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APPRAISAL OF RECENT EXCHANGE RATE POLICY MEASURES IN NIGERIA

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The Nigerian economy was visibly distressed prior to the introduction of the ongoing economic reform programme. External reserves were relatively low. The accumulation of payments arrears pushed the country's debt stock to uncomfortable level. These tended to completely erode the country's international credit worthiness thereby constraining its accessibility to international credit. Real output declined and level of unemployment remained high. The naira exchange rate was grossly overvalued with adverse consequences for the balance of payments. A comprehensive macro-economic reform programme — the Structural Adjustment Programme (SAP) — was therefore introduced in 1986 to eliminate the observed distortions in the economy and to predispose it to sustainable growth. A major strategy in the reform process is the determination of a realistic naira exchange rate through the operation of market forces. The new approach contrasted sharply with the previous system where the naira exchange rate was administratively fixed and remained relatively rigid. The Second-tier Foreign Exchange Market (SFEM), an institutional and auction-based framework for achieving a realistic naira exchange rate has since its inception in 1986, been continually fine-tuned to enhance its efficiency. The new exchange rate policy was designed to achieve internal and external balance and improve the efficiency of resource allocation. Specifically, it was aimed at loosening the stranglehold of oil on the economy, reduce the dependence on imports, increase non-oil exports, eliminate payments arrears and overvaluation of the naira exchange rate. The impact of the new exchange rate policy on the economy has been mixed. On the one hand, real output increased in the period 1986—1990 contrasting with the developments in the preceding five years. The external balance was maintained. The contribution of non-oil to total exports increased. Trade and payments arrears were eliminated. The proportion of repatriated earnings as well as the level of autonomously financed imports increased in 1989 and 1990. The list of non-oil exports has increased to include non-traditional exports such as cars, charcoal and petroleum products. The high parallel market premium has been drastically reduced. However, grey areas remain. The parallel market premium has widened in recent months. The pressure on the naira exchange rate has persisted, capacity utilization in the industrial sector remained at its nadir reflecting high cost of credit and the depreciation of the naira exchange rate. To ensure the stability of the naira exchange rate, the level of fiscal deficit should be drastically reduced so as to reduce the excess liquidity in the system. The interest rate should be deregulated. This will enhance capital inflow and reduce the ability of speculators to finance their operations. Efforts should be intensified at improving the domestic supply situation so as to dampen inflationary pressures. To reduce speculation against the currency, the supply of foreign exchange should be improved through a more aggressive export policy by the private sector and more comprehensive rescheduling of the country's external debt.

Prior to the introduction of the ongoing economic reform programme in 1986, the Nigerian economy was in a highly traumatised state. The sharp fall in oil price and the consequent decline in foreign exchange receipts were such that the economy could not meet its international financial commitments. However, imports of goods and services could not be scaled down immediately as there was a strong perception then that the cash-flow problem was temporary. Consequently, unpaid trade bills and payments arrears accumulated. This, along with the precarious external reserves position severely compromised Nigeria's credit worthiness abroad to the extent that, for some time, access to international credit was constrained. Efforts were, however, made to tackle some of these problems. These were embodied in the economic stabilization measures of 1982. With respect to exchange rate policy which is the focus of this paper, an accelerated depreciation of the naira exchange rate was commenced. However, the overvaluation of the

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exchange rate persisted as the ratecontinued to be fixed administratively. By and large, the exchange rate policy in force then lacked dynamism and proper articulation. The result was that the rate remained grossly overvalued and was propped up by stringent trade and exchange control system. As foreign exchange was not made readily available to all users at the prevalent low official price, the parallel market blossomed. The parallel market premium — an indication of the misalignment of the exchange rate — was about two hundred per cent during the two years preceding the introduction of the Structural Adjustment Programme (SAP) in 1986. The overvaluation of the naira exchange rate had deleterious effects on the economy. It cheapened imports and stunted the growth of non-oil exports with adverse consequences for the balance of payments. On the domestic front, the severe reduction in foreign exchange receipts made it extremely difficult for a largely import-dependent industrial sector to sustain its output. The result was severe underutilization of capacity coupled with high rate of unemployment. Inflationary pressures also persisted largely as a result of financing of huge fiscal deficit.

At the end of 1985, therefore, the economy was on the brink of collapse. It thus became clear that what was needed was a comprehensive macro-economic reform programme that would address the structural imbalances in the economy. The Structural Adjustment Programme (SAP) was therefore introduced in 1986 to chart a new course in macro-economic management. The major objectives of the Programme include restructuring and diversifying of the production base of the economy, achieving durable fiscal and balance of payments viability, among others. Some of the major strategies designed to achieve the above policy objectives include restructuring of tariff to protect industry and agriculture, removal of elements of subsidy on goods and services provided by the public sector. Of major strategic importance in the nexus of policy were the maintenance of a viable and realistic naira exchange rate, and the liberalization of trade and payments system. At the inception of the SAP, the vision of the economy that the authorities had in mind was a highly deregulated one where market forces would be increasingly relied upon to direct economic activities.

The institutional framework for achieving a realistic naira exchange rate was initially the Second-tier Foreign Exchange Market (SFEM) which is an auction-based market. The SFEM has undergone several changes although the basic objectives of the new exchange rate regime remained the same. In recent times, however, many people have begun to question the efficiency of the new policy thrust because of the persistent depreciation of the naira exchange rate, the persistent wide divergence between official and parallel market rates, the slow response of non-oil exports to the new policy regime, the slow pace of export diversification and the low level of direct foreign investment. These have called into question, the appropriateness of the modalities of the current exchange rate policy. In response to these criticisms and conscious of the key role which the exchange rate plays in the economy, the naira exchange rate has been kept under constant surveillance by the authorities who have continued to seek ways of ensuring that a realistic rate is achieved.

It is the purpose of this paper, therefore, to review and appraise the exchange rate policy measures, especially the most recent ones. To place the analysis in its

proper perspective, the paper is divided into five sections. Section I articulates the conceptual and theoretical framework and contains a review of current naira exchange rate policy. Section II outlines the policy measures undertaken so far while the appraisal of the policy measures is attempted in Section III. Section IV suggests measures that would ensure a viable and stable naira exchange rate. The last section contains the summary and conclusions.

SECTION I

CONCEPTUAL FRAMEWORK

In the literature, many factors are usually specified as influencing the real exchange rate. These include, differentials in inflation rate, interest rate, growth in national income between one country and another as well as the incidence of speculation. The factors are integrated into exchange rate models. Some of these models including the traditional flow model, monetary model and the portfolio-balance model are reviewed briefly as follows:

The Traditional Flow Model

According to this model, the exchange rate is determined simply by the forces of supply and demand for foreign exchange. The exchange rate is in equilibrium when supply equals demand. The current account imbalance is offset by a net flow of capital in the opposite direction. A current account surplus is financed by acquisition of financial assets abroad or outflow of capital. Similarly, a deficit is financed by an inflow of capital. The current account is assumed to be determined by changes in relative prices and real income. Increases in domestic prices relative to foreign prices lead to exchange rate depreciation. This is because increases in the domestic price level feed into costs thereby making exports costly and highly uncompetitive. Consequently, the supply of foreign exchange is constrained. Imports on the other hand, increase since the inflation ridden economy is a more profitable place to export to. If imports are very inelastic, import payments increase thereby increasing the demand for foreign exchange. Under this model, increases in real income cause exchange rate to depreciate because such increases tend to increase demand for imports with negative impact on the current account but with no offsetting increase in capital inflow. The model posits that an increase in domestic interest rate relative to the foreign interest rate causes an appreciation of the exchange rate through induced capital inflow. The model prescribes that a country that intends to strengthen its exchange must therefore raise interest rate, lower prices and reduce real growth. An important drawback of this approach is that it ignores the relevance of the asset market. The model prescribes that a country can continue to run a current account deficit indefinitely and merely finance such deficit through capital inflow into the deficit country induced by higher interest rates. The model therefore assumes that foreigners will accumulate the deficit country's domestic assets indefinitely. In such a situation the stability

condition for financial asset accumulation by foreigners is neither established nor feasible. The defect of the traditional flow model is partially remedied under the monetary model.

Monetary Model

Broadly, the monetary model tries to explain changes in exchange rates in terms of changes in the demand for and supply of money between two countries. According to this model, an increase in money supply causes the exchange rate to depreciate as a result of inflationary pressures so generated. An increase in real income, with a fixed nominal money supply, causes prices to fall leading to an appreciation of the exchange rate. An increase in domestic interest rate lowers money demand, raises prices (with a given stock of money). The increase in prices leads to the depreciation of the exchange rate. It can be seen from the above, that although the traditional flow and monetary models specify the same factors as affecting the exchange rate, the results are in the opposite directions. The former predicts that increase in real income and interest rate lead to exchange rate appreciation. However, they cause the exchange rate to depreciate in the latter. One of the criticisms of the monetary model is the assumption that domestic and foreign bonds are perfect substitutes. If the two assets are not perfert substitutes, then account must be taken of the differences in their prices and yields. The problem is addressed by the portfolio balance or asset-disturbance model.

Portfolio-Balance Model

The portfolio-balance model assumes that residents distribute their wealth among three forms of assets: monetary base, domestic bonds and foreign bonds. The exchange rate is in equilibrium when the holdings of these assets are in their desired proportion. An increase in domestic wealth may arise either from increases in monetary base, holdings of government bonds or from the current account surplus. An increase in wealth increases the demand for foreign bonds or assets leading to a depreciation of the exchange rate as a result of capital outflow so generated. However, an increase in private sector holdings of government bonds (increase in domestic government debt) drives bond prices down and raises interest rate. This causes an appreciation of the exchange rate. Thus, an increase in domestic government bonds has an uncertain effect on the exchange rate. The exchange rate may appreciate or depreciate, depending on the relative strengths of the substitution and income effects. The exchange rate will appreciate if the substitution effect is stronger. On the other hand, it will depreciate if it is weaker than the income effect. A major criticism of the asset-disturbance model is that it ignores the fundamental determinants of trade, role of expectations as well as the role of purchasing power parity.

Purchasing Power Parity (PPP) Theory

The Purchasing Power Parity (PPP) theory attempts to explain the equilibrium value of the exchange rate in terms of inflationary differential between two

countries. The theory assumes that exchange rate of currencies of two countries move in a manner that seeks to offset the inflation differential between the economies thereby maintaining the real purchasing power of either currency in the other economy. There are two variants of this doctrine, the absolute and the relative versions. The absolute version states that the equilibrium exchange rate between domestic and foreign currencies is equal to the ratio of domestic to foreign prices. The relative version states that changes in the equilibrium exchange reflects changes in domestic and foreign prices. The absolute and the relative versions are defined thus:

$$PPP^A \quad = \quad \frac{P_t}{P^*_t} \quad \ldots\ldots\ldots\ldots \quad (1)$$

$$PPP^R \quad = \quad E_o \quad \frac{P_t}{P^*_t} \quad \ldots\ldots\ldots\ldots \quad (2)$$

Where P_t =   current price level in domestic economy

P^*_t =   current price level in foreign country

PPP^A =   current absolute PPP   (exchange rate measured)
(as units of foreign   )
(currency per unit of   )
(domestic currency   )

PPP^R =   current relative PPP

E_o =   nominal exchange rate in base period.

Given the basic assumptions that the shortrun PPP tends towards the longrun PPP and that the PPP is the longrun equilibrium exchange rate, then

$$V \quad = \quad \left(\frac{E_t - \hat{E}_t}{\hat{E}_t} \right) \quad x \quad 100$$

Where V =   magnitude of overvaluation where
(+)   indicates overvaluation
(-)   " undervaluation

E_t =   nominal official exchange rate in current period

E_t =   equilibrium exchange rate

The concept of the PPP has been one of the most useful building blocks in exchange rate determination as well as in policy formulation especially in flexible exchange regimes. Since the PPP theory was first propounded in the 1920s by Gustav Cassell, economists have continued to debate whether the PPP holds in the short-run, long-run or not at all. In the 1920's during the brief period of floating regimes, estimates validated the PPP hypotheses that the elasticity of exchange rate with respect to the price ratio was about unity. However in the 1970's, short-run changes in exchange rate did not reflect changes in price differentials. The debate has therefore shifted to whether the PPP holds in the long-run. A major problem in determining the validity of long-run PPP is the concept of the long-run itself. Empirical results on the validity of long-run PPP have been mixed. Although Frankel could confirm the validity of the PPP hypothesis in the 1920's, he could not do so in the 1970's. However, Lothian (1989), using data covering over 100 years for Japan, US, UK and France found that the real exchange rate tended to return to its long-run equilibrium. Thus the determination of the empirical validity of the constancy of the long-run equilibrium PPP continues.

The dismal performance of the PPP hypothesis in the short-run is due to a number of factors whose consideration may help to explain the deviation of current exchange rate from its equilibrium. First, the equilibrium value of the exchange rate is influenced by the choice of the base year, structural shift in the economy and changes in relative prices, the proportion of traded to non-traded goods in the price index as well as by inflationary expectations and speculation. Indeed some economists have postulated that the deviation from equilibrium may reflect the size of speculation. Also, national prices do not strongly correlate with asset prices such as exchange rate and stock market prices. This is because commodity prices are "sticky" reflecting, for example, finite nominal contracts. Exchange rates, on the other hand, being the price of durable asset (money) reflect changes in expectations which are in turn influenced by current events. These events include uncertainty about future course of economic and political events which induce sharp changes in expectation. The fact that these events cannot be predicted implies that exchange rate movements assume the nature of "random walk". If this is so, then the long-run PPP does not hold. Studies by Adler, Lehmann etc. rejected the notion of long-run PPP. However, Lothians (1989) using data covering over 100 years, found that real exchange rates tended to return to their long-run equilibrium values. Under these circumstances of conflicting results, policy makers must look more closely at factors that cause the exchange rate to deviate from its long-run equilibrium value.

Despite its deficiencies, the PPP has been used in this analysis as one of the criteria for evaluating the current naira exchange rate policy in Nigeria because of its simplicity and operational tractability. The results of the PPP calculations are contained in Table 4.

Equilibrium Exchange Rate

As has been noted elsewhere, exchange rate adjustment (ERA) is undertaken to achieve certain macro and micro-economic objectives. These objectives include the achievement of balance of payments viability, the maintenance of internal balance and the promotion of efficiency in resources allocation. Therefore, an equilibrium exchange rate may be defined as that real rate which promotes the achievement of external balance in a manner that is consistent with the other targets of economic policy. In this context, equilibrium exchange rate is synonymous with an appropriate or realistic rate. However, it should be distinguished from the nominal rate which clears the foreign exchange market at the auction session. This is because equilibrium in the foreign exchange market does not ensure that the goods and money markets are in equilibrium. Thus equilibrium in the foreign exchange market could be sub-optimal in the sense that full employment of resources might not be guaranteed.

Real/Nominal Exchange Rate

The nominal exchange rate is the exchange rate as generally understood and quoted. Simply, it is the price of one currency in terms of another. It can be quoted as so many units of domestic currency per unit of foreign currency or conversely. In Nigeria, it is commonly quoted as so many units of Naira per unit of foreign currency (Naira per dollar for example). In the United Kingdom (UK) it is quoted as so many units of foreign currency per unit of pound Sterling. The concept of nominal exchange rate is important in many respects. It determines the cost of imports to importers and the level of revenue to exporters. For policy purposes, it can be used as a variable to compensate for movements in differential rates of inflation.

Real Exchange Rate

However, in measuring a country's price competitiveness, the real exchange rate is employed. This is defined as the nominal exchange rate deflated by the index of relative inflation rates.

By definition,

$$RER = E_t \bigg/ \left[\frac{(P)}{(P^*)} \right] = E_t \cdot \frac{P^*_t}{P_t}$$

Where   RER = Real exchange rate

E_t = Nominal exchange rate in current period

P_t = Price of domestic tradeable good in current period

P^*_t = Price of foreign tradeable good in current period.

In practice, the Consumer Price Index (C.P.I.) is used as proxy so that the international price competitiveness is measured as relative movements in C.P.I.

measured in the common currency. In countries where statistical coverage and sophistication are high, the wholesale price index (WPI) (which usually has a high proportion of tradeables), domestic and foreign unit labour costs deflated by a common currency, are used. In most developing countries, including Nigeria, the CPI is used as proxy as a result of lack of other price indices. It is thus clear that the real exchange rate and a country's international competitiveness are affected by the nominal exchange rate and the cost/price relationship.

Real Effective Exchange Rate (REER)

The real effective exchange rate (REER) is a trade-weighted average of real exchange rate between one country and its trading partners. The weights reflect the proportion of trade with a country's trading partner. The weight could be import or export biased or a combination of the two.

$$\text{REER} = \text{trade-weighted RER}$$

$$= \sum_{i=1}^{m} S_i \frac{E. P^f}{P^d}$$

Where

S_i = weights, either imports or exports or sum of imports and exports.

Nominal Effective Exchange Rate (NEER)

The nominal effective exchange rate (NEER) is the weighted average of nominal exchange rates between one country and its trading partners. The NEER and REER of the Naira used in this review were obtained from International Financial Statistics, a publication of the International Monetary Fund (IMF). For policy makers, exchange rate policy in practice, requires the adjustment of the nominal rate to achieve a REER equilibrium. While this is possible in the short-run, it is debatable if the long-run equilibrium value of the real exchange rate can be properly targetted given the fact that the long-run equilibrium value may not be stable.

Objectives of Exchange Rate Policy in Nigeria

The objectives of exchange rate policy are generally the same as those of economic policy, viz increase in output and its optimal distribution. These may be termed the ultimate objectives. The proximate objectives, defined as those that can be more directly influenced by exchange rate policy include the achievement of internal and external balance as well as increasing the efficiency of resource allocation. The objectives need further elucidation since it is against these that exchange rate policies can be appraised. External balance does not imply that the current acccount must be balanced at every turn. In fact, it may be desirable and feasible to deliberately unbalance the account and allow capital inflow. So, the

attainment of external balance implies the achievement of a sustainable current account deficit, that is, a current account deficit financed in the short-to-medium term by a realistic inflow of capital. This qualification is necessary since it is neither desirable nor feasible to run current account deficit in the longer term. Internal balance implies the achievement of high level of employment consistent with a tolerable rate of inflation. Here, the trade-off between inflation and the level of employment should be carefully evaluated since a consistently high pressure on demand may increase employment but at a cost of higher rate of inflation. Efficiency of resource allocation implies that resources move to areas where their impact on real output will be greatest. Implicit in efficient resource allocation is the need to realign relative prices so as to remove distortions which inhibit growth.

In Nigeria, the specific objectives of exchange rate policy include:

(i)   the achievement of balance of payments viability in the medium term;

(ii)   reduction of dependence on imports and oil exports;

(iii)   diversification of the export base;

(iv)   reduction or elimination of incidence of capital flight;

(v)   elimination of payments arrears;

(vi)   encouraging local production of inputs;

(vii)   correction of the over-valuation of the naira exchange rate through the achievement of a realistic rate, and

(viii)   reducing or eliminating the parallel market premium thereby improving resource allocation and enlarging the scope of legitimate foreign exchange transactions.

A necessary condition for the achievement of the above objectives is that the exchange rate should be as stable as possible. Stability in this instance does not imply that the rate should be static. Stability should be interpreted to permit variability of the rate in response to changes in economic fundamentals which may alter the equilibrium rate. Economic fundamentals include changes in relative prices, international terms of trade and other factors that impinge directly on the price competitiveness of the domestic economic agents and products. Stability of the exchange rate ensures that economic agents can plan ahead without fear of escalating costs while at the same time, unit costs can stabilize and even decline. Also, because stability could have positive impact on inflationary expectations, it enhances the usefulness of money and the credibility of the currency. The objective of reducing the parallel market premium has become important in the Nigerian situation given the existence of that market alongside the official-legal markets.

Since these markets are somehow linked in a way, divergence of one rate from another implies that resources are not rationally priced or employed efficiently. Thus, a high parallel market premium is a clear indication of the extent of misalignment of the exchange rate. The point is not that the differential should be zero but that it should be as small as possible reflecting only transaction costs and not speculative bubbles. However, while it is impossible to ignore the rates ruling in the parallel market, undue obsession with that market might amount to chasing the shadows because the market is estimated to comprise only a small segment of the entire foreign exchange market. The market, having operated for a long period of time, has become deeply entrenched. In any case, with the operations of the Bureaux de Change being more effectively felt and further liberalization of the trade and payments system, the importance of the parallel market may be considerably reduced. Being a residual market, it will tend to survive unless the problem of large excess demand for foreign exchange in the economy can be contained. It may be noted here also that the survival of the market has been facilitated by leakages from the official market. Consequently, the goal should be to ensure that the parallel market premium declines and probably disappears over the long-term.

SECTION II

RECENT EXCHANGE RATE DEVELOPMENT AND POLICY MEASURES

In this section, attempts will be made to discuss the policy measures taken since the commencement of SAP in 1986. However, the review will focus largely on the most recent ones, that is, those measures starting with the introduction of the interbank foreign exchange market (IFEM) in 1989. While the basic framework for operating the exchange rate policy remains unchanged, the modalities have been continuously fine-tuned through various changes in operating rules and complementary measures in monetary and fiscal policies. These were also geared towards achieving the desired objectives stated earlier.

The Dual Exchange Rate Regime

The naira was floated on the 26th of September, 1986 in what was referred to as the Second-tier Foreign Exchange Market (SFEM). The second-tier exchange rate applied to all transactions except debt service payments, embassy expenses, subscriptions to international organisations and settlement of transitional or pre-SFEM transactions. The first-tier exchange rate, was applicable to all excluded transactions. The authorised dealers were required to bid for foreign exchange subject to their allocation ceilings and at prices that appeared to them to approximate the market perception of demand for and supply of foreign exchange. To ensure equity, banks were categorized into two, namely, big and small. Big banks could purchase a maximum of 10 per cent, while small ones purchased a maximum of 7 per cent. Under this arrangement, many banks did not win at the auctions. To increase the number of successful winners, the banks were classified

into big, medium and small with each category entitled to 5, 2 and 1.5 per cent, respectively. During the first two auctions in the second-tier foreign exchange market (SFEM), the exchange rate was determined by averaging the successful bid rates. After the first two biddings, the average rate method was replaced with the marginal rate pricing which had the potential of reducing the observed continuous depreciation of the currency. To introduce more professionalism into the system of bidding that is, ensure that bids reflect economic fundamentals, the Dutch Auction System (DAS) was put in place in April, 1987. Under the system, dealers were allocated funds at their bid rates. The objective was to reduce the propensity for high bids. The effect was a multiplicity of bid rates. However, the official exchange rate was determined at the margin. In addition, the bidding period was changed from once a week to once in a fortnight.

Later in July 1987, the dual exchange rate system was abolished with the merger of both the first and second-tier rates. All transactions, thenceforth, were to be priced at the second-tier rates. This was to eliminate the subsidy on first-tier transactions, rationalise the allocation of foreign exchange and eliminate multiple currency practices. However, transitional transactions continued to be excluded from this arrangement. The autonomous foreign exchange market blossomed in 1988. Under this arrangement foreign exchange acquired by the banks on their own initiative could be sold by them at rates determined also by them, subject however, to a maximum spread of one per cent. The objective was to encourage non-oil foreign exchange inflow to banks and thereby relieve the pressure on the official market. The autonomous market was abolished in January, 1989 as a result of distortions it induced in the system as well as its inability to foster the stability of the naira exchange rate in the official market.

The Inter-Bank Foreign Exchange Market

The inter-bank foreign exchange market thus came into operation in January, 1989. The objective of this measure was to unify the rates in the official and autonomous segments of the market so as to reduce distortions inherent in the old system. The operations were conducted on a daily basis. The exchange rate was determined by using one or a combination of the following:-

(i)   Weighted average of all quotations submitted by banks; (individual bank's quotations weighted by amount demanded.)

(ii)   Simple average of all quotations submitted by banks;

(iii)   Highest and lowest banks' quotations provided the latter does not depreciate by more than 2 per cent when compared with the rate that emerges in (ii) above; and

(iv)   Intelligence reports on exchange rate movements during the previous day both in inter-bank market and in some world financial centres.

For purposes of determining the amount of foreign exchange that should be

allocated to each bank, all dealing banks were classified into four groups and ranked from biggest to smallest. The classification was based on the weighted average of a number of factors which included the banks' levels of net assets, net profit, loans and advances, and deposit liabilities. The proportion of total allocations that went to each group and bank was not immutable but changed to reflect the number of new banks that came into the market for the first time as well as the amount of foreign exchange the Central Bank was prepared to put into the market. In determining the amount to be allocated to banks generally, the Central Bank took into account the level and stability of foreign exchange inflow as well as the stock of contingent liabilities of the monetary authorities.

Another practice in the operation of the market was that dealers bought foreign exchange on their own account instead of on behalf of their customers as was the case previously. This practice was predicated on the need to allow the banks cater for the interest of their customers in their branches nationwide. After the allocations had been taken up, each bank's account with the Central Bank was debited with the naira equivalent of the allocations. For this purpose, the CBN selling rate which was usually 0.5 per cent above the market rate was applied. Dealers were not allowed to use funds so acquired for inter-bank transactions or for parallel market operations. Thus, all banks that came to the market were allotted their share of total allocations.

The dealing banks submitted bids on their own account, on a daily basis, to the Central Bank. The individual bids, which were not to exceed the maximum which each bank was entitled to, were arranged in descending order of bid rates. The bid rate of the bank that cleared the market represented the cut-off point. Though the bid rates influenced the determination of CBN's "effective" rates, the criteria for determining the naira exchange rate were not unique. However, once the rate was determined, the CBN selling rate was regarded as a base rate by the banks.

Bureaux De Change

One important policy action taken in 1989 was the licensing and commencement of operation by bureaux-de-change in the economy. These are institutions specifically licensed to undertake foreign exchange transactions on a relatively small scale. Their operations are aimed at enhancing macro-economic management, through broadening the scope of legitimate foreign exchange transactions, improving fiscal efficiency, provision of the free access to foreign exchange to small users in a convenient and informal manner, thereby filling gaps under the existing arrangements. Although not in the instrument setting them up, the bureaux-de-change could also provide competition to the parallel or unofficial market and possibly marginalize it.

Re-Introduction of the Dutch Auction System

On December 14, 1990, the Dutch Auction System (DAS) was re-introduced to check, it was hoped, the observed deficiencies in the market. These deficiencies included foreign exchange hoarding, submission of multiple bids thus inflating the demand for foreign exchange. Under the DAS, however, banks had to pay for

foreign exchange allocations at their bid rates. Also, the accounts of the successful bidders with the Central Bank were to be debited automatically with the naira equivalent of the bank's dollar allocations. Consequently, the onus rested on each bank to adequately fund its account before coming to the market. Banks which ignored these guidelines were to be automatically barred from participating in the market for a certain period of time. Persistent underfunding of accounts would lead to permanent exclusion from the market.

With the re-introduction of the DAS, banks were regrouped into six categories with percentage allocations ranging from 4.70 for the first category to 0.45 for the last. Four factors were considered in categorising the banks. These included shareholders funds, deposit base, loans and advances and profit before tax. The shareholders funds were adjusted to take account of operating losses where applicable, while loans and advances were computed net of provisions for non-performing assets. Different weights were assigned to these indices.

The marginal rate continued to be used to determine the official rate. This was the rate that exhausted supply. This rate was marked up by 1% to determine the effective rate. The CBN buying and selling rates were accordingly determined by adding and subtracting 0.5 per cent. The banks determine their rates through their individiual bid rates subject to a margin of 0.5 per cent on either side of their bid rates.

Jumbo Sales

On 22/3/91, the CBN decided to further mop up excess liquidity and assuage the high demand for foreign exchange by making available to the banks an unusually large amount of funds totalling $197.3 million. The banks (107) took up $174.7 million. All were successful. The amount supplied by the CBN equalled the amount demanded by the banks. On 27/3/91, another jumbo sale of $120 million was made compared with $177.4 million demanded by the banks. The sum of $107.8 million was taken up and only 54 banks were successful. The rate of failure increased this time because many banks which did not adequately fund their accounts were disqualified. These measures caused the naira to temporarily appreciate in the official market.

Modified Dutch Aution System (MDAS)

Despite the re-introduction of the DAS in December 1990, the depreciation of the naira exchange rate persisted although there were flashes of strength especially in March and April 1991, when excess liquidity mopping-up operation was stepped up through the issuance of relatively large volumes of stabilization securities. By the mid-August, it was clear that unless urgent measures were taken, the sharp depreciation of the naira exchange rate might vitiate the other objectives of policy. Therefore to further mop-up excess liquidity in the economy, deal with the problem of multiple applications from bidders and reduce speculative fever, the Dutch Auction system was modified with effect from August 14, 1991. Under the new system, banks were no longer required to bid on their own behalf

but on behalf of their customers. Banks were required to debit the accounts of their customers immediately with the naira value equivalent of their foreign exchange requests at the time the request was made. Furthermore, the bid rate of each bank was weighted by its demand for foreign exchange and aggregated to arrive at a weighted average for all the banks. The CBN marks up the weighted average by one per cent to arrive at the effective rate or central rate from which the buying and selling rate are determined. Nevertheless, the banks continued to be debited at their bid rates plus one per cent mark-up. Under the new system success at the auction depends on how far an individual bank's bid rate deviates from the weighted average. Other things equal, the smaller the deviation, the better the chances of a bank succeeding. The above policy measures were taken to raise the efficiency rate of the foreign exchange market through their direct effects on the naira exchange rate itself.

Complementary measures

Complementary measures were also taken to realign the demand and supply of foreign exchange at desired levels. Aggregate demand management policies involved restraint on monetary expansions and on government deficit financing. In the area of monetary policy, the prescribed ceiling on credit expansion was reduced in January 1989, while banks' cash reserve requirements and the Minimum Rediscount Rate (MRR) were revised upwards. In April 1989, monetary policy became more restrictive when the cash reserve requirements and the statutory liquidity ratio were further raised. In addition, banks and non-bank financial institutions that grant credit in Nigeria were prohibited from granting loans denominated in naira on the guarantee of foreign assets. Institutions that failed to comply were made to deposit with the CBN an amount equivalent to the loan principal so granted. In the area of fiscal policy, the Federal Government, directed, in June, that all Federal and State governments' deposits and those of their agencies be transferred from the commercial banks to the CBN. Deposits so transferred totalled ₦ 8.5 billion at the end of July 1989. From August, excess liquidity in the system was further mopped up through the issuance of stabilization securities which are compulsorily taken up by banks deemed to be characterised by excess liquidity.

On the supply side, government continued to provide incentives designed to increase non-oil export receipts and diversify the export base. The incentives include the right of exporters (including exporters of petroleum products) to retain 100 per cent of their proceeds in their domiciliary accounts and use them for legitimate transactions, the Rediscounting and Refinancing Facility (RRF) established by the Central Bank in 1987; and the Nigerian Export Credit Guarantee and Insurance Corporation (NECGIC). Debt management policies have also been supportive of exchange rate policy. Through rescheduling, restructuring and debt conversion, the foreign debt is being effectively managed while new funds are being sourced at concessionary rates to fund the foreign exchange market and boost the country's productive capacity.

SECTION III

APPRAISAL OF RECENT EXCHANGE RATE POLICY MEASURES

For a fair assessment of the naira exchange rate policy pursued since 1986, both the achievements and the lingering problems will be analysed in relation to the objectives set out earlier at some point in the paper. Some of these objectives include the elimination of overvaluation of the exchange rate, reduction of the parallel market premium and elimination of payments arrears.

However, in assessing the impact of exchange rate on the economy, it is necessary at the outset to note some caveats. First, no empirical tests have been conducted to isolate the effect of exchange rate changes from those arising from other policies, especially monetary, fiscal and sectoral policies. For example, an increase in real output may be due to increase in agricultural production arising from better incentives to agricultural producers, good weather or the opening up of rural areas. Second, the exchange rate itself could also be affected by those aggregates which it is hypothesized to influence. This is the so-called simultaneous equation bias. For example, it has been observed that the depreciation of the naira exchange rate increases the production costs of producers which may in turn lead to increase in prices. However, price increases lead to inflationary expectations which may in turn cause the depreciation of the rate itself. Third, the attainment of one objective of policy may vitiate the realization of another objective. For example, high level employment may be achieved through demand management policy that puts pressure on prices. This would lead to the depreciation of the exchange rate. Thus a careful assessment of the trade-offs among policy objectives is required. As a result of these problems, only impressionistic or qualitative statement can be made about the effect of exchange rate on some of the targets of policy.

To ease the process of appraising the current exchange rate policy, a comparative approach has been adopted. Accordingly, movements in policy targets during the current period of independent floating (1986—1990) are compared with those aggregates in the preceding five years (1981—1985). A country's currency is said to be floating independently if the exchange rate is market determined, with or without government intervention. With the aforementioned caveats in mind, an examination of the policy targets during the periods under consideration indicates that exchange rate has had generally positive impact on the economy. Real output, which declined by an average of 4 per cent during the 1981—1985 period rose by 4.8 per cent in 1986—1990. The turn-around reflected impressive performances by the industrial and agricultural sectors whose output increased by 9.5 and 6.1 per cent in the 1986—1990 period compared to an average decline of 2.8 per cent and an increase of only 1.2 per cent in the preceding five years, respectively. The current account balance as a percentage of GDP, recorded an average deficit of 5.6 per cent in 1981—1986 contrasting with an average surplus of 3.4 per cent in 1986—1990. This reflected the drop in the volume of imports and the higher relative contribution of non-oil exports to total exports. The contribution of non-oil exports to total exports averaged 6.0 per cent during 1986—1990 indicating an average increase of 2.8 percentage points over the level in the preceding five years.

Along with trade and payments liberalization, the exchange rate policy has succeeded in eliminating the incidence of payments arrears which had tended to compromise the country's creditworthiness in the past. The liquidation of payments arrears was however expected, given the cash and carry nature of the current payments system. Following the incentive given to exporters to retain wholly the proceeds from their exports, the proportion of repatriated earnings to total value of non-oil exports increased steadily from 73.7 per cent in 1987 to 98.5 per cent in 1990. Diversification of non-oil exports has also proceeded smoothly with the exportation of hitherto relatively unknown exports such as Peogeut cars, asbestos cement, charcoal and empty bottles. Most remarkable has been the narrowing of the average parallel market premium from 160.6 per cent in the period 1981—1985 to 54.3 per cent in 1986—1990. This was a clear indication of the extent to which the misalignment of the naira exchange rate and distortions in foreign exchange transaction has been corrected. Despite the above achievements, many grey areas remain.

Capacity utilization in the industrial sector remained low, falling from an average of 47 per cent in 1981—1985 to 40 per cent in 1986—1990. The decline reflected not only high cost of imported inputs induced by the low value of the naira but also high cost of credit following the deregulation of interest rate. The level of external reserves, although rising in recent years, had remained comparatively low. Reserves could cover 2.3 months of imports in 1981—1985 compared with 5.9 months in 1986—1990. Reserves averaged $1,887.8 million in 1981—1985 compared with $1,691.3 million in 1986—1990. However, the relatively low level of reserves under the current exchange rate regime is not unexpected given the fact that the more flexible an exchange rate regime, the lower the need for reserves since pressure on reserves caused by excess demand for foreign exchange is reduced as a result of the depreciation of the exchange rate. Other problem areas are the instability of the naira exchange rate and the large parallel market premium. These are discussed below in greater detail.

Stability of the Naira Exchange Rate

Developments in the Foreign Exchange market do not indicate that the stability objective has been achieved. Despite the numerous changes introduced since 1986, the naira exchange rate continued to depreciate and had become more unstable than in the preceding five years. Deviation from overall mean averaged ₦2,430.5 = $1 in 1981 to 3rd quarter 1986 compared with ₦2.8746 = $1 from 4th quarter 1986 to third quarter 1991. This result is graphically presented in Chart 1. Chart 2 also indicates that the naira exchange rate was relatively stable from first quarter 1987 to first quarter 1988 with instability increasing from then on to second quarter of 1989. This was followed by a period of relative stability between second quarter of 1989 to third quarter of 1990. Since then instability increased. Thus the introduction of FEM, DAS and the implementation of the various complementary monetary and fiscal measures have not stemmed the pressure on the exchange rate. The naira exchange rate, for example, depreciated by 46 per cent from $1 = ₦3.9691 in 1988 to $1 = ₦7.3651, on the average, in 1989.

Since the re-introduction of the Dutch Auction System (DAS) on December 14, 1990, the Naira has weakened markedly. At the end of December 1990 one US dollar traded for ₦9.0001 in the official market, indicating a depreciation of 6.7 per cent when compared with the rate prevailing on the eve of the introduction of the DAS. Prior to that date, the naira exchange rate had shown a tendency to appreciate in the official market.

In the Bureaux de Change and the parallel market, the naira exchange rate remained relatively stable in December, 1990. Since then, however, the rate has depreciated substantially and persistently in all the markets. In the official market, the naira exchange rate depreciated by 5.5 per cent in January 1991. Available data during the first five months of 1991 indicated a depreciation of 13.6 per cent. The weakening of the naira exchange rate was equally dramatic in the bureaux de change where the rate weakened by 7.2 and 7.6 per cent in January and February, respectively. In April, the rate averaged $1 = ₦12.37 indicating a further depreciation of 9.2 per cent from the rate prevailing at the beginning of the year. In the parallel market, one dollar traded for ₦12.37 in April, indicating a depreciation of 9.2 per cent from the operative rate at the beginning of the year.

Rates in the official, bureaux de change and parallel markets indicated depreciations of 7.6, 21.9 and 22.5 per cent in April 1991 respectively. However, following a liquidity mop-up operation conducted in March 1991, the naira appreciated in March and April in the official market while the rate of depreciation in the other two markets declined in March. However, in line with similar behaviour in the past, the depreciation of the naira exchange rate resumed in May in the official market while the rate of depreciation accelerated further in the other two markets in April.

Parallel market premium

The parallel market premium which averaged 160.6 per cent in the period 1981—1985, declined to 54.3 per cent in 1986—1990 indicating that the misalignment of the exchange rate had been comparatively reduced. Analysis based on annual movements showed that following tough monetary and fiscal measures taken in 1990 the premium narrowed substantially from 42.7 per cent in 1989 to 19.6 per cent in 1990. It declined to a low of 15.9 per cent in March and April 1990. In 1991 the premium widened progressively from 17.9 per cent in January to 39.5 per cent in April. However, it declined steadily to 26.9 per cent in August 1991 following the relatively large depreciation of the official rate. Following the modification of the DAS, the official rate appreciated by 10.6 per cent in September 1991 compared with only 2.1 per cent appreciation of the parallel rate. Consequently, the arbitrage premium widened again from 26.9 per cent in August to 37.5 per cent in September, 1991.

The persistently large parallel marked premium clearly indicates the continued misalignment of the naira exchange rate. The disequilibrium may be due to fundamental and structural factors such as the persistently large excess demand, and entrenched interests.

SECTION IV

MEASURES TO ENSURE A VIABLE AND STABLE NAIRA EXCHANGE RATE

Available data indicate that the overvaluation of the naira exchange rate which characterized the erstwhile rigid exchange rate regime has been largely eliminated. The overvaluation of the naira exchange rate measured against the PPP equilibrium was about 200 per cent in the pre-SAP period and was eliminated by 1987. Also, the parallel premium which was over 300 per cent in 1985 has been drastically reduced. However, in recent months, the naira exchange rate has tended to veer from the equilibrium. As noted earlier, the real exchange rate is a function of many variables notably, the relative inflation and interest rates between Nigeria and her trading partners as well as the incidence of speculation, among others. Consequently, stability of the exchange rate requires that these variables themselves should be as stable as possible. The viability and stability of the naira exchange rate in future therefore requires a consideration of the future stability of those variables that influence the rate. However, to ensure that the factors that determine the rate achieve their desired objective, it is necessary that the factors themselves should move freely to reflect changes in economic fundamentals. Therefore, I wish to assume that economic policy will continue to be formulated within the framework of a liberalized and deregulated economic environment, where economic agents are free to respond to free market signals. It should however be noted that it might be expedient as a matter of deliberate policy to allow the exchange rate to diverge from equilibrium. In this regard, the exchange rate of a currency could remain undervalued if policy is to encourage exports, given the right conditions. Some newly industrialized countries of Asia pursued that line of policy to encourage their manufacturing sectors to produce for exports.

The rest of this section will review areas that policy should be directed to ensure the future viability and stability of the naira exchange rate. This does not imply that the present policies are not right. Indeed without these policies, the situation would have been worse. The assertion here, therefore, is that since the naira exchange rate is still unstable, there is need to intensify action to push it towards equilibrium. The future stability of the naira exchange rate will depend on efforts to reduce the pressure on the general level of prices, reduce the huge fiscal deficit, harmonize fiscal and monetary policy and reduce the excess demand for foreign exchange.

Fiscal Deficit and the Naira Exchange Rate

In recent years, the level of fiscal deficit has been increasing. It rose from ₦12.2 billion in 1988 to ₦15.3 billion in 1989 and jumped to ₦17.0 billion in 1990. As a proportion of GDP, it fell slightly from 8.5 per cent in 1988 to 7.9 in 1989 but rose to 8.8 per cent in 1990. Preliminary data for the first half of 1991 indicated a deficit of ₦19.5 billion representing 12.4 per cent of projected GDP. Studies carried out in the Research Department indicate that the exchange rate is strongly influenced by the method of financing the deficit. Normally, deficits are financed by one or a combination of the following sources viz drawings on external debt, borrowing

from the banking system and drawdown on other funds. Financing the deficit through drawdown on external loans causes the exchange rate to appreciate through the inflow of foreign exchange. However, deficits financed through the banking system especially through the Central Bank, directly increase liquidity which, other things equal, exerts pressure on the exchange rate. Analysis carried out recently show that a 10 per cent increase in government deficit causes the naira to depreciate by a magnitude ranging from 1.2 to 2.4 per cent. Thus, with the deficit increasing by 52.9 per cent in 1990 from the level at the end of 1988, the naira exchange rate would be expected to depreciate by between 6.35 and 12.7 per cent in 1990. In other words, the nominal exchange rate would, other things equal, lie between ₦8.1061 and ₦8.5901 to the dollar in 1990. The observed rate in 1990 was ₦8.7071 to the dollar in December, 1990, which is close to the predicted value. The deficit in the first half of 1991 averaged ₦3,260.4 million indicating an increase of 67.5 per cent over the average monthly deficit of ₦1,946.4 million in first half of 1990. Consequently, the exchange rate would be expected to lie between ₦9.4124 and ₦10.1177 to the dollar in June 1991. The observed rate stood at ₦10.1722 to the US dollar in June, 1991 which was not far from predicted value. What the above analysis has conclusively demonstrated is that any action to stabilize the naira exchange rate must start with the reduction of fiscal deficit.

Inflation and Naira Exchange Rate

The equilibrium exchange rate is also influenced by changes in relative inflation rates between Nigeria and her trading partners. Consequently, factors that put pressure on prices directly influence the exchange rate. Factors that cause prices to rise may be analysed from two angles — inadequate supply of and high level of demand for goods and services. Supply shortages can be remedied through imports and increased domestic output. Domestic demand is strongly influenced by the amount of liquidity in the economy. To stabilize prices therefore required a two-pronged attack — increasing supply to satisfy a given level of demand or reducing demand to match available supply. Increase in supply through imports has been contrained by shortage of foreign exchange for domestic use. Efforts should therefore be intensified to reschedule the country's external debt so as to make more resources available for domestic use. In addition, there is need for the country to pursue a more aggressive export policy which will seek to expand non-oil exports. In this regard, the execution of Liquified Natural Gas (LNG), the petrochemical and Oso-condensate projects should be pursued to its logical conclusion. On the need to restrain demand, the huge fiscal deficit comes to mind again. This is because increase in the level of deficit increases liquidity in the system. Therefore, with given supply of goods and services such an increase in liquidity is expressed in high demand for goods and services which exerts pressure on prices. Although prices dropped early in 1991, the upward trend has resumed since May. This has occurred despite the tight posture of monetary policy. Since August 1990, the Central Bank has taken concerted action to mop up excess liquidity generated by large government deficit. There is need therefore to ensure the harmonization of monetary and fiscal policies.

Speculation

Speculation can either be stabilizing or destabilizing. In a situation of stabilizing speculation, speculators buy (sell) foreign exchange now because they expect the price of the currency to rise (fall) in future. In so doing, they cause the present prices to rise (fall) beyond what it would normally be. When however, their expectations are realized they sell (buy) and cause the price to fall (rise) thereby evening out the degree of fluctuations. This promotes stability of the exchange rate. In a situation of destabilizing speculation, the speculator buys, for example, not with the hope of selling in the near future when prices rise but to hoard, with the expectation that the price will continue to rise. This action further constrains the availability of foreign exchange and with increased speculative buying, causes the exchange rate to depreciate further thereby pulling the exchange rate further away from its equilibrium rate. Speculative behaviour is largely influenced by considerations about how well the economy is managed, consistency about government policy and expectations and judgment about the certainty of availability of foreign exchange in the future.

In Nigeria, speculation has been largely destabilizing reflecting the endemic shortage of foreign exchange. This has been manifested in the persistent depreciation of the naira exchange rate. Speculative fever will lessen only when more foreign exchange is made available to the official market and to the parallel market through inflow of autonomous funds. Monetary and fiscal policy actions which mop up excess liquidity in the system will also reduce the speculator's ability to speculate. Therefore, current effort to drain off excess liquidity from the system should continue.

Interest Rate Policy

Available data show that the parallel market premium was smaller in 1990 (averaging 19.6) when the interest rate was more deregulated than during the first nine months of 1991 (monthly average of 29.4 per cent) when it was capped. This was due in part to the higher cost of borrowing in the former period. It may be noted that the parallel market premium rose persistently from January to April 1991 but fell continuously from May to August largely as a result of excess liquidity mopping up operations conducted by the CBN through the issuance of stabilizing securities. To ensure that the naira exchange stabilizes and even appreciate, there is need to uncap the interest rate. This will help to mobilize savings, reduce speculative fever and narrow the interest rate differential between Nigeria and the rest of the world. Eventually, the rate of interest will decline and had indeed started to do so in 1990. For example, the rates for call money and 7-day deposits fell from 29.3 and 28.2 per cent in January 1990 to 23.6 and 19.4 per cent in November, respectively.

Increasing Supply of Foreign Exchange

A critical problem hindering the achievement of a stable naira exchange rate is the serious shortage of foreign exchange from both official and non-official sources. Inflow from official sources has been largely constrained by large external

debt service payments which gulped about 38.0 per cent of official foreign exchange inflow during the first nine months of 1991. Non-official inflow has been comparatively low, averaging about $1,217.5 billion in the last three years compared with private sector foreign exchange demand of $12.4 billion. On the official side, there is need to increase the amount of foreign exchange put in FEM by urgently concluding the debt rescheduling arrangements with Nigeria's external creditors. This will allow the funding of the official segment of the FEM to increase beyond the present $57.5 million weekly allocation. The potentials of the Oso-condensate, petrochemical and LNG projects should be fully explored. On the non-official side, the private sector should endeavour to increase autonomous inflow to the point where government would withdraw from funding the FEM. The private sector should therefore imbibe the spirit of "export or perish" and rededicate itself to the task of completely meeting its own demand for foreign exchange.

SECTION V

SUMMARY AND CONCLUSION

At the end of 1985, the Nigerian economy was in a highly distressed state. Following the plummenting of oil prices early in the decade, foreign exchange inflow fell to precariously low level. This had adverse effects on the economy. External reserves dwindled. Payments arrears mounted as international commitments could not be scaled down immediately in line with the new realities. International confidence in the economy was seriously eroded. Real output declined while the level of unemployment increased. Agricultural output and industrial production also nosedived. While these problems persisted, the naira exchange rate remained overvalued thereby accentuating the distortions in the economy. The parallel market in foreign exchange and goods blossomed as prices of exports paid to domestic producers became uncompetitive. The SAP was therefore instituted in 1986 to turn the economy around by tackling the problems of structural rigidities in the economy. Generally, SAP was to usher in a new style in economy management predicated on the interplay of market forces. In particular, SAP sought to foster balance of payments viability, reduce the dependence of the economy on imports and the oil sector and increase efficiency in resource allocation by ensuring that the naira exchange rate was realistically determined through an institutional framework the "Second-tier Foreign Exchange Market" (SFEM). Since the introduction of SFEM in 1986, the naira exchange rate has depreciated to the consternation of the authorities and the users of foreign exchange generally. To enhance its effectiveness the SFEM has been continually fine-tuned.

To ease the process of appraising the exchange rate changes, certain fundamental concepts in exchange rate determination were explained in section one. These included the concepts of nominal and real exchange rate, the nominal and real effective exchange rate and equilibrium of the exchange rate. In addition, the objectives of exchange rate policy were analyzed. Specifically, policy was aimed at diversifying the export base, reducing imports so as to increase the development

of local substitutes, correcting the overvaluation of the naira exchange rate, reducing or eliminating payments arrears etc. The paper has stressed the importance of stability of the naira exchange rate and noted that stability does not imply fixity but that the rate should be allowed to vary in a manner that should foster the achievement of other macro-economic objectives. The need to also reduce the parallel market premium to some manageable level was emphasized because its continued existence clearly indicates misalignment of exchange rate and inefficiency in resource allocation. The paper has also reviewed the various policy changes made since 1986. These include the pricing and allocative formulae applied in making foreign exchange available to banks and others authorized to buy foreign exchange at the auctions. The paper noted the use of simple average and marginal pricing methods, the merger of the first and second-tier foreign exchange markets, the introduction of the Dutch Auction system, the interbank foreign exchange market, the introduction of bureaux de change, the re-introduction of the DAS and its recent modification in August 1991. Generally, these fine-tuning operations were carried out to improve the efficiency of the foreign exchange market and were aimed at the achievement of a realistic naira exchange rate.

The impact of the new exchange rate policy on the economy had mixed results. Comparing the period 1981—1985 and 1986—1990 it was indicated that aggregate output, industrial output and agricultural production grew faster in 1986—1990 than in the preceding five years. Payments arrears were eliminated and although the parallel market premium persisted in 1986—1990, it declined compared to 1981—1985. The current account was also relatively more buoyant in 1986—1990. However, instability of the rate increased, the parallel market premium persisted and has tended to widen in recent months. The paper concludes by suggesting the measures needed to stabilize the naira exchange rate such as the deregulation of the interest rate, resolution of the external debt problem and increase non-oil official export receipts so as to increase funding of FEM. The private sector is urged to pursue a more aggressive export policy so as to meet its demand for foreign exchange and reduce pressure on the FEM.

Overall, the impact of the new exchange rate policy on the economy has been salutary. However, certain problems persist which frustrate the realization of the policy objective. In particular, there is need to reduce the level of fiscal deficit. Other measures include, the harmonization of monetary and fiscal policies, the uncapping of interest rate, increase in non-oil export receipts and further restructuring of the external debt service payments. Finally, the private sector was called upon to pursue a more aggressive export policy so as to earn foreign exchange to finance its operations without undue pressure on officially generated resources.

Table 1

PARALLEL MARKET PREMIUM

Period	Official (N)/Rate $	Bureaux (N)/de change $	Parallel (N)/market $	Parallel market Premium
1984	0.7642	—	3.25	325.3
1985	0.8924	—	3.79	324.7
1986	1.756	—	4.17	137.5
1887	4.016	—	5.55	38.2
1988	4.5367	—	6.05	33.3
1989	7.3919	10.13	10.545	42.7
1990				
Jan.	7.8620	9.51	9.50	20.8
Feb.	9.9001	9.49	9.41	19.1
March	7.9388	9.26	9.20	15.9
April	7.9400	9.27	9.20	15.9
May	7.9400	9.30	9.26	16.6
June	7.9424	9.47	9.44	18.9
July	7.9523	9.88	9.79	23.1
Aug.	7.9623	9.67	9.62	20.8
Sept.	7.9743	9.78	9.72	21.9
Oct.	8.0089	9.91	9.85	23.0
Nov.	8.3247	10.15	10.10	21.3
Dec.	8.7071	10.10	10.20	17.1
Average	8.0378	9.65	9.61	19.6
1991				
Jan.	9.2121	10.82	10.86	17.9
Feb.	9.6108	11.80	11.82	23.0
Mar.	9.4521	11.99	11.99	26.9
April	8.8691	12.37	12.37	39.5
May	9.3700	12.64	12.64	34.9
June	10.1722	13.21	13.18	29.6
July	11.0474	14.19	14.15	28.1
Aug.	11.3280	14.37	14.37	26.9
sept.	10.2416	14.00	14.08	37.5

Sources   (a)   World Currency Year book for parallel market rates
1984 — 1987.

(b)   Compiled from data available in C.B.N.

TABLE 2

FEM BID RATES

Year/Month	Highest Bid Rate $\frac{N}{\$}$	Lowest Bid Rate $\frac{N}{\$}$	Ratio of L/Highest Rate %	Amount Demanded ($ M)	Amount Received ($ M)	Difference ($ M)
1987	4.2889	3.8960	90.8	2,785.0	2,330.4	—454.6
1988	4.5702	4.4699	97.8	3,259.6	2,879.0	—380.6
1989	7.4900	6.8869	91.9	17,411.5	2,278.2	—15,133.3
1990						
Jan.	7.8723	7.4104	94.1	1,822.1	262.1	—1,560
Feb.	7.9088	7.5246	95.1	1,534.5	238.5	—1,259.9
March	7.9488	7.6785	96.6	1,566.7	223.5	—1,343.2
April	7.9505	7.8209	98.4	1,016.6	155.0	— 861.6
May	7.9735	7.8591	98.5	1,348.1	199.5	—1,148.6
June	8.0025	7.8031	97.5	1,435.5	199.1	—1,236.5
July	8.0053	7.9108	98.8	1,492.6	189.1	—1,303.5
Aug.	8.0250	7.8415	97.7	1,784.0	222.4	—1,561.6
Sept.	8.0716	7.9366	98.3	1,569.6	183.1	—1,386.5
Oct.	8.1498	7.5369	92.5	2,113.8	239.0	—1,874.8
Nov.	8.3876	7.9355	94.6	2,325.5	251.6	—2,073.9
Dec.	8.8469	8.2954	93.8	2,169.1	218.0	—1,951.1
Average	8.0952	7.7961	96.3	1,681.5	215.1	—1,466.4
1991						
Jan.	9.3477	9.0941	97.3	934.8	264.5	— 670.3
Feb.	9.6620	9.4904	98.2	824.8	230.0	— 594.8
March	10.2656	9.0597	88.3	840.1	292.5	— 547.6
April	10.1052	8.7302	86.4	593.6	219.2	— 374.4
May	9.6643	9.1480	94.7	625.1	238.3	— 386.8
June	10.5156	9.9956	95.1	796.9	212.7	— 584.2
July	11.5751	10.9225	95.1	1,012.8	276.8	— 736.0
Aug.	11.6200	11.0509	95.1	651.2	218.7	— 432.5

Source: Compiled from C.B.N. sources.

TABLE 3

FOREIGN EXCHANGE FLOWS, DOMESTIC LIQUIDITY AND THE NAIRA EXCHANGE RATE

Period	Foreign Exchange Inflow (US $ Million)			Foreign Exchange Disbursement (US $ Million)		Monetary Aggregate ((End of Period (₦ Million))			Naira/US Dollar Exchange Rate End of Period (₦ = $1)	Units of Domestic Liquidity To A Unit of Available Dollar (₦)
	Oil	Non-Oil	Total (1)+(2)	Debt Service	Net Available To Service The Economy (3)—(4)	Narrow Money M_1	Time and Savings Deposit (QM)	Broad Money M_2 (6)+(7)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1980	22,932.6	3,046.7	25,979.3	185.8	25,793.5	9,226.8	5,170.6	14,397.4	0.5444	0.56
1981	17,471.5	3,977.7	21,449.2	857.4	20,591.8	9,774.9	5,803.2	15,548.1	0.6369	0.76
1982	12,178.5	2,772.7	14,951.2	1,151.6	13,799.6	10,048.9	6,845.4	16,893.9	0.6702	1.22
1983	10,192.5	1,486.7	11,679.2	1,845.5	9,833.7	11,282.4	8,086.5	19,368.9	0.7485	1.97
1984	11,016.1	1,105.3	12,121.4	3,455.1	8,666.3	12,204.1	9,396.4	21,600.5	0.8082	2.49
1985	11,367.2	943.0	12,310.2	4,180.4	8,129.8	8,129.8	10,550.8	23,818.6	0.9996	2.93
1986	5,742.5	1,461.8	7,204.1	2,127.2	5,076.9	12,728.3	11,487.7	24,216.0	3.1166	4.77
1987	4,924.3	1,934.4	6,593.7	1,567.0	5,026.7	14,905.9	15,088.7	29,994.6	4.4104	5.97
1988	4,924.9	1,549.2	6,474.1	1,959.3	4,514.8	20,052.7	18,397.2	38,449.9	5.3530	8.52
1989	5,913.2	2,224.0	8,137.2	2,035.8	6,101.4	25,697.6	20,525.3	46,222.9	7.6500	7.5758
1990	7,437.1	2,998.3	10,435.4	3,823.8	6,611.6	37,233.7	27,669.0	64,902.7	9.0001	9.8165
1991										
1st Oct.	973.6[1]	137.8[1]	1,111.6	324.3	787.3	3,093.7[2]	2,418.0	5,511.8[2]	9.3138	7.0009
2nd Oct.	620.9[1]	165.9[1]	782.5	373.9	412.9	3,447.2[2]	2,653.7[2]	6,100.9[2]	9.7629	14.7757

[1] Monthly Average
[2] Monthly Average holdings of stock
   Source: Compiled from data available in C.B.N.

TABLE 4

OVERVALUATION/UNDERVALUATION OF NAIRA EXCHANGE

	Domestic Price level pd	Trading Partner's Price level	Absolute PPP pd/pf	Official Exchange Rate $/N (Ex)	Equilibrium Exchange Rate	Measure of Overvaluation/ undervaluation (%) [1]
1960	100.0	100.0	1.0000	1.3999	1.3999	—
1985	1,494.3	363.5	4.1109	1.1206	0.3405	229.1
1986	1,574.7	370.7	4.2479	0.7806	0.3295	138.7
1987	1,735.4	384.1	4.5181	0.2780	0.3098	—1.3
1988	2,399.4	399.4	6.0075	0.2219	0.2330	—4.8
1989	3,381,0	418.7	8.0750	0.1354	0.1734	—21.9
1990	3,634.6	444.2	8.1823	0.1244	0.1711	—27.3
1* 1991 June	3,849.0	466.4	8.2526	0.1127	0.1696	—33.5

[1] Minus sign indicates undervaluation
   Plus   "   "   overvaluation.
* Projected Inflation Rate for Nigeria '91 = 5.9%
* Projected Inflation Rate U.S.A. June 1991 = 5.0%
   U.S.A. Inflation as at December 1990 = 6.1%
   Nigeria Inflation as at December 1990 = 7.5%

Sources: (i) Computed from data supplied to C.B.N. by Federal Office of Statistics (FOS)
        (ii) International Financial Statistics (IFS)

TABLE 5

SELECTED ECONOMIC INDICATORS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1. G.D.P. (Growth rate) ..	—	—8.4	0.5	—4.1	—6.7	—1.5	3.2	0.5	9.9	5.2	5.2
2. Fiscal Deficit (% of GDP)..	4.0	6.6	10.1	5.3	3.7	3.9	10.4	5.3	8.0	6.?	8.5
3. Current Account (% of GDP) ..	—4.7	—8.5	—10.3	—5.9	0.1	3.3	—4.5	—0.3	—0.8	4.8	17.7
4. Capacity Utilization ..	70.1	73.3	63.6	49.1	42.0	37.1	38.9	40.4	41.5	42.5	37.5
5. Industrial Production (Growth rate)	—	—2.8	6.3	—21.6	—4.9	9.1	3.5	18.0	14.5	9.5	2.2
6. Agric. Production (Growth rate)	—	3.3	—0.5	—4.4	4.0	3.7	7.7	8.0	—5.9	13.7	7.2
7. Domestic Prices (Growth rate)	9.9	20.8	7.7	23.2	39.6	5.5	5.4	10.2	38.6	40.9	10.1
8. Non-Oil Exports as % of Total Exports ..	3.7	2.9	2.4	3.9	2.6	3.9	4.1	7.3	9.2	4.9	2.8
9. External Reserves ($ million)	10.003.0	3,806.4	1,532.1	1,043.7	1,415.6	1,641.0	1,081.5	1,121.3	611.4	1,758.9	3,883.2

Source: Central Bank of Nigeria

CHART 1

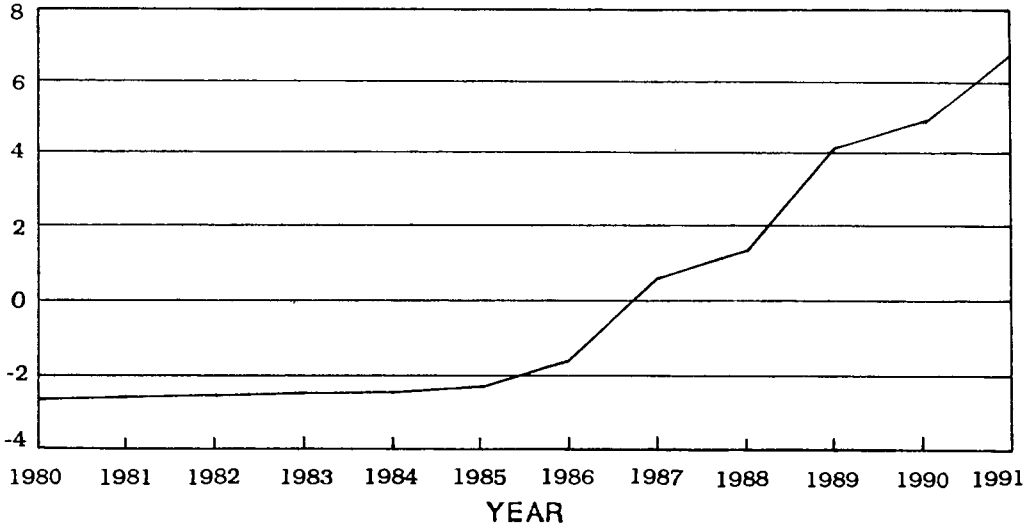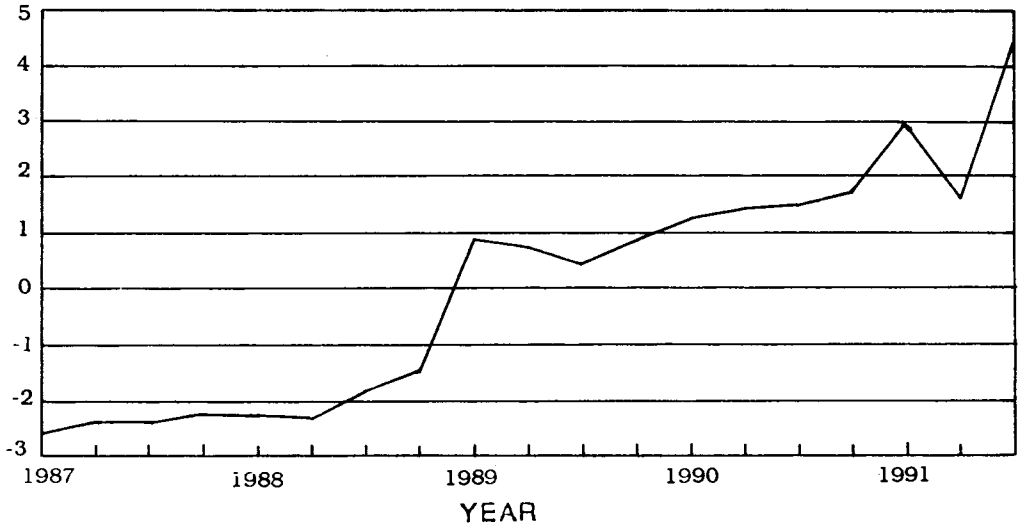# DEVIATION FROM OVERALL MEAN OF AVE. EXCHANGE RATE (₦/$)

YEAR

CHART 2

DEVIATION FROM OVERALL MEAN OF AVE. EXCHANGE RATE (₦/$)

MEAN DEVIATION OF EXC. RATE

YEAR

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