in the Nigerian financial system, as in other countries, are important determinants of the form, content and effectiveness of monetary policy and a brief review of the salient features is necessary. Of particular relevance are the banking system and the money market, both of which constitute the main institutional channels by which monetary policy actions are transmitted to the real sectors of the economy. Developments within both of these institutions in the last few years have created conditions that should enhance the efficacy of monetary policy in the near future. The banking system has expanded at a remarkable pace in the last few years and this has spurred greater competition in the markets for primary non-bank deposits and inter-bank call and term deposits. The securities segment of the money market has also undergone significant change with the adoption since 1989, of an auction-based system for the issue of Government treasury bills and treasury certificates. By further advancing the process of deregulation, the auction system paves the way for the emergence of an active secondary market for short and medium term Government securities outside the Central Bank. However, owing to the limited scale of participation of commercial and merchant banks, as well as the non-bank public in the market for Government securities, the Central Bank has had to take-up and hold relatively large amounts of these securities, thereby constraining its ability to employ market-based forms of monetary and credit control.

PART III
REVIEW AND APPRAISAL OF POLICY

Our next task is to undertake a brief review and appraisal of recent monetary and banking policy measures which would form the basis for future policy selection. The gradual movement to indirect monetary control and deregulated banking system since 1986 has been motivated by two major factors. The first is to encourage competition and efficiency in the allocation of financial resources, while the second is to complement the overall economic policy which relies on market forces in the allocation of resources.

1. Review of Policy

In order to achieve the broad objectives outlined earlier, a number of policy measures were adopted. These measures embraced reforms in monetary and credit management, interest rates and banking as explained below.

(a) Monetary and Credit Management

From the inception of the SAP, the need to curb excessive bank credit expansion to the economy was recognised in order to maintain an appropriate monetary growth which would ensure stability in both the domestic and external sectors of the economy and in particular to promote a smooth operation of the foreign exchange market. To this end, the permissible rate of increase of commercial and merchant banks' loans and advances was generally reduced over the years. One notable exception was in 1988 when the need to stimulate growth and reduce mounting unemployment prompted an increase in the permissible credit expansion of banks.

In addition to direct credit control through variation in credit ceilings, a series of indirect measures to control the ability of banks in extending new credit were also applied.

These measures included:

(i) the recall of naira counterpart of outstanding external payment arrears to the CBN in 1986 and 1987;

(ii) mopping of excess liquidity through the issuance of Stabilization Securities since October 1990;

(iii) increases in commercial banks' cash ratio requirement in 1989, 1990 and 1992;

(iv) introduction of cash ratio requirement for merchant banks in 1990;

(v) expansion from 1990 of the base for calculating the cash ratio requirement to include all deposits instead of restricting it to demand deposits as was the case prior to 1990;

(vi) raising the liquidity ratio for commercial banks from 25 to 30 per cent;

(vii) varying the liquidity ratio for merchant banks from 30 per cent of deposits and call money in January 1988 to 20 per cent of total deposit liabilities currently;

(viii) transfer of public sector accounts from the commercial and merchant banks to the CBN in May - June 1989; and

(ix) prohibition of commercial and merchant banks from accepting foreign guarantees and/or foreign currency deposits as collaterals for domestic loans denominated in naira.

At the beginning of September 1992, indirect methods of credit and monetary control received a boost with the selective lifting of credit ceiling for healthy (sound) banks. Apart from measures designed to influence total credit expansion, there are other measures to re-direct credit to particular sectors considered vital to economic growth. These include the prescribed allocation, since 1987, of 16 and 35 per cent of commercial banks' total credit to agriculture and manufacturing. Merchant banks' minimum credit targets to these sectors have remained at 10 and 40 per cent since 1987. The prescribed minimum ratio of commercial banks' deposits mobilized in the rural areas to be granted as loans to finance activities in such areas was increased from 45 to 50 per cent, while the minimum of banks' loans to small-scale wholly-owned Nigerian enterprises as a percentage of total loans was raised from 16 to 20 per cent.

(b) Interest Rate

The posture of the Government to deregulate the economy in order to enhance competition and allocation of resources necessitated the introduction of an interest rate policy based on market forces. Consequently, interest rates were deregulated in August 1987, thereby giving banks a free hand in determining their deposit and lending rates according to market conditions. However, the Central Bank continued to fix the Minimum Rediscount Rate (MRR) which was raised to 15 per cent in August 1987. In order to stimulate investment and growth in the economy, the CBN reduced the MRR to 12.75 per cent in December 1987. This was raised to 13.25 per cent in 1989 in line with the perceived need to moderate monetary expansion. Subsequently, in a bid to remove distortions in the interest rate structure, the CBN reached an accord with the banks on certain margins between their deposit and lending rates late in 1989. Following that understanding, the spread between the savings deposit and prime lending rates for each bank was fixed at 7 percentage points. The margin between the prime and highest lending rates for each bank was fixed at 4 percentage points while the inter-bank rates were to be at least 1 percentage point below the prime lending rates.

Realising that the structure of deposit and lending rates had been largely unresponsive to the observed decline in inflation in 1990 and the increase in domestic liquidity, the monetary policy for 1991 fixed a maximum spread of 4 percentage points between their cost of funds and their maximum lending rates. This directive was subsequently modified in January 1991, requiring banks to observe lending rates of not more than 21 per cent and minimum deposit rate of 13.5 per cent. These prescriptions on interest rates were later removed in January 1992 but banks have been required to observe a maximum spread of 5 percentage points between their average cost of funds and their maximum lending rates more as a performance than mandatory target.

(c) Banking Sector

The development of an efficient financial sector, especially a competitive and efficient banking system, has been considered necessary for the success of the Structural Adjustment Programme. Consequently, steps were taken to reorganise the banking sector. Among the initial actions was the reduction of existing numerous economic sectors into two broad categories - "priority" and "other" sectors for the purpose of bank credit allocation. Another step taken was the promotion of the expansion of the banking sector. There was a deliberate effort to encourage the emergence of new institutions and the expansion of the existing ones. In the banking sub-sector, the procedure for licensing new banks was eased to stimulate the growth of banks. To provide banking services to the poor and others who have no access to the conventional banks, two innovative banks - the People's Bank of Nigeria and Community Banks were established in 1989 and 1990, respectively. Another institution - the Nigeria Deposit Insurance Corporation (NDIC) - was set up in 1988, but started operations in 1989, in order to provide deposit insurance and enhance banking supervision.

Furthermore, new and far reaching supervisory and regulatory arrangements aimed at strengthening the banking system and promoting safe and sound banking practices were introduced. In 1990, the CBN issued some directives to banks aimed at enhancing their capital base and professionalism in bank lending and provisioning for non-performing credits. The directives were prompted by, among others, the rapid expansion of the banking industry, the increased risk of bank failure, the problems of illiquidity and insolvency in the system and the staggering level of non-performing loans, all of which resulted largely from bad management of the banks. To crown it all, the Central Bank Decree (No. 24), 1991 and Banks and Other Financial Institutions (BOFI) Decree (No. 25) of 1991 were promulgated to strengthen the foundation for a more stable, efficient and sound financial sector. The new laws became necessary, firstly, because of the need to consolidate and harmonise the numerous amendments to the existing banking laws. Secondly, the new laws constituted an important component of the broader programme of financial sector reforms aimed at promoting competition and efficiency in the country's financial system.

2. Appraisal of Policy

The impact of monetary policy may be assessed first in terms of the behaviour of intermediate targets of policy and secondly in terms of the performance of the ultimate targets such as output growth, price stability, savings and investment. The impact of policy on the latter set of variables is generally difficult to establish especially for economies such as Nigeria for reasons, some of which were examined in the early part of the paper. Other equally important constraints are the weakness of the available statistics and the fact that monetary policy measures are employed all the time in combination with various other policies whose effect are difficult to isolate. There are also the effects of purely exogenous factors such as large variations in export prices and earnings and drastic weather changes affecting agricultural production and prices which tend at times to dominate other influences on the economy. For these reasons, the following discussion is focused mainly on the impact of policy on the intermediate target variables, namely, money supply and credit and variables such as interest rates, the naira exchange rate and the price level in the recent past.

(a) Money and Credit

The effectiveness of monetary policy in regulating the money supply over the years has depended to a large extent on Government spending and fiscal deficit. Whenever fiscal policy was only moderately expansionary, money supply growth usually fell in line with the direction of monetary policy. Excessive growth in private sector credit had in recent years exerted much less influence on the behaviour of the money stock. This is illustrated by the experience of the last seven years. As the data in the accompanying Table illustrate, the growth rates in money supply were closest to target levels in those years such as 1986, 1987 and 1989 when net credit to Government rose only moderately (as in 1986 and 1987) or declined as in 1989. The sharp increases in money supply in 1988, 1990, 1991 and the first half of 1992 were associated with relatively large increases in net credit to Government. The impressive deceleration in money supply to 21.5 per cent in 1989 from 41.9 per cent in 1988 was substantially influenced by the decline of 21.1 per cent in net credit to Government. This performance would have been even better if the monetisation of oil receipts had stayed close to the expected level. The acceleration in money supply growth from 1990 onwards, on the other hand, reflected the substantial growth in Government expenditure and deficits, including debt service payments.

However, Government fiscal operations have not been the only source of significant deviations of money stock growth from targets. Above-target of private sector credit mainly from commercial and merchant banks also contributed to the large increases in 1988 and from 1990 onwards. In sum, the restrictive stance of monetary policy was reasonably achieved in terms of intermediate targets in 1986, 1987 and 1989 but not in 1988, 1990, 1991 and the first half of 1992. The data in the Table also indicate reasonable levels of compliance by banks in respect of the sectoral credit guidelines. In the last three years, the share of the priority sectors in banks' aggregate credit averaged about 5 percentage points below the specified 50 per cent in the case of commercial banks and exceeded the minimum as regards the merchant banks. The maturity distribution of merchant banks' credit, however, consistently diverged significantly from the prescribed levels, with the bulk of their credit being short rather than medium or long-term as specified. Both classes of banks consistently exceeded the minimum specified level of credit to small-scale wholly Nigerian-owned enterprises.

(b) Inflation

As indicated earlier, a primary focus of monetary policy is to facilitate growth at stable prices. It is acknowledged that non-monetary or cost-push factors have been present in the recent Nigerian inflation experience and, therefore, the relationship between money supply movements and the price level had not been on a one-to-one basis, to say the least. However, the association between the two has been quite remarkable. The inflation rate rose sharply from 10.2 per cent in 1987 to 38.3 per cent in 1988 as the growth in money supply rose also sharply from 13.7 to 41.9 per cent. The inflation rate increased further to 50.5 per cent in 1989, but the growth in money supply decelerated to 21.5 per cent and fell steadily after July 1990. By end-December 1990, the inflation rate was down to 7.5 per cent. Although money supply rose during the year by 44.9 per cent, the growth came only in the second half of the year and especially in the last quarter. In 1991 and first half of 1992, inflation rate stood at 13.0 and 27.0 per cent, respectively, as money stock increased by 32.6 and 26.5 per cent. Thus, it appears evident from this experience that money supply growth has contributed or facilitated the sharp increases in the inflation rate in some years and served as a restraining force in others.

Interest Rates

Following interest rate deregulation in August 1987, bank deposit and lending rates moved upwards on average by about 3 and 6 percentage points to 12.4 and 16.50, respectively, and hovered at about the new levels until late 1989. The Central Bank in line with the objective of deregulation and its perception of the financial situation at the time, raised the treasury bill rate and MRR to 14 and 15 per cent, respectively, with effect from 1st August 1987. At the end of December of that year, however, the CBN revised both these rates downwards to 12.75 and 11.75 per cent, respectively, in response to signals from the market. In January 1989, the Bank, once more, revised the MRR as part of a package of measures to combat the spiralling inflation rate.

Through all of these, bank deposit and lending rates remained relatively stable. In late 1989, all rates began to climb apparently as a result of the adoption of a series of anti-inflation measures including the transfer of public sector deposits from commercial and merchant banks to the Central Bank. Commercial and merchant banks' savings deposit rates rose on average by about 4 percentage points to 16.4 per cent, while the banks' prime lending rate rose on average by about 10 percentage points to 26.80 per cent. The wide differential between savings and lending rates became a matter of great concern to the monetary authorities and led to the accord reached with the banks in November 1989 as noted earlier, for fixed spreads between savings deposit and prime rates, between prime and maximum lending rates and between inter-bank rates and prime lending rates. Banks generally responded to the accord by raising both lending and deposit rates with some narrowing of the margins.

Although market interest rates were at historically high levels at the end of 1989, the inflation rate was even higher and real interest rates remained negative. It was expected that improvements in both bank liquidity and inflation would bring down interest rates to much lower levels. Inflation peaked in July 1990 at just under 50 per cent and bank liquidity generally improved. Despite both these developments, market interest rates showed no perceptible decline. By year-end, the inflation rate had come down to 7.5 per cent and all real rates had become substantially positive. It was this observed downward rigidity of market interest rates and the potential adverse impact of this on investment and growth that led to the interest rate measures taken in January 1991. In essence, these measures sought to relate lending rates to banks' cost of funds and to bring down lending rates by inducing a fall in deposit rates. Later developments showed that the benefits of this action were only marginal and the CBN had to revert to the pre-1991 practice with regard to interest rate determination.

Exchange Rate

Under the current floating exchange rate regime, the stability of the Naira exchange rate is a major objective of monetary policy. An inflationary expansion of money supply under the system, would not only exert an upward pressure on the domestic price level, but also a downward pressure on the value of the Naira. This would happen either as a result of an excessive expansion in the demand for imports and, therefore, foreign currency or because inflationary expectations alter the currency preferences of economic agents in favour of foreign currencies. In practice, this shows itself in the foreign exchange demand pressure on banks and a widening gap between the official and other markets for foreign exchange. The wider this gap becomes, the more intense the speculative pressure on the official market. Thus, while the large initial depreciations of the Naira in 1986 and 1987 were mainly the result of the previous overvaluation of the currency, subsequent movements in the exchange value of the currency have been influenced by the high level of aggregate demand and speculation.

Following the average nominal depreciations of 29.8 and 64.7 per cent in 1986 and 1987, the Naira depreciated by a further 20.2 and 39.0 per cent in 1988 and 1989 amidst the sharp increases in money supply growth and accelerating inflation. The deceleration in money supply growth towards 1989 coupled with the steady drop in inflation helped to stabilise the Naira which depreciated by only 8.1 per cent in 1990. The real Naira exchange rate showed an average depreciation of 67.5 per cent between 1986 and 1990, with the bulk of the decline, averaging 45.0 per cent, occurring in 1986 and 1987. The real exchange rate appreciated by 6.1 per cent in 1988 and depreciated by an average of 9.3 per cent yearly between 1989 and 1990. Given that the Naira float, like those of other currencies, has not been a clean float, there is need for caution in relating the movement in the Naira exchange value to movements in underlying factors. Nonetheless, the experience so far underscores the importance of money supply movements on the Naira exchange rate.

PART IV
CHALLENGES FOR THE FUTURE

The foregoing review and appraisal have shown that in spite of some gains made in reforming Nigeria's monetary management and banking culture through innovative policy measures, the most desired objectives, such as price stability and rapid growth with minimal unemployment, are still elusive. There is a new consensus among economy watchers in Nigeria that the problem is not so much in terms of formulating appropriate policies but rather in resolving the conflicts and negative side effects of policy measures which constrain policy implementation. These constraints constitute the major challenges for monetary and banking policies now and in the years ahead as examined below.

1. Rapid Growth in Domestic Liquidity

The relative calm which characterised the financial system in the first two years of the SAP has given way to some destabilising movements in domestic liquidity. This has adversely impacted on the naira exchange rate and aggravated inflationary pressure. Uncertainty about future tendencies has diverted assets holdings to financial instruments with short-term maturities and away from those with long-term maturities, thereby reducing the availability of funds for long-term investment. Besides, in a high inflationary situation, prices and costs are volatile and may send wrong signals to economic agents for efficient resource allocation. This underscores the importance of stabilization for the success of monetary and banking policies under the structural adjustment regime. One of the challenges in the years ahead is to halt the rapid growth in liquidity which has impacted adversely on the naira exchange rate and domestic price level. Although excess liquidity is linked directly with the monetisation of foreign exchange and rapid growth in aggregate credit, the real problems are those factors which influence these monetary aggregates. As already noted, the greatest problem in this respect is the financing of large government deficits by the CBN. An elimination of such deficit financing would bring stability to the money market. However, when it is realised that Federal Government debt service payments constitute the major source of government deficit, complete elimination of government deficit becomes difficult without substantial reduction in the stock of debt. If debt service is reduced substantially and deficit financing by the CBN stopped, excessive growth in domestic liquidity will be minimised. This development will in turn have some salutary effect on the naira exchange rate and inflation.

2. High Interest Rates

Another challenge posed to the authorities in the years ahead is the existence of a high interest rate regime. Although interest rate deregulation has stimulated competition and efficiency in resource allocation thereby paving the way for indirect monetary control, it has, nevertheless, encouraged high lending rates which could discourage investment in fixed plant and equipment. However, the high lending rates could have been lower than the current levels but for the oligopolistic structure of the system which permits a few banks to act as the dominant suppliers of funds to the market. Since a few banks have most of the funds, each action by the Central Bank to drain reserves from the system strengthens the bargaining power of these institutions, resulting in higher interest rates, even when there is excess liquidity in the system as a whole. The rise in the number of insolvent banks has worsened the situation. A less skewed distribution of reserves would have led to lower and less volatile rates of interest.

3. Financing of Federal Government Deficits by the CBN

The greatest problem which has reduced the effectiveness of current monetary and banking policies in Nigeria is the persistence of large Government deficit and its mandatory financing by the CBN. The financing of Government deficits by the CBN increases the monetary base and swells up the level of excess liquidity of the banking system. But excess liquidity is inconsistent with the principle of fractional reserve system and open market operations which constitute the basic elements of indirect monetary control that are being developed for effective monetary control under the current deregulated financial environment. The use of stabilization securities for mopping up excess liquidity has run into some problems because of the nature of the excess liquidity. Where, as in Nigeria, the deficit financed by the Central Bank constitutes the major source of excess reserves in the banking system, mopping up exercise for monetary control may prove unsustainable. Attempts at mopping up such excess liquidity through the issuance of stabilization securities tends to destabilise the money market and put upward pressure on interest rates although at present there exists no viable alternative. For these and other reasons, there is need to realign fiscal policy which has been substantially expansionary with monetary policy which should be necessarily restrictive in the current economic circumstances.

4. Mandatory Role of the CBN in Underwriting Treasury Debt Instruments

The mandatory role of the CBN in the underwriting of primary issues of government securities has continued to constrain its ability to regulate the reserves of the banking system. The Bank has had to underwrite new issues of treasury securities on occasions when the stance of policy would have required a reduction in its portfolio. The problem is likely to remain as long as rapid growth in government securities is allowed to continue while the size of institutional investors in the market remains limited.

Related to the limited share of institutional investors in primary issues of government securities, is the small size of the secondary market in these securities. The right and usual practice of banks to rediscount their holdings of government securities with the CBN makes it difficult for the Bank to regulate the reserves of the banking system. Action taken by the CBN to reduce the reserves of the banks will always be offset if the banks decide to rediscount their holdings of debt instruments with the CBN. This underscores the need to have an active secondary market outside the Central Bank where banks in need of liquidity could discount their holdings of government securities. The advent of Discount Houses, three of which had already received CBN's approvals-in-principle should remedy the situation.

5. Scarcity of Professional Staff

Largely as a result of the recent rapid growth in the number of financial institutions, the industry is presently beset with such problems as scarcity of professional staff, poor management, increase in the number and complexity of fraudulent practices and inadequate infrastructure. The dearth of managerial staff has resulted in frequent staff turnover, especially at the executive level and has exacerbated the problem of frauds, weak internal controls and frequent contravention of statutory regulations. All these have contributed to the rise in the number of insolvent banks. More intensive training programmes in the banking industry could assist in this regard. This is clearly a serious challenge to the financial sector managers.

6. Data Constraints

Another major constraint to the current monetary and banking policies, especially with the limited introduction of indirect monetary management, is that most of the required data are not yet available on weekly and daily basis while some of those available on monthly basis have uncomfortable time lags. Data from banks are obtainable mainly on monthly basis while weekly and daily series are not fully developed. One of the major reasons why these daily and weekly data are not readily available is the inadequate computerisation of the activities in the banking system. Although much progress has been made in this regard, there is need to step up efforts not only to computerise individual banks but also to develop an integrated electronic information system for the banking system as a whole. An important area where there is inadequate data is government fiscal operations which are needed by monetary policy makers for planning purposes. Consequently, the CBN relies on estimates in analysing government fiscal operations. Since the lags for some of the relevant data are large – sometimes spanning some years—the validity of the estimates get weaker over the years. Besides, there are other data series, such as GDP and inflation figures, generated outside the banking system, which monetary authorities require for planning purposes but cannot get promptly.

PART V

CONCLUDING REMARKS

In my concluding remarks, I intend to highlight what I consider to be some of the leading issues in macroeconomic management generally and monetary policy specifically, in Nigeria. In this exercise I shall attempt to anticipate some of your questions and concerns:

(i) The objectives of macroeconomic policy in Nigeria all through the years have been basically the same, namely: growth and development; price stability; balance of payments viability; employment generation; improvement in the standard of living; income redistribution etc. However, the priorities, focus and strategies have changed from time to time. Another valid general observation is that the country has the ability to formulate good policies on paper but inability to implement them. That is the "Achilles' Heel"–the missing link of macroeconomic management in Nigeria.

(ii) My experience in policy formulation and implementation has been humbling -- a unique learning experience -- on the basis of which I respectfully assert that there are no "quick fixes" nor magic formulae for solving intractable economic problems. Economic reforms do require time, persistent and consistent effort,

proper sequencing, sacrifices and patience, mass participation and democratisation, in addition to resources, in order to succeed.
Consequently, there is need for realism, pragmatism and flexibility in policy design and implementation. Periodic reviews and corrective action in the light of experience are necessary if policy implementation must remain relevant and on track i.e. consistent with the goals of policy and the priority needs of the country.

(iii) It should be stressed that given the circumstances of the country namely, the scarcity of resources, the high oil and import dependency and consequent vulnerability of the country to externally-generated shocks, the prevalence of rigidities and distortions and, above all, the record of failure of the past regimes of stringent trade and exchange regulations, there is no viable alternative to comprehensive, robust and sustained economic reform such as is being pursued under the aegis of the SAP. The alternative scenarios and frameworks, the most respectable of which is the AAF-SAP (African Alternative Framework to Structural Adjustment for Socio-Economic Recovery and Transformation), based as they are on the re-enactment of the regime of controls and protectionism (not even managed trade) as well as overly simplistic assumptions about the resource profile, appear rather quixotic in an age of increased internationalisation/globalisation of economic activities and generalised economic reforms with fuller rein on market forces.
Agreed, policy reviews, adjustments, fine-tuning and strategic repositioning in the light of experience are imperative. But these do not amount to policy reversals nor alternative programmes in themselves.

(iv) Liberalisation and deregulation are concepts which are often used without proper appreciation of their import. Certainly, in the Nigerian context, they do not mean a "free-for-all" regime, the absence of regulation. This is erroneous. Properly considered, the objectives of policy are "orderly" liberalisation and "guided" deregulation especially in the face of market inefficiencies and failures—markets, in fact, do get cornered and rigged. Consequently, there is scope for intervention by the regulatory/supervisory authorities to give direction and effect desirable correction but it should be stressed that such intervention should be well-informed.

(v) The exchange rate has been a topical issue and a matter of concern since the introduction of the SAP in September, 1986. The focus of concern has been the persistent depreciation and occasional instability of the exchange rate. This is understandable given the high import dependency of the country and the key role of the exchange rate in resource allocation, the determination of relative prices, macro-economic management etc. However, it should be stressed that the exchange rate is a price which, under a floating regime, is determined by the forces of supply and demand. Moreover, the exchange rate is largely a reflection of economic fundamentals, an index of the underlying strength and health of the economy. Seriously speaking, it cannot be fixed and sustained by administrative fiat otherwise each country would compete with the other in artificially raising its country's currency value if there was any real benefit to be derived from such an exercise. In this connection, I wish to quote the dictum of Prof. Jacques I. Polak, IMF Director of Research for over 20 years (1958 to 1979) namely, that: "No country has an advantage in sticking to a disequilibrium rate for its currency, and no country in the end manages to do so." Consequently, if we want the naira exchange rate to appreciate, we must work for it, must earn it through increased productivity, export more and import less etc.

(vi) Now to the issue of method or strategy. Some concern has been expressed over the use of "Shock Therapy" as against a gradualist approach in effecting necessary correction. The two areas where shock therapy has been applied are anti-inflation policy and exchange rate realignment or stabilisation. In Nigeria, there have been at least six instances when the shock therapy was applied:

- September 1986: exchange rate realignment through the introduction of the (S)FEM.
- 1986/1987: call -in of deposits with banks awaiting exchange cover or trade arrears refinancing.
- 1989 : transfer of public sector deposits from the banks to the CBN.
- 1989: abolition of the use of foreign guarantees and domiciliary account balances as collaterals for naira loans.
- 5th March 1992: 42% naira devaluation.
- mid- September 1992: massive issuance of stabilisation securities with concomitant surge in interbank and other rates of interest.

In all six instances, there was excessive money supply growth which destabilised the foreign exchange market and exerted enormous pressure on the exchange rate.
In view of time constraint, we cannot go into the details of the then prevailing situations

and what measures were taken. However, it is highly desirable to explain CBN's action in the two most recent cases of shock therapy.

(a) 5th March, 1992: The following adverse developments were noted:

- increasing parallel market premium to an all-time high of over 80%.
- serious and widespread malpractices and violations by operators including selling official forex in the parallel market to make windfall profits.
- inefficiency arising from multiple banking arrangements (e. g. banks compelling customers to make deposits which earned no interest).
- excessive demand for official forex because of implied huge subsidy.
- massive speculative activity.

(b) Mid September, 1992: The following conditions were discernible:

- destabilising increase in money supply and inflation rate.
- unsustainable increase in demand for forex from less than $100 million to about $180 million per week in less than one month.
- widening of parallel market premium.
- massive and wide-scale speculative activity by banks, foreign exchange users as long as Naira exchange rate continued to depreciate.

While in the first case, massive corrective exchange rate action in combination with some demand management initiative was taken, in the second case, massive demand management action was adopted. Each had its costs in terms of depreciation and concomitant surge in interest rates respectively but they were considered acceptable costs in order to re-establish normalcy and stability in a situation of serious emergency. In such circumstances, a gradualist approach was considered to be totally irrelevant and inappropriate as it was most likely to be subverted through further speculation and counter measures and, therefore, doomed to failure. For international comparisons I wish to cite the examples of Sweden, mid-September, and Britain, late October, 1992 which moved interest rates to 500% and 100% respectively in order to defend their currencies.

While I acknowledge that shock therapy has its costs and that it has not been as effective as it would have been if it had been accompanied by fiscal restraint and other complementary measures, I should stress that if the shock treatment was not applied, the situation would have got out of hand. Given the imbalances, distortions and other problems which constrain the conduct of monetary policy, the outcome could be optimal only by fluke. In such circumstances, it is better to talk of "satisficing" than of optimising. The focus of policy action, therefore, is the deliberate choice of that option which has the greatest net benefit for the economy.

(vii) Put differently but to the same effect, the conduct of Monetary Policy in Nigeria is a delicate balancing act involving rather tough policy choices and difficult trade -off's between policy objectives. It is severely constrained by lags, the problems of predictability and control and the divergence of fiscal operations from targets. We absolutely lack fiscal discretion, we simply have no responsibility or control over Government expenditure. That is why the tendency to blame the CBN for all the ills of the economy including fiscal slippages would have been laughable were it not so serious an error. Perhaps those who expect more from the CBN might give thought to granting greater discretion to the Bank with respect to macroeconomic policy management, with a strong, entrenched anti-inflation mandate as for example in New Zealand. But how feasible is this scenario at a time when some critics are calling CBN's autonomy to question and expressing concern about its alleged wide powers?

(viii) Doubts have been expressed from time to time on the adequacy of the regulatory/supervisory capacity of the CBN in the face of the phenomenal increase in the number of market participants and the large volume and sophistication of the financial services industry.

I wish to state that a lot has been done in recent years in enhancing not only the regulatory/legal arrangements but also in strengthening the in-house expertise and capacity of the CBN through recruitment and training of staff as well as computerisation of the Banking Supervision function and developing a comprehensive off-site surveillance framework for monitoring the performance of banks.

Moreover, in line with the far-reaching provisions of the CAMD and the BOFID which place enormous responsibilities on directors and the top management of banks with respect to corporate governance, it is expected that bank directors would take a more critical, on-going interest in monitoring the performance of their institutions not only with respect to the achievement of their corporate objectives but also the observance of relevant laws. In this connection, bank directors are expected to act in a selfregulating, quasi-auditing capacity.

Indeed, the achievement of an efficient, safe and sound banking system cannot be accomplished without the cooperation of the banks themselves. Consequently, all hands must be on deck. And when the banks violate the ground rules we penalise them. As a matter of fact we penalise banks all the time but we do not think that this is a matter to be published on the pages of newspapers.

(ix) The question is often asked as to who we owe our allegiance: the IFI's, the Bretton Woods Institutions, external creditors or to Nigeria. For the avoidance of doubt, I state that Nigeria is our constituency and it is to Nigeria we owe our allegiance. Our policies are entirely our responsibility; they are not externally imposed. However, as members of the World Bank and the IMF, our performance is subject to periodic and special reviews and consultation in an atmosphere of mutual accommodation and equality. Moreover, the external creditors do have a right to know how much we earn and how we are managing our resources if we are asking them for more generous concessions (e.g. debt cancellation) perhaps at the expense of their own tax payers.

(x) In the light of the present state of the country's economy after six years of SAP, the questions may be posed: where do we go from here? Is economic development in Nigeria an impossible task?
Viewed from both internal and global perspectives, we have come a long way. Significant achievements have been made but the unfinished agenda and the list of concerns are formidable.

(xi) Consequently, the following new initiatives are called for:

(a) more robust external debt management to secure more favourable terms, debt and debt service reduction.

(b) improved productivity and qualitative growth.

(c) enabling macroeconomic and policy environment.

(d) export for survival, recovery and growth.

(e) credible system of rewards and penalties including poverty alleviation measures (social safety nets) redistributive equity especially in sharing the burden of structural adjustment.

(f) enhanced implementation of policy measures.

(g) fiscal viability– restraint, prudence, austerity and improved ability to tax and collect revenue.

(h) channelling the elements of the Nigerian factor (a euphemism for the worst in the Nigerian) to positive national endeavours and goals.

(xii) Now to the prospects for monetary policy. The prognosis, perhaps a credible scenario, for the Third Republic is that although the country would continue to contend with the problem of the fiscal deficit, pressures on the domestic price level, the balance of payments and the naira exchange rate, a more stable regime would emerge in the medium term. This scenario is posited on the evolution of a monetary policy framework which relies increasingly on indirect instruments and whose design and conduct become more sophisticated and confident and less episodic and cataclysmic. Then, fine-tuning which involves small changes or adjustments, rather than path-finding, involving large disturbances and oscillations would characterise the conduct of monetary policy. Another important assumption is that in recognition of the fact that our economic problems have deep fiscal roots, a less inflationary way of financing the large fiscal deficit through non-bank sources would be found. Ultimately, fiscal viability, involving the substantial reduction or elimination of the fiscal deficit (a function of both revenue mobilisation and expenditure control measures) would have to be achieved if domestic price, exchange rate and interest rate stability and therefore, meaningful growth, are to be attained.

(xiii) I also expect a more efficient, sound and stable banking industry –one that is more customer oriented and responsive to the needs of the country. This state of affairs would arise from the implementation of the prudential guidelines, the institution of more robust supervisory remedies to deal with the problems of distressed banks, and the emplacement of a more level playing field with significant reduction both in arbitrage opportunitiesand the concomitant rent-seeking activity- and in the discretion (and I dare say indiscretion) exercised by individual players—a moderation of the prevailing economic Darwinism.

(xiv) As economists there is an urgent need for all of us to return to the micro economic foundations of our discipline. For a better comprehension of how things work in real life under the prevailing market-based system there is need to fully understand concepts such as marginalism, opportunity cost, utility, economic efficiency, consumer's surplus, convertibility, purchasing power parity, market equilibrium, oligopolistic pricing, collusion, the theories of the second best, rational expectations, "crowding out", the price auction model, social choice, satisficing, the functioning of the informal sector (underground economy). Greater attention should also be given to Political Economy with respect to the analysis of economic power, its sources, limits, uses and abuses as well as redistributive equity, social safety nets etc.

(xv) Moreover, the need for close collaboration between policy economists in academia and policy formulators and practitioners in Government for mutual clarification and strengthening is greater now than ever before. There is also an urgent need for the design of a macro-econometric model for policy formulation and evaluation.

(xvi) Finally, I stand before you to acknowledge that we are not infallible. Indeed, it would be naive and dishonest to claim otherwise. While I consider that we have enormous scope for improvement, I at times feel desolated that our problems have tended to be overstated while our performance in the conduct of monetary and banking policies has been consistently understated. This is, however, not a call for conceit or complacency. It is a call for greater understanding and support from academia through rigorous, objective and constructive appraisal of policy measures and proffering credible alternatives. On this challenging note, I conclude my presentation.

2ND DECEMBER, 1992

TABLE

MONEY AND BANKING STATISTICS

	1985	1986	1987	1988	1989	1990	1991	First Half 1992
(A) Money and Credit (=N= Million):								
1. Money Supply (M1)	13,267.8	13,105.0	14,905.9	21,148.6	25,697.6	37,233.7	49,364.5	62,463.8
2. Quasi Money	10,550.8	11,487.7	15,088.7	21,631.7	20,525.3	27,699.0	36,788.0	45,876.7
3. Aggregate Credit (net)	32,680.3	36,820.3	42,082.0	52,060.5	52,320.2	57,675.0	83,823.7	92,513.1
4. Credit to Government (net)	18,980.1	19,455.3	22,265.0	26,970.7	21,557.3	21,043.0	38,498.5	41,781.2
5. Credit to the Private Sector	13,700.2	17,365.0	19,817.0	25,089.8	30,762.9	36,631.0	45,325.2	50,731.9
(B) Growth in Money and Credit (%):								
1. Money Supply	17.6	1.2	13.7	41.9	21.5	44.9	32.6	26.5
2. Aggregate Credit (net)	5.0	12.7	14.3	23.7	1.5	26.8	45.3	10.4
3. Credit to Government (net)	4.3	2.5	14.4	21.1	— 20.1	40.8	82.9	8.5
4. Credit to the Private Sector	5.9	26.8	14.1	26.6	22.6	19.1	23.7	11.9
(C) Sectoral Distribution of Credit (%):								
1. By Commercial Banks to Priority Sectors:								
(i) Target	—	—	50.0	50.0	50.0	50.0	50.0	50.0
(ii) Achieved	—	—	41.9	45.4	46.0	48.7	51.4	52.6
2. By Merchant Banks to Priority Sectors:								
(i) Target	—	—	50.0	50.0	50.0	50.0	50.0	50.0
(ii) Achieved	—	—	45.7	57.8	54.8	57.3	58.1	59.7

REFERENCE

1. Belongia, Michael T., Foreign Exchange Intervention by the Unites: A review and Assessment of Issues, Federal Bank of St. Louis Review, Vol. 74, No. 3 May/June, 1992.
2. Burns, Arthur F., The Anguish of Central Banking - The 1979 Per Jabson Lecture.
3. Central Bank of Nigeria, Monetary and Credit Policy Guidelines, 1987 - 1992.
4. Central Bank of Nigeria, Prudential Guidelines For Licenses Banks, November 1990.
5. Cole, David C., & Slade, Betty F., "Monetary Policy Regimes in East and South East Asia", Preliminary Draft Paper presented to ODI/HIID Conference on Improving Monetary Management in Africa and Asia, held at Regent's College, London, Sept. 9 - 11, 1991.
6. Duesenbery, James & Mcpherson, Malcon F., Monetary Management in Sub-Saharn Africa; A Comparative Analysis, (AER Discussion Paper No. 7, 1991).
7. Federal Republic of Nigeria, Central Bank of Nigeria, Decree No. 24, 1991.
8. Federal Republic of Nigeria, Banks and Other Financial Institutions, Decree No. 25, 1991.
9. Federal Republic of Nigeria, Nigerian Deposit Insurance Corporation, Decree No. 22, 1988.
10. Federal Reserve Bank of New York, "Monetary Policy of Open Market Operations, in 1991", Federal Reserve Bank of New York, Quarterly Review, Vol. 1 Spring 1992.
11. Federal Reserve Bank of Richmond "A Monetarist Model of Exchange Rate Determi nation", Economic Review, January/February 1977.
12. Federal Reserve Bank of Richmond, "A Monetarist Process", Economic Review, Nov/ Dec 1985.
13. Federal Reserve Bank of Richmond, "On Cost-push Theories of Inflation, "Economic Review, May/June, 1972.
14. Klamer, Arjo (ed), Conservations With Economists, Rowman & Allanheld, 1983.
15. Muelendylee, Ann Maria, US Monetary Policy & Financial Markets, Federal Reseve Bank of New York, December 1989.
16. Thurow, Lester C., Danguerous Currents - The State of Economics (1983).