Dissertation

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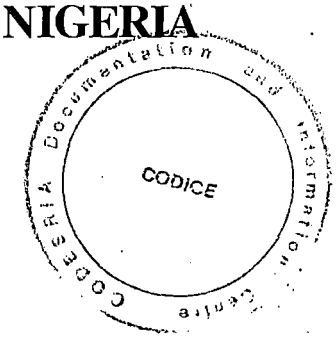
Empirical determination of the parallel currency market premium in Nigeria

1996

EMPIRICAL DETERMINATION OF THE PARALLEL CURRENCY MARKET PREMIUM IN NIGERIA



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B.SC (ECONOMICS), BENIN

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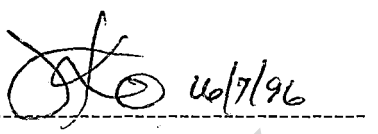
1996

CERTIFICATION

I certify that this work was carried out by AKINBOBOLA TEMIDAYO OLADIRAN, under my supervision in the Department of Economics Obafemi Awolowo University, Ile-Ife, Nigeria.



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ABSTRACT

This study focuses on the provision of both theoretical foundations and empirical evidence on the parallel market premium in Nigeria. The parallel market premium was traced to the variations in major macroeconomic variables in the economy.

The increase in the parallel market premium observed after the introduction of economic reforms in Nigeria, in 1986, had adverse effects on all the sectors of the economy. Structural and monetary models of parallel market premium were constructed in this work covering the period of 1987 to 1993. Quarterly data was used to examine the impact of structural and monetary variables on the premium. The models were estimated using the ordinary least square (OLS) method of estimation.

The main findings of the study include among others, the existence of a structural relationship between the direction of exports and the premium; a low tariff rate which will reduce the level of parallel market premium, and a more gradual approach to the liberalisation of the exchange rate so as to discourage the widening of the gap between the official and the parallel exchange rates, that is, the premium. Our empirical results confirmed Ansu (1991) and, Ghei and Kiguel (1992) argument about the relationship between money stock and the parallel market premium, i.e. money stock has a positive relationship with the parallel market premium.

The obvious policy implication is that, for a unification of the foreign exchange rates, devaluation which is inflationary in consequence should be gradual while emphasis should be placed on a strict monetary and fiscal

policies. This will go a long way in achieving an equilibrium value for the currency (naira) and thus, lead to an enhanced financial policy credibility and economic growth.

Other measures that could aid the achievement of a realistic exchange rate include, fiscal discipline, a strong supportive diversification effort to fund the system, monitoring and rescheduling of debts etc., with this in place, illegal transactions, smuggling activities, overinvoicing of imports, underinvoicing of exports, and other vices that lead to the widening gap would have been reduced.

CHAPTER ONE:

INTRODUCTION

1.1. INTRODUCTION

Following the deregulation of the Nigerian economy, prompted by the implementation of the Structural Adjustment Programme (SAP) in September, 1986, the Country has been faced with solving the problems of instability in the official foreign exchange market.

Improvements have been recorded in the balance of payments over the years, measured by the movement in external reserves which indicates and upward trend (surplus), the naira has been depreciating in international foreign exchange market and this means a fall in total value of external assets in foreign exchange terms. In a bid to solve this basic economic crises the need for further exchange and trade restriction in preserving reserves has become inevitable.

One instrument that has attracted protracted debate of recent in Africa in the policy packages has been the management of the exchange rate. The Breton Woods institutions have always taken the view that prices in general, including the price of foreign exchange, should reflect resource scarcity if resource misallocation is to be avoided.

The ineffectiveness of the trade and foreign exchange restrictions in preserving reserves has been endemic and is a causal factor for the growth of illegal markets for goods and foreign currencies parallel to the official transaction of same.

The inadequacy experienced in the foreign exchange market is one

important factor adduced for the existence of parallel currency market premium in Nigeria. Many other factors such as smuggling, bunkering etc. that is, factors confined to the fringes of the foreign exchange bureaux, and motivated more by a desire on the part of dealers to avoid taxes rather than exchange and trade controls are also causal factors for parallel or an unofficial foreign exchange market.

The dominating tendencies and the prevailing effectiveness of the parallel currency market for commodities has led us into having an overview of the workings of the parallel currency markets. Though, unrecognised, its abolition in January 1994, made situations worse and the parallel market more unorganised.

The coexistence of an official and parallel market for foreign exchange has resulted from the Central Bank's inability or unwillingness to meet all the demand for foreign exchange at the official exchange market. These lapses have a resultant effect on the price of foreign exchange and consequently on unofficial market to meet the unquenching demand.

Again, it should be noted that the major source of foreign exchange earnings in Nigeria is oil. A monoproduct country like ours, with little foreign exchange earnings from capital transfers, natural resources, etc. will be severally affected and controlled by the world market price of that product (oil). In this wise, demand management policies will not be effective if supply widening policies are not well revisited.

The principal trust of this study therefore is to empirically investigate

the determinants of the parallel currency market premium in Nigeria.[1] It is quite obvious that illegal trade creates demand for illegal currency which in turn stimulates its supply thereby leading to the existence of the parallel currency market.

Very little seems to have been done in the theoretical studies and empirical investigation of the parallel currency market premium in Nigeria. The pertinent question that readily come to mind, however relates to the reasons for the existence of the gap between the official market exchange rate and the unofficial or the parallel market rate.

The variations in the official and parallel rate has led to serious destabilization of foreign exchange market and a consequent depreciation of the naira value.

An attempt to solve this problem must involve a realistic investigation of the determinants of the premium as we shall attempt in this study.

1.2. THE RESEARCH OBJECTIVES AND RESEARCH HYPOTHESIS

The broad objective of the study is to conduct an empirical investigation on the determinants of the parallel currency market premium in Nigerian.

In achieving this broad objective focus will be on the following specific objectives.

(i) To identify the main determinants of the parallel currency market premium in Nigeria, and

[1] Premium:- Is the difference between the parallel market rate and the official market rate.

(ii) Suggest possible macroeconomic policies for ameliorating the impact of the identified determinants on the foreign exchange market.

Consequently, our working hypothesis shall be that:

Macroeconomic variables have a significant effect on the parallel currency market premium in Nigeria.

1.3. JUSTIFICATION FOR THE STUDY

After recording reasonably good economic growth up to the late 1970's, Nigeria started to experience strains in her foreign exchange position in 1981 when the prize oil, a very significant component of Nigerians export collapsed in the international market. External debt of the country which was nothing to worry about before 1978 when the federal government raised its first jumbo loan of one billion us dollars became a serious constraint to economic growth.

In 1981, the country's external debt stood at about $11 billion. By 1984, this had increased further to $26.0 billion arising mainly from accumulation of unpaid trade bills, for which promisory notes were issued, as well as default payments of armotization and interest charges.

A consequence of decreasing supplies of imports and tightening of trade and exchange controls, in a bid to revitalise the economy led to the growth of parallel economic transactions, smuggling of imports and exports.

As the parallel market economy grew in output, this led to a fall in revenue accruing to the federation account, a fall in foreign exchange earnings of the government and therefore a consequent balance of payments problems. The increasing importance and growth of the parallel market also led to a fall

in external reserves of the country. Nigerians external reserves which exceeded ₦3 billion in 1976 and 1977 capable of financing between four and six months import bills respectively nosedived in 1978 to less than half the 1977 level.

It recovered the following year, that is 1979 and reached an all time high of over ₦5.6 billion in 1980. 1981 and 1982 recorded much lower reserve levels and by 1983 external assets of ₦0.83 billion was barely sufficient to finance one month's import bill. The ratio of import duties to GDP also followed suit as that of oil revenues (and export duties in general).

The high rate of monetary expansion which is attainable in a situation where the compression of import volume and falling production levels produce acute shortages of goods, gave rent to a high rate of inflation in the consumer price index (CPI) and a rapid increase in the black market premium. In this sense savings was discouraged and thus, a fall in investment ratio to the GDP.

The growth of the parallel market economy, which widens the premium level has been seen as a strong causal factor for high inflationary tendencies within the economy, the parallel market for foreign exchange as well described as more efficient market for the demand and supply factors of foreign exchange in Nigeria (See Ogiogio, 1994). In this wise, it determines the domestic prices of comsumables within the economy.

In a bid to reduce the possible effects of the aforementioned problems on the economy, various policy options have been attempted albeit unsuccessfully since the inception of the reform programme. My opinion is

that any realistic attempt of solving the problem must begin with identifying the determinants of the premium. Hence this study.

CHAPTER TWO:

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. PARALLEL CURRENCY MARKET MODELS: A THEORETICAL FRAMEWORK

Over the past ten years or thereabouts, Africa has gone through a process of changing its policy framework through the implementation of Structural Adjustment Programmes with full support of the Breton Wood institutions. The programmes are aimed at attaining external and internal balance, and macroeconomic efficiency i.e. domestic price stability, improvements in the performance of Central Government budget and public enterprises, external viability, and growth of the economy.

One instrument that has attracted protracted debate in the policy packages has been the management of the exchange rate. The foreign exchange management through the strengthening of foreign exchange controls and restrictions lead countries into having dual markets for foreign exchange. The market participants realizing the economic benefits of avoiding official regulation develop parallel markets as second best mechanism for promoting an efficient allocation of resources.

Over the years, there has been a convergence of views on the issues of parallel currency markets in developing countries including Ghana, Uganda, Sudan, Brazil, Tanzania, Nigerian to mention a few. Studies carried out in most of these countries show that parallel currency market rates are more efficient in having correct price signals, promoting stability in the exchange rate and in stimulating export. The parallel market rates are more efficient

than the official determined rates in Nigerian (Ogiogio, 1993)[2]

In a bid to liberalise foreign exchange transactions in most countries where dual markets exist, private operators, commonly known as forex bureaus operators, are licensed to transact in buying and selling of foreign exchange. The bureaux rate freely determined by the demand and supply forces in the foreign exchange market, is in fact seen to be the most efficient price in foreign market in Nigeria (see Ogiogio, 1993).

There is a great need for an extensive research into the efficacy of parallel currency market and its consequent effect on the economy. To be specific, the parallel market premium which depends on a host of factor - in particular, the penalty structure and the volume of resources devoted to apprehension and prosecution of violators as depicted in Agenor (1990).

Elbadawi (1991) in his analysis of parallel market (s) differentiate between the short run and medium to long run determinants of the parallel market rate. He argues that in the short run, the rate is basically asset market determined and heavily influenced by expectation of future devaluation and changes in monetary policy. In the medium to long run, the rate is driven by excess aggregate demand for imports.

In most developing countries, tax administration is still weak, while tax rates are high. The ease of evading taxes creates an incentive to maintain a premium on the auction exchange rate, some businessmen claim they find it cheaper to finance imports through the bureaux than official channels.

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[2] Ogiogio, G.O. (1993) "A statistical Analysis of the Behaviour of Foreign Exchange Rates in Nigeria since the Economic Reform Programme" Final Report, AERC-Sponsored Research, September.

They point to cost related to delay in opening and confirming letters of credit, and bank charges in both the central bank and commercial banks. If this claim is confirmed, official devaluations will increase the demand for foreign exchange in the bureau market and black market as more businessmen opt out of the official channel resulting in a depreciation of the parallel market rates. Other factors that may be considered in explaining the exchange rate premium are the risk premium and profit margin for the parallel market operators.

Kamin (1991) showed also that premium rises prior to devaluation twice as many cases as it falls preceding devaluation. His studies also confirmed that the real black market rate depreciates in direct response to official devaluation. Parallel markets for foreign exchange have been discussed and investigated from a number of perspectives; "real trade" models, portfolio balance approach, monetary model and models of formal dual-exchange systems with leakages.

The real trade model provided an adequate framework for analysing the impact of trade restrictions (as distinct, from exchange controls) on the parallel market rate (Agenor, 1990b). It emphasizes the role of smuggling, under-invoicing of exports as the main source of supply, and impact of high trade taxes on smuggling activities and illegal currency transactions. As shown by de Macedo (1987) and Branson and de Macedo (1985), an importer will tend to smuggle if the tariff is so high that it pays to purchase foreign exchange at a premium in the parallel market, even after allowing for the possibility of getting caught by the custom enforcement agency.

In a system where the government bans all capital outflows and distribute whatever foreign exchange available to demanders of foreign exchange for current account transactions at the pegged rate, the unsatisfied demand for foreign exchange will obviously seek out other sources of supply (Black market for foreign exchange).

With exchange controls, capital inflow may be discouraged in the form of direct investment since it becomes uncertain to foreign investors whether or not they can take their profits or principals out of the country, this will decrease the total supply of foreign exchange due to a decrease in capital inflow, this ultimately leads to an increase in the black market rate.

As the black market rate rises given the official rate, exporters will be tempted to divert more and more of their foreign exchange earnings from the official to the black market, this is also a source of supply of foreign exchange into the black market and this is from domestic residents overinvoicing imports, due to the overvaluation of exchange rate (see Sheikh, 1976).

The real trade approach is based on partial equilibrium analysis and makes restrictive assumptions regarding the sources of supply (see for instance Sheikh, 1976 and cuibertson, 1975). This approach discovers the long-run parallel market premium which is determined by the equilibrium conditions for legal and illegal trade. In the long-run equilibrium where legal exports equal legal imports and successfully smuggled exports pay for planned smuggled imports, the premium can be expressed as a weighted average of tariffs and subsidy (or tax rate) on exports, and it is therefore determined (as is the smuggling ratio) by the structure of tariff barriers.

The basic limitation of the real trade model or approach is that, because the only reason to deal in foreign currency is to buy imported goods, the sole purpose of black market is to enable smuggling to take place. This assumes away the portfolio motive that has been identified as a critical contributor to the demand for foreign currency in the present times.

Moreover, although this approach provides a useful analysis of the long-run determinants of the premium, it contains no mechanism that satisfactorily explains the short-run behaviour of the premium which is taken as given by exporters and importers in most models.

De Macedo (1987) developed a model in which the long-run premium was determined by the structure of trade taxes (real-trade approach), while the short-run premium resulted from the requirement of the portfolio-balanced. Dornbusch et al (1983) also developed a portfolio balance model for Brazil, the model emphasised the role of asset composition in the determination of the parallel market rate.

Portfolio diversification has indeed been identified as a critical component of the unofficial demand for foreign currency in many developing countries. The general observation underlying this class of models is that foreign exchange is a financial asset. Loss of confidence in the domestic currency, fears about inflation and domestic interest rates gives rise to a demand for foreign currency, both as a hedge and refuge for funds and, as a means of a acquiring and hoarding imports.

An anticipated future change in the domestic money stock will begin to exert its effect immediately after announcement. (For instance or as soon

as agents become aware that the policy change will take place). This will generate portfolio re-adjustments as well as concomitant changes in the parallel market rate, so as to achieve the desired composition of private agents portfolios.[3]

Dornbusch et al (1983) model of portfolio balance focused on the coexistence of portfolio decisions relevant to the holding of asset stocks and the determinants of net flows of dollars associated with tourism and smuggling. A partial equilibrium model of the black market shows that the level of the premium is determined by the official real exchange rate and the official, depreciation-adjusted interest differential, as well as seasonal factors associated with tourism. The portfolio-balance model developed in Brazil[4] showed that the black market . The current account of the black market or the net rate of addition to the stock of black dollars was described or seen as a function of the premium and the official real exchange rate;

$$B = F(x, e) \; ; \; F_x > o, \; F_e > o$$

where B is the existing stock of dollars/current account for the black market, x is the premium and e, the official real exchange rate.

Argentinian tourists are an important source of dollar inflows, while Brazilian tourists (limited to a $1000 allowance of official foreign exchange) give rise to outflows.

A rise in the premium will raise the net rate of inflow as it reduces the

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3 Portfolio balance implies that the domestic currency value of the stock of foreign assets is equal at each instance to desired proportion of private wealth.

4 Dornubusch et al. (1983) empirically tested for premium in Brazil using a currency - Substitution or portfolio balance approach.

import smuggling and Brazilian tourism abroad, while increasing the use of the black market by export smugglers and Argentinian tourists to Brazil.

The model emphasizes the interaction of portfolio decisions, depending on the relative returns to holding black market dollars versus domestic assets, and the flow market for the ? Dollars in which smugglers and tourists mingle. The model (Dornbusch et al, 1983) explains how the expectation of future official devaluation leads to an immediate depreciation in the black market and a subsequent decline in the premium when the expected official depreciation occurs. The model also lends itself to an examination of seasonal patterns. A seasonally high stock of dollars leads to a seasonally low level of the premium.

Kamin (1991) examined the private current account balance in the long term and the short term. In the short term, during which time the entire stock of dollars available to the private sector is considered fixed, the black market rate is determined by the portfolio based stock demand for dollars. Private agents hold two assets in their portfolios, dollars and domestic currency. In the long run, the black market rate and the private sector stock of dollar holdings are determined by the requirements of both portfolio and current account equilibrium. Kamin (1991) analyzed the response of official trade and current account measures in developing countries to both anticipated and unanticipated devaluations. The model explains why both exports and imports appear to decline prior to devaluation, why exports recover so rapidly immediately afterwards, and why imports also rebound so strongly, the real depreciation of the exchange rate notwithstanding. The model explains the

behaviours of the black market rate during devaluation episodes. It also verifies the predicted negative relationship between the black market premium and official exports.

In all these models, output is exogenous, and the desired proportion between domestic and foreign currencies is given by a liquidity preference function (Calve and Rodriguez, 1977) that depends on the expected - and, under perfect foresight, actual-rate of depreciation of the parallel market exchange rate. Private Capital transactions through the official market is usually ignored, so that the reported current account balance is equal to the change in Central Bank reserves, which together with an exogenously determined rate of growth of domestic credit, determine the changes in the domestic money stock. The unreported current account balance determines the change in the stock of foreign currency held in private agent portfolio. The flow supply of foreign exchange in the parallel market usually derives from under-invoicing of export. The propensity to under invoice, when endogenous, is assumed to depend positively on the level of premium. Portfolio balance implies that the domestic currency value of the stock of foreign asset is equal at each instance to a desired proportion of private wealth. In the short-run, the parallel market rate moves so as to set the portfolio demand for foreign assets equal to the existing stock of foreign currency, implying that flow demand and supply may diverge at any given moment.

In the long-run, the parallel rate and private sector holding of foreign currency are determined jointly by the requirements of both portfolio and

current account equilibrium .

Differences between individual formulation exist, for instance, Edward and Montiel (1989) consider a three-good economy and developed a fairly general analytical framework, but they assume that foreign-currency holding remain constant, thus excluding an important source of dynamics. The process leading to a devaluation crisis has been well documented by Edward (1989) and Edward and Mantel (1989).

Blejer (1978) emphasized the role of monetary factor in the behaviour of parallel market exchange rates. Blejer developed a model of the premium by embedding a flow parallel market for foreign currency into a monetary model of the balance of payments in which the rate of devaluation of the official exchange rate depends on the inflation differential with the rest of the world. In Blejer's model, an increase in the domestic money stock initiated say, by a rise in net domestic credit result in an ex-ante disequilibrium between supply and demand in the money market. An access cash balances are worked off by agents, domestic prices rise, this reduces the demand for domestic goods and thus, increase in black market premium.

To Blejer (1978) there should be a positive relationship between the parallel exchange rate and the money stock.

Elbadawi (1988) applied a monetary model to the case of Sudan. The model reflected the influences on real exchange rates of the terms of trade, commercial policy, the parallel market premium and the impact of excess aggregate demand in the economy. Elbadawi concluded that excess aggregate demand and the parallel market premium can be major sources of real

exchange rate appreciation in Sudan.

Elbadawi asserted that the monetary expansion and highly anticipated maxi-devaluations have accelerated domestic inflation immensely. Such conditions of an inflation environment and highly suppressed aggregate demand, especially the one for imported goods, have paved the way for the emergence and subsequent expansion of the parallel market for foreign exchange.

The models of dual exchange rate is a system in which there are two officially accepted exchange rate; a commercial exchange rate for current account transactions, and financial exchange rate for capital account transactions. In the typical arrangement, the commercial exchange rate is either pegged or managed, while the financial exchange rate is market determined. In other cases, an illegal (or black) parallel market developed in response to the imposition of restriction to operate in the official foreign exchange market for certain trade and capital transaction (Ghei & Kiguel, 1992). This spells out the distinction between the dual exchange market and the parallel market rates.

Official dual exchange rates are typically adopted in response to a particular macroeconomic shock, for instance in a country with debt crisis-Mexico and Venezuela. Illegal foreign exchange markets, on the other hand, emerges as a response to market imbalances caused by legal restriction on trade and capital flows.

The principal motivation for resorting to dual exchange rate system is to protect international reserves in a balance of payments crisis without

resorting to maxi-devaluations, which is instead channelled to the parallel foreign exchange market. Domestic prices are partly insulated (at least in theory), as the authorities can defend the fixed exchange rate which is used for trade; while they maintain greater control of the money supply. The advantage of the use of this model over the other are clearly emphasized above, that is, protect international reserves in a balance of payments crisis without resorting to maxi-devaluations, which could be inflationary, domestic prices are partly insulated as it depicts in theory a maintenance of greater control of the money supply.

Just as Kiguel and Lizondo (1990) and Lizondo (1987), Ghei and Kiguel (1992) set out a basic portfolio model for a dual exchange rate system. The parallel exchange rate (and the spread between both exchange rates) especially in the short-run is primarily determined by the evolution of macro-economic variables, expectations and portfolio considerations.

2.2. PARALLEL CURRENCY MARKETS IN DEVELOPING COUNTRIES

Most developing Countries impose restrictions on foreign exchange transactions, especially on the capital account. The imposition of this type of restrictions generally leads to the emergence of a parallel foreign exchange market.

Parallel markets in the developing Countries typically emerge out of restrictions on foreign trade and capital flows. The process often starts with the government trying to impose regulations on trade flows (Licensing procedures, administrative allocations of foreign exchange, prohibitions) in

low-income countries. the imposition of tariffs and quotes creates incentives to smuggle and fake invoices by creating an excess demand for imported goods at illegal, pre-tax prices. Illegal trade creates a demand for illegal currency, which in turn stimulates its supply and leads to the creation and establishment of a parallel currency market if the central bank is unable, or unwilling, to meet all the demand for foreign exchange at official exchange rate. At a later stage, the parallel market expands to accommodate financing of Capital flight and portfolio transactions.

It is important to note that important requirement for the emergence of the parallel currency market is the existence of exchange controls and not necessarily the imposition of tariffs (trade controls), though this creates incentives for smuggling. In the particular case where legal trade requires the sale or purchase of legal foreign exchange, however, the existence of a positive tariff will also be sufficient to induce illegal trade and Currency transactions (Pitt, 1984). Many other factors could help explain the development of a parallel currency market in a partcicular country. In Pakistan, for instance, the rapid expansion in the illegal market for foreign exchange in the late 1970's is ascribed primarily to the sudden influx of worker's remittances from the middle East (Banuri, 1989).

In colombia and Guyana, the expansion of the illegal market for United States dollars has been closely associated with drug-related activities (Thomas, 1989). The size of this market varies from Country to Country, and depends upon the range of transactions subject to exchange controls as well as the degree to which these restrictions are enforced by the authorities.

In Countries where the degree of demand rationing in the official market for foreign exchange is low, the parallel market will play only a marginal role. Conversely, in Countries where balance of payments deficits are chronic and where the central bank does not have Sufficient reserves (or the borrowing Capacity) to satisfy the demand for foreign currency at the official parity, parallel currency market will typically be well developed and organised with an exchange rate substantially more depreciated than the official rate.

Parallel currency market, although illegal are often tolerated by authorities in developing countries (for example, Bangladesh in 1972, the Dominican republic in 1982, Nigeria in 1986, until 1994 when it remained banned). the prevailing price is known to all who wish to patronise the market. In some countries, market users go through personal intermediaries which may be why the market seems so uniform, while in some other countries, the market is dominated by a small number of "big" operators, who fix the exchange rate, sometimes on a daily basis, using their judgement about the market forces. They are followed by large number of intermediaries who are physically present in the market on a daily basis. The spread between the rate the intermediaries pay and the rate the major operators pay them is the sources of the intermediaries income and is reflected in the emergence of a spread between asking and trading rates. A consequence of this type of intermediation is that the actual size of the market is difficult to evaluate and estimates are subject to wide margins of error.

The demand and supply sources varies from country to country and

depend heavily on the nature and effectiveness of exchange restriction imposed by authorities.

The demand sources of foreign currency in the parallel market reflect generally three activities, legal and illegal import, portfolio diversification and capital flight, and residents travel abroad. The demand for foreign currency to finance legal import steams from the existence of rationing in the official market for foreign exchange. The demand to finance illegal import is for goods that are either prohibited or highly taxed and are smuggled into the country.

The absence of legal accountability and inherent confidentiality of transactions in the parallel market provide incentives to agents to use it for concealing illicit activities.

The portfolio motive for the demand is particularly acute in high-inflation economics and in countries where considerable uncertainly over economic policies prevail, because foreign currency holdings represent an efficient hedge against bursts of domestic inflation. In the middle-income developing countries, as suggested by econometric evidence portfolio diversification represents a key determinant of the demand for foreign exchange in the parallel market (Agenor 1991). Portfolio diversification may also take place through the parallel market for foreign exchange when countries impose restriction on private capital outflows. Attempts at circumventing the regulations are funded through the parallel market.

Fixed amount of the foreign currency are advocated in most developing countries for residents-travel abroad. This will again be circumvented through

the use of the parallel currency market.

Blejer (1978) studied the effect of expectations about future exchange rate adjustments on the demand for money in developing countries where foreign exchange restrictions were imposed. The result obtained from Brazil, Chile and Colombia indicated that the demand for money is significantly reduced when expectations of black market depreciation intensify: and that when this variable (for which the proxy used is the divergence of the black market exchange rate from purchasing power parity) is committed from the demand for money function, the response of the demand for money to changes in the expected rate of domestic inflation tends to be over estimated. A policy implication of these findings is that Government intervention in the foreign exchange black market, with the aim of avoiding undesired increase in the exchange rate, tends to reduce the demand for domestic money, making it more difficult to implement stabilisation policy.

Kamin (1993) confirmed through his developed model the behaviour of the black market rate during the devaluation episodes in most developing countries. It also verifies the predicted negative relationship between the black market premium and official exports. However, movements in black market rates do not fully explain the observed pattern of export variation during devaluation episodes.

Parallel currency markets play a dominant role in most developing countries economies for instance, an econometric study estimated the size of parallel market economy in Ghana indirectly through estimates of the amount of money generated by cocoa smuggling. Using this approach, the parallel

market economy was estimated to have grown from about 0.5 percent of GDP in 1974 to about 32 percent in 1982 (Ausu, 1991). While one might question the estimates, the trend to the increasing importance of black or parallel market transactions in the Ghanaian economy and in general over this period was unmistakable; so much so that in 1977 the government publicly accused Togo of economic sabotage through the running of a black market in the Cedi and of smuggling from Ghana.[5]

Sudan's economy has also been characterised by an extensive system of import restriction and fixed multiple exchange rates. Consequently, it is plagued by a rather substantial parallel market for foreign exchange. This type of regime which is generally considered typical of most LDC's is presumed to have its intellectual motivation in a development doctrine bent on "Industrial import Substitution" as the main strategy. In the case of Sudan, however, other goals such as balance of payments and government revenue consideration, encouragement of remittances from sudanese nationals working abroad (SNWA) and to some extent export promotion, seem to be the key factors shaping Sudan's foreign trade and payment regime (Elbadawi, 1987). As the Sudanese Government witness more domestic crisis by the mid seventies and the domestic and foreign balances continued to worsen, the need to check excess aggregate demand and to maintain government revenues ensured the maintenance of above system. The attempted foreign trade liberalisation that came with an IMF - inspired package could not, therefore

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5 Ansu, Y (1991) "Macroeconomic Aspect of Multiple Exchange Rate Regime; The case of Ghana", unpublished, The World Bank. Washington D.C.

the sustained. Turbulent developments in the Sudanese macroeconomic structure after the mid-seventies included massive monetary expansion with money supply (M_1) and domestic credit growing, respectively at an average annual rate of 27 percent, and 26 percent during 1975 - 1986. Such conditions of an inflationary environment and highly suppressed aggregate demand, especially the one for imported goods, paved the way for the emergence and Subsequent expansion of parallel market for foreign exchange in Sudan.

Prior to 1986, the foreign exchange market in Nigeria was largely passive. In 1974, a policy of "Progressive Appreciation" of the naira was introduced as a first attempt to break away from the IMF per value system. The value of the naira peaked in 1980 when it averaged 55 kobo per dollar. In 1981, however, because of the Sudden crash in oil prices and a general shortage of foreign exchange, a policy of "gradual depreciation" was embarked upon.

The problem of an over valued naira remain unsolved throughout the early 80's and thus a great need to have a realistic exchange rate arose.

This was a major break in Nigerians system of foreign exchange management when the exchange control regulations were replaced by a two-tier foreign exchange market. The Central Bank fixed the exchange rate for the first tier while authorised dealers in the second-tier market determined the foreign exchange rate through their bidding.

The development of the autonomous foreign exchange market in which authorized dealers trade in foreign exchange from non-petroleum

sources was a major feature of Nigerian experiment. Others include the unrecognised 'parallel' or 'Black' market which survives through unofficial sources of foreign exchange and its ability to transact business quickly.

The emergence and subsequent expansion of the parallel market for foreign exchange in Nigeria indicates the inability of the system to have a 'realistic' exchange rate, but a confusing multiplicity of exchange rates.

Agenor (1991) estimated a model for the determination of the parallel market rate, using quarterly data for a group of twelve developing countries: Colombia, India, Korea, Malaysia, Malawi, Mexico, Marocco, Nigeria, Pakistan, Singapore, Tunisia and Zambia. Instruments used for estimation were the seasonal dummies, a time trend, four lagged-values of the real money stock, real output and domestic inflation, current and four lagged values of the world inflation rate, a constant term and the level of the official exchange rate lagged once.

The official exchange rate has in all countries a highly significant impact on the parallel market rate. With all the caveats about the weakness of the data - The econometric estimates show that the major determinants of the behaviour of the parallel market exchange rate are the official exchange rate, monetary disequilibrium and - to a lesser extent economic activity.

An important finding is that the parallel exchange rate depreciates, on impact, proportionally less than the official rate in response to devaluation, so that the premium falls initially. Subsequently, the parallel market rate continues to depreciate while the premium rises, returning in the long run to its initial level in six out of the twelve countries. In this case a devaluation is

'neutral'. In other countries in the sample, however, an official devaluation may have a permanent effect on the spread, contradicting the prediction of the portfolio model developed by Dornbusch (1986).

2.3. FOREIGN EXCHANGE MARKETS UNIFICATION

Foreign exchange Market Unification means the adoption of a single exchange rate for all external account transactions with full convertibility if the exchange rate is managed (Kiguel and O'Connel, 1994).

In Nigeria, the market for foreign exchange is widespread, and tends to have a strong macroeconomic link, traditional objectives of economic reforms, such as stabilising the macroeconomy and achieving real depreciation, are equivalent to the objectives of stabilizing the free market rate and reducing the premium, and perhaps ultimately achieving exchange rate unification or at least successfully delinking the black market rate from the major sectors of the economy.

The unification of foreign exchange markets, whereby the premium is lowered and the official and parallel rates are gradually brought closer so as to eventually produce a unique exchange rate, remains a key policy issue for many developing countries.

The elimination of inefficiencies and market fragmentation which are the major objectives of the foreign exchange market unification is viewed from the perspective of whether to adopt a uniform floating, fixed or crawling official rate.

Considering the policy of adopting a floating exchange rate, such a policy shift has ambiguous effects on the short and long run behaviour of the

exchange rate and inflation rate. In the long run, the effect depends crucially on the fiscal impact of the exchange rate reform. If the dual arrangement provides profit to the authorities in, for example, the form of tax revenue from currency operations, the rate of depreciation of the exchange rate and the inflation rate can be expected to rise, because the authorities are apt to compensate for a fall in revenue by an increase in monetary financing; conversely, if the system causes losses, the rate of depreciation and inflation rate can be expected to fall. In the short run, the behaviour of the floating exchange rate after unification will depend on a number of factors, in particular, the behaviour of expectations regarding the reform process. When unification is anticipated, agents seeking to avoid capital losses and to realise capital gains will shift immediately into the foreign currency assets if the uniform floating exchange rate is expected to depreciate relative to the existing parallel rate. They will shift into domestic currency assets if the rate is expected to appreciate relative to the parallel market rate. As a result of these portfolio adjustment, the parallel market rate will move immediately - as soon as expectations are formed - towards the level asset holders expect the post unification floating rate to reach. In the limiting case in which private agent anticipate perfectly the evolution of the post unification exchange rate, the parallel market rate will jump initially and then depreciate steadily toward that level as the time of actual unification approaches.

The evolution of the premium also fits well with the story of expected devaluation based on the model developed by Aron and Elbadawi (1992). Thus, the premium does not only affect inflation and the real exchange rate

but it also serves as a signal for lack of credibility of economic reform and unsustainability of macroeconomic policy.

We can also consider the case in which the authorities attempt to unify the official and parallel markets by adopting a crawling peg, possibly following a one shot devaluation of the official rate. In the longrun, the rate of crawl must be consistent with the balance-of-payments equilibrium, and such a rate must equal the rate of depreciation that would prevail in the long run under a uniform floating regime (Lizondo, 1987). In the short run, the behaviour of the parallel rate after unification will depend, once again, on the behaviour of expectations. If agents anticipate the unification attempt, the portfolio adjustment described above will be initiated, and the parallel - market rate as an indicator for the initial level of the official rate under a crawling-peg regime. If private agents anticipate the unification attempt, the parallel rate will move immediately, before the reform is implemented, towards the level at which the authorities are expected to set the official crawling rate. Setting the initial post-reform rate equal to the parallel rate at the time of unification will thus be consistent with the balance-of-payments equilibrium only if expectations are correct.

Recent evidence points to greater flexibility in the exchange arrangement of some developing economies, with several countries adopting market-oriented exchange systems. Robert (1989) study the experience of African countries with market-based exchange rate arrangements in the mid-1980's, specifically with foreign exchange auctions and floating rates. Other developing countries recently adopting a floating rate include Uruguay in late

1982, Jamaica and the Philippines in 1984, and Bolivia and the Dominican Republic in 1985, and Nigeria in 1986. The moves occurred in most cases at times of increasing external payments difficulties, increasing arrears and capital flight (with reserves no longer available to support the fixed exchange rate), and with extensive parallel currency markets syphoning foreign exchange out of the official channel (Branson and de Macedo, 1989).

These reforms often has as an explicit goal, the absorption of the parallel market and a reduction or elimination of the premium. The challenge of identifying the "market clearing rate", a realistic rate which clears the market and makes black marketing unprofitable, is the sole objective of foreign exchange market unification.

Roberts, 1989 identified the unification attempts through nominal devaluation in some developing countries that changed or switched into a floating exchange system.

TABLE 2 1.

CHANGE IN EXCHANGE RATES, MONEY SUPPLY, AND PRICES IN THE NINE AFRICAN COUNTRIES (IN RATES TO DOLLARS AND PERCENTAGE

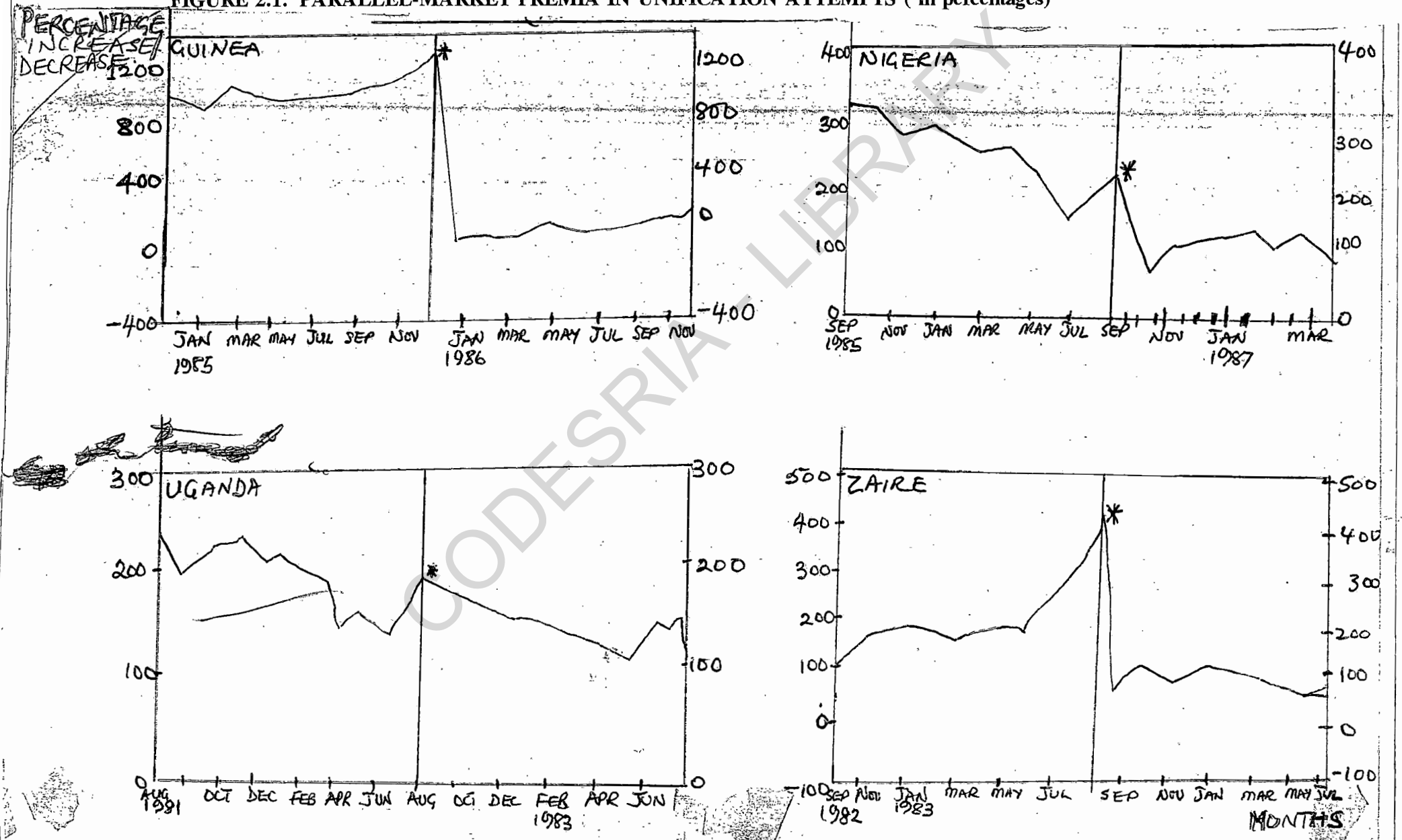
Country	Start of float or Auction	Rate before depreciation Official	Parallel	Rate immediately after depreciation	Initial nominal depre. of official Rate (%)	Additional nominal over 1st year of float (%)	Broad growth on 1st year (%)	Inflation in rental 1st year (%)
Gambia	1/86	3.5	7.0	6.8	49.0	10.0	7.0	54.2
Ghana	9/86	90.0	150.0	120.0	25.0	30.0	65.0	45.0
Guinea	1/86	270.0	420.0	340.0	20.0	15.0	75.0	71.0
Nigeria	9/86	1.6	4.0	4.8	66.0	-12.50	15.0	15.0
Sierria-Leone	7/86	5.0	15.0	12.0	58.0	78.0	126.0	320.0
Somalia	1/85	26.0	90.0	90.0	71.0	22.0	81.0	38.0
Uganda	8/82	100.0	360.0	300.0	67.0	-2.8	42.0	40.0
Zaire	9/83	5.8	66.0	30.1	80.0	26.0	35.0	50.0
Zambia	9/85	2.2	3.9	5.0	56.0	29.0	70.0	55.0

Source: Roberts, 1989, P. 130.

From the table, one could deduce that the rates of nominal devaluation that followed the introduction of auctioning or floating were massive in Nigeria, Sierra-Leone, Somalia, Uganda, Zaira and Zambia. The table shows clearly that the failures of auctions and floats are associated with a loss of control over monetary policy (for example, in Zambia and Ghana), whereas the successes are associated with a stabilization, if not a reduction of a liquidity growth, (for example, in Gambia).

Fig. 2.1 shows the movement of the premium prior and after exchange reforms in Guinea, Nigeria, Uganda and Zaire.

FIGURE 2.1. PARALLEL-MARKET PREMIA IN UNIFICATION ATTEMPTS (in percentages)



SOURCE: International Monetary Fund and World Currency Year Book

It shows that the parallel market premium rose substantially before the reform of the exchange system. This rise can be interpreted as being partly the result of expectations about the reform process, as noted earlier, asset holders facing the possibility of a future depreciation of the parallel rate will reallocate their portfolios away from domestic currency, thereby causing the free rate to depreciate immediately and the premium to increase prior to the depreciation of the official rate. The pattern depicted in Fig. 2.1. is consistent with the result reported by Kamin (1991b), Edwards (1989) and Edwards and Mantel (1989). The evidence also suggests that the premium fell sharply in all countries following the exchange rate reforms and that a significant premium re-emerged subsequently in those countries where money growth could not be kept under control (Ghana, Sierra-Leone, Somalia, Zambia).

The concept of unification I have in mind does not call for a zero level of the premium, however. At least for the case of capital controls, liberalisation may not be possible nor desirable for sometime to come in Nigeria. It is important, however, to liberalise major trade and financial markets in a way that will compress the parallel market and prevent the premium from serving as a major signal to the economy. A large premium can have a deleterious effect on our major exports (oil, agricultural products), directly as an indicator of foreign exchange shortages indirectly through its negative influence on the domestic structure of incentives for the officially sanctioned trade channel. Aron and Elbadawi (1992) made it clear in their econometric analysis for Zambia, that high premium encouraged over-importing (and probably over invoicing) of officially traded imports. The black market rate was also found

to have a significant effect on domestic inflation through at least two channels. Depreciation of the black market rate and foreign inflation directly increases domestic inflation through the cost-push channel. The other effect is indirect and operates through the money market disequilibrium that is, money market distortions arising form the speculative activities of foreign exchange dealers who buy in anticipation of reselling.

The operation of the parallel market is a distortion of the official exchange market. Buyers of foreign exchange have consistently turned to the parallel market where the supply is more certain, though at higher rates. Apart from the risks involved, there is no administrative protocol as in the SFEM/IFEM and this diverts buyers away from the official market. Another distortion is the practice of round tripping, whereby dealers buy foreign exchange from the official market and resell at the parallel market at higher exchange rates. These distortions have contributed to the continued instability and uncertainty of the naira, contrary to Government expectations, hence the need for unification.

The existence of the autonomous market encouraged speculative activities and other malpractices. Therefore, there is a great need for the markets to be merged to eliminate these practices and bring about a single naira exchange rate and reduce the premium to a very minimal level.

The establishment of Bureau-de-change in Nigerian by 1989 was an attempt to curtail the activities of the parallel market, to marginalise the gap between the official and the parallel rates. The Bureaux, however, which were funded from autonomous private sources took care of small buyers of foreign

exchange. The effectiveness of this market were to be determined by their ability to mobilise foreign exchange form the parallel market. The smaller the difference between the rates operating at the Bureau-de-change and the parallel market the better, since dealings in the parallel market are subject to risks of arrest and prosecution by the authorities, a factor which must be considered by those who patronise this illegal market.

Unification experience in most African economies have been gradual and partial in nature, that is, minimizing the premium rate. A complete removal of the premium, that is full unification seems unattainable in most developing countries because of several modifications in their foreign exchange structure which used to be fixed, to a floating rate and the laxity observed in maintaining a tight fiscal and monetary policy - this could as well be adduced to the undeveloped structure of both their money and capital market.

2.4 THE PARALLEL MARKET PREMIUM: EMPIRICAL EVIDENCE FROM OTHER COUNTRIES

Premium in the black market as defined by Dornbusch et al, 1983 is the percentage excess of the black market price of dollars over the official exchange rate. The amount by which the parallel market exchange rate exceeds the official rate, is the parallel market premium" Agenor (1991). Premium could be negative, market participants for instance in Nigeria will be paying in excess of the official rate in selling dollars for naira. This negative premium is essentially a "laundering charge" paid by people who have no right to possess the dollars that they are offering for sale. In

discussing the determinants of the black market premium, various models have been used, some combining the two classes of models discussed previously, for instance, using the portfolio balance approach and the monetary model or the real trade model and so on.

Dornbusch et al, 1983 developed a model of the portfolio balance considerations that govern the holding of stocks of black dollars and of the rate of net additions to the existing stock in Brazil. Thus having a model of the form;

$$x/x = G(xb/-c) - (i^* + d - i) ; \quad G' > 0$$

Where x/x is the rate of change of the premium. (xb/c) is the stock of black dollars, i* is the nominal interest rate on dollars, i is the nominal interest rate on cruzeiro, d is the rate of depreciation of the official rate, (i* + d - i) is the depreciation adjusted differential.

Equilibrium in the stock market in the above equation requires that an increase in the relative supply of black dollars (xb/c) be accompanied by an increase in the relative yield. The rise in the relative yield can come from a higher official, depreciation-adjusted differential (i* + d - i), or from a rising black market premium $X > 0$.

Conversely, a rise in the official differential will create an excess demand that needs to be offset by a rise in supply through a higher level of the premium or through an offsetting decline in demand due to a falling premium. The flow market for black dollars in Brazil arises from a variety of sources. Coffee export smugglers remit their foreign exchange earnings through the black market. Argentine tourists are an important source of

dollar inflows, while Brazilian tourists constitute outflows.

A rise in the premium will raise the net rate of inflow as it reduces the import smuggling and Brazilian tourists abroad, while increasing the use of the black market by export smugglers and Argentine tourists to Brazil. A real depreciation of the official exchange rate, similarly gives rise to increased net inflows, since it reduces the relative cost of Brazilian goods (manufactures or hotels) and thus reduces depletion of the black market by smugglers and tourists.

The effects of real and financial changes on the black market was also analysed. A rise in Brazilian interest rates will lead to an immediate fall in premium, this adjustment is the impact effect of the portfolio shift. The anticipation of a future depreciation of the level of exchange rate (Maxi devaluation) leads all speculators to recognise that in the long run the economy will return to an unchange premium and that hence the Maxi-devaluation of the official rate must also be reflected in a depreciation of the black rate. The recognition of that depreciation or of the potential capital gain or dollars leads to an immediate shift in demand toward dollars and given the available stock, to an immediate jump in the premium. This jump is seen to collapse after the actual depreciation of the official rate.

Dornbusch et al, 1983 also looked into the effect of seasonal factors on premium. As described, the tourist season, this is, in the early period of the year from before christmas to after carnival and another minor period in July, signalled a high rate of inflow of dollars into the black market, and hence a seasonal decline in the premium.

Their empirical investigation reveals that both the real exchange rate and the interest rate and the interest differential have the expected signs, that is, a real depreciation or an increase in the real exchange rate leads to a decline in premium and an increase in U.S interest rates relative to those in Brazil, adjusted for official depreciation, leads to an increase in the premium. The Large size of seasonal variation in the premium suggests that, to the speculators, they perceive an important risk that makes cruzeiros and black dollars substantially imperfect substitutes.

Aron and Elibadawi, 1992 explained using a model, that the parallel market premium in Zambia is influenced by (or jointly determined with) a variety of factors including macroeconomic and trade policies, agents expectations, as well as exogenous determinants such as terms of trade (TOT) and foreign aid. A basic model of dual exchange rate was developed in which the premium was specified as function of the stock of money, and uncovered interest parity differential, reflecting the asset market condition; as well as the flow determinants which include the official real exchange rate (Eo/PN), permanent real wealth (or stock of money), and the parameters of trade policy. After series of derivation, a basic model of the premium in a linear logarithmic form was obtained as;

Log qt - Tt Log qt + 1 = do + di (i*t + Δlog Eot + 1 - it) + d2 log Mt

- d3 long RERXt - d4 RERIt + d5 long (1 - tx)t

t d6 Log (1 - t_I)t + d7.

Where; M is the stock of domestic broad money, RERX is the real exchange rates for exports RERI is the real exchange rates for imports, (I -

tx), $(I - t_I)$ is the explicit taxes on imports and exports.

The estimation of the model explain thus, the interest parity differential and the change in the stock of real domestic money, have a significant and positive influence on the premium. No satisfactory measure for the relative tax variable is available, and hence it was dropped from the regression. The effect due to TOT operates through at least three channels, two indirect channels, through the real wealth and real exchange rate flow effects. An improvement in TOT leads to a rise in the premium. The effect of TOT improvements through the RER channel depends on whether the change in TOT leads to RER depreciation or appreciation. The third, and what appears to be dominant channel is the direct effect of TOT on the supply of foreign exchange which will have the effect of reducing the level of the premium.

A reduction in foreign aid (Grant) however, will ceteris paribus lead to real depreciation and hence a reduction in premium.

The negative significant effect of the lagged log of the premium, shows that high premium in the previous period is likely to lead to less increase in the rate of growth of the premium in the following period in Zambia.

Ghei and Kiguel (1992) presented a portfolio model based on Lizondo (1987) and Kiguel and Lizondo (1990) which serve as the basis of their econometric estimations. The model assumes a small open economy with one traded good and one non-traded good. All commercial transaction take place at the official rate Eo, which crawls at a rate Π. All financial

transactions take place at the parallel rate E_B, which is determined by the market. When 'D' is the stock of domestic credit and 'F' is the stock of foreign assets held by private agents. Following series of modification, a model of dual exchange rate system was developed in which the parallel market premium could be estimated by:

$$q = f\ (F, \Pi, D)$$

Where q is the parallel premium, F, Π, D as defined. The priori signs of the coefficients are given as;

$$f_1 < 0; \quad f_2 = ?; \quad f_3 > 0$$

A larger stock of foreign assets will reduce the parallel exchange rate. Higher deficits will result in an increase in the level of the parallel premium. In the short run, the premium will be affected by expectations of a devaluation on the official exchange rate or the approaching balance of payments crisis. The stock of domestic credit was seen to have a positive relationship with the level of premium.

The model indicates that the size of the parallel premium depends on the consistency between monetary policy and exchange rate-policy, expectations of devaluation of the official exchange rate, the size of the budget deficit and the nature and scope of controls in the current and capital accounts of the balance of payments.

For estimation purposes, they focused primarily on certain macro-economic variables. They examined the relationship between the parallel premium, the money stock, the stock of international reserves and expectations of devaluation of the official exchange rate. There should be a

positive relationship between the parallel exchange rate and the money stock, as postulated by simple monetarist model (e.g. Blejer (1978).

It was discovered that large changes in the money supply which are not accommodated by proportional changes in the official exchange rate signal inconsistent macro-policies, thus leading to an increase in the premium. Second, falling stocks of international reserves in countries with limited access to external financing could signal the approach of a balance of payments crisis which would cause the parallel rate to depreciate and the premium to increase. Third, expectations of devaluation of the official exchange rate in the immediate future should lead to a depreciation of the parallel rate and increase in the premium. In some cases, devaluation can be predicted by looking at the evolution of the real official exchange rate; a strong real appreciation could indicate that a devaluation is in the making. The deviation of the real exchange rate from its equilibrium value would then influence the level of the parallel premium.

Ghei and Kiguel, 1992 , estimated further a specification developed for some countries. The fundamentals chosen were the broad money, stock of non-gold international reserves, deviation of real exchange rate from the equilibrium and lagged level of the premium.

They derived this;

$$\text{Ln } qt = Bo + B1 \text{ Ln } Mt + B2 \text{ Ln } Rt + B3 \text{ Ln } et + B4 \text{ Ln } q_{t-1} + Et$$

Where Mt is the broad money divided by the official exchange rate, Rt is the stock of non-gold international reserves dominated in U.S. dollars. et is deviation of the real exchange rate from its equilibrium value

and Et is an error term. The priori signs of the coefficients are;

$\beta 1 > 0; \beta 2 < 0; \beta 3 > 0; \beta 4 = ?$

The procedure used for estimating disqulibrium of the real exchange rate was the following. The real exchange rate, et was defined as;

$$et = \frac{Et - Pt^*}{Pt}$$

Where Et is the nominal official exchange rate, Pt* is the world price and is proxied by U.S producer price index and P_t is domestic price, using the domestic consumer price index. The equilibrium of real exchange rate depends on a number of fundamentals, such as fiscal and monetary policy, the terms of trade, availability and size of foreign financing and aid, etc. Unfortunately, variables were not available for majority of the countries in their samples with the frequency used for the estimation. Instead, the equilibrium real exchange rate was calculated as a twelve period (quarter) moving average. This assumes that actual real exchange rate observed during a span of three years roughly correspond to the equilibrium one. The difference between the calculated and the actual real exchange rate was used to proxy for the extent of disequilibrium of the real exchange rate at any point in time;

Ln et = ln et - et

A sample of twenty- one developing countries for which quarterly data are available were used. Countries were divided into those with high premia (i.e. in excess of 35 percent) on average, and those with moderate premia (i.e below 35 percent) on average . The rationale for this division

was based on the expectation that the relationship between premium and macroeconomic variables would be clearer in high premium countries than in the countries with moderate premia. There were thirteen countries (Nigeria inclusive) in the high premium group and seven experienced premia averaging between 10 and 35 percent.

The results were clearer and stronger for the high premium countries. The money had the expected sign for all high premium countries and significant, that is, a positive relationship exist between the money stock and the premium. While the level of International reserves coefficient were negative for some high premium countries and statistically significant at 5 percent level, the international reserves were not statistically significant at the same level where their coefficients had a positive value. The deviation from the real exchange rate equilibrium term had the expected sign for high premium countries, that is, the higher the deviation, the higher will be the premium. There was an indication that the short-run behaviour of the premium is primarily influenced by portfolio considerations and changes in variables such as the money stock and the level of international reserves are important, from the results of their error correction equation.

Mbelle (1993) investigated the foreign exchange premium in Tanzania with the following relationship which was estimated using the ordinary least square (OLS) method (For desired properties and simplicity). The model states thus;

$$\text{Log PRE} = \beta o + \beta_1 \text{ Ln GDP} + \beta_2 \text{ Ln AID} + \beta_3 \text{ Ln RER} + \beta_4 \text{ Ln TOT} + \beta_5 \text{ Ln EET} + \text{DUO} + \text{U}.$$

Where, PRE is the foreign exchange premium, AID is the net aid flows to Tanzania (in dollar terms), RER is the real exchange rate of Tanzania, TOT is the terms of trade, EET is the explicit tax on exports, DUO is a dummy variable for the introduction of the own-funds scheme in Tanzania, GDP is the real gross domestic product and U is an error term.

The variables postulated to influence the premium explain about 50 percent of the variations in the premium. TOT and EET came with the priori signs that they negatively influence the premium. AID was discovered to be negatively related with premium as it represents flow of foreign exchange into the economy. The sign of real GDP is an anomaly. Usually, expectation was that as the real side of the economy grows the premium will be reduced.

Empirical evidence has shown that the greater the resources in the official channel the lower would be the premium, other factors held constant. This brings into question the possibility of attaining unification which is donor driven. Once the resources are exhausted a premium reappears. On this basis a model of premium determination was developed for Uganda and variable to capture availability of resources in the official channel was incorporated, IMPF meaning Import Support Sales of donor-funded foreign exchange to finance imports. The steady state of parallel market premium "q" is determined by the budget deficit, the rate of crawl in the official exchange rate and steady state holding of foreign currency (F). According to the equation, the premium will diminish as the desired holding of the domestic money in total wealth increases, as the rate of crawl (ii)

Increases, and as the size of budget deficit financed by recourse to the central bank narrows.

The identity below, thus, explained the determination of foreign exchange rate premium in both the short and long term. The equation includes variables to capture overvaluation in the official exchange rate, availability of resources in the official channels, monetary disequilibrium and portfolio arguments.

$$q = F (REFF, IMPF, RIRFF, (Mt - Mtd]$$

$$Pte/t-1, bte/t-1, Qet/t-1]$$

where q is the foreign exchange premium, REFF is real effective exchange rate, IMPF is the availability of foreign exchange resources in the official channel - proxied by import support sales by the Uganda Central Bank, disequilibrium in monetary sector is denoted as (Mt-1-Mdt), RIRFF is the real interest rate differential between Uganda shilling and dollar dominated assets, Pte/t-1 is the expected level in the premium and Qte/t-1 is the expected level of foreign prices. The results from estimating this model of foreign exchange premium asserts that the exchange rate premium are well specified and thus, have a significant explanatory power. The explanatory power of the equation is over 80 percent. The parameter estimated revealed a highly negative and significant role for the real exchange rate. The higher the appreciation in the real effective terms, the higher the premium.

Ansu (1991) estimated a model of the black market premium in Ghana. The black market premium is derived from the market-clearing condition for the demand and supply of foreign exchange. The total demand

for foreign exchange is assumed to be made up of three components; demand for trade and services through the official channel (DO); demand for trade and services through the black market (DB); and demand for portfolio investment or simply capital flight (DF). The supply of foreign exchange is assumed to be made up of two parts; inflows through the official channel (SO) and inflows through the black market (SB). The market clearing condition is described as;

Do (e,y) + DB (P,Y) + Df (r) =

So (x, Px, Q, P) + SB (x, Px, Q, P)

Foreign exchange for trade services through the official channel, Do, is assumed to depend positively on the general price level, CPI, deflated by the official exchange rate, E. This ratio denoted 'e', is a measure of the 'real' exchange rate. The higher the ratio, the more overvalued the official exchange rate is, and hence the greater the demand for foreign exchange through the official window for imports.

The foreign exchange demand through the official channel is also positively influenced by the level of income in foreign currency terms; that is, gross domestic income deflated by the official exchange rate, and is denoted by y. Ansu (1991) used GDP divided by the official exchange rate to denote y.

Foreign exchange demand on the black market for imports of goods and services, DB is assumed to depend negatively on the ratio of the black market foreign exchange rate to the official exchange rate (P), referred to here as the premium. The demand on the black market is also assumed to

be positively related to y.

The third component of foreign exchange demand is the financial demand, DF, which is assumed to be channelled only through the black market. It depends on, r, the ratio of foreign to domestic deposit interest rates taking into account the expected depreciation of the black market exchange rate.

Inflows of foreign exchange through the official channel is assumed to depend positively on exports through official channel. Exports through official channels depend positively on the total volume of export production, X, and on the foreign prices of exports, Px. However, they are affected negatively by the volume of cocoa smuggled out of Ghana. Algebraically, the producer price ratio can be split into the product of two ratios; the ratio of the producer price using the official exchange rate for the Cedi, a, and the black market premium, p. It is assumed that smuggling is areas directly with the ratio of the producer price of cocoa in the Cote d'Ivoire to that in Ghana, where the Cote d'Ivoire producer price is converted to Ghananian Cedes using the official CFA franc to dollar rate and the black market rate of the dollar in Cedes.

Aggregating the demands as well as the supplies in the above equation gives the following identity with signs of the derivatives underneath.

$$D\ (e,y,p,r) = S\ (X, Px, Q, P)$$

$$De, Dy, Dr, > 0;\ Dp < 0;\ Sx, SPx > 0;\ SQ, Sp < 0.$$

The parallel currency market premium was estimated with the

equation below;

$P = C + S_1 x + S_2Px + S_3Q + d_1e + d_2y + d_3r.$

priori, we have $S_1, S_2 < 0$; $S_3, d_1, d_2, d_3 > 0$.

The above equation was estimated using annual data from 1971 - 1989. The result show that, all the priori signs, except the one on the real income were as expected. Only the real exchange rate and the interest rates ratio were significant at 3 percent and 9 percent respectively. The result indicates that both overvaluation (an increase in the real exchange rate) and an increase in foreign interest rates relative to the domestic savings deposit rate are likely to increase the premium on the black market rate.

This study will compliments these existing works by adding or investigating some more important variables which could be effective at determining the parallel currency market premium. The study also complement the existing literature on the parallel currency market premium in developing countries, by empirically testing some macroeconomic variables, as determinants of the parallel currency market premium in Nigeria, as little has been done in this area.

CHAPTER THREE

EVOLUTION OF THE FOREIGN EXCHANGE MARKET IN NIGERIA

3.1 FOREIGN EXCHANGE MARKET IN NIGERIA. AN OVERVIEW

The foreign exchange market is an organisational framework within which individuals, firms, banks, government and institutions buy and sell foreign exchange. Like any other commodity, the price of a currency, in the absence of government intervention, is determined by forces of demand and supply. The foreign exchange market also provides an avenue for transferring funds from one country to the other, provides credit facilities for foreign buyers of goods and services, and facilitates hedging and speculation.

Most countries in a bid to have a stable currency which is a principal indicator of a stable economy, were reluctant to allow a free play of market forces to determine the exchange rate of their currencies, Nigerias official exchange rate determination had been carried out administratively by the Central Bank of Nigeria (CBN) until the introduction of the Structural Adjustment Programme (SAP) in 1986.

In Nigeria, concern for exchange rates and the foreign exchange market did not quite become pronounced until September, 1986 when the exchange rates were allowed to respond, though guidedly, to market forces. Since this reform in exchange rate management policy, much has been written on the level of exchange rates and the behaviour of the foreign exchange market.

Before the creation of the Central Bank of Nigeria (CBN) and the

enactment of the Exchange Control Act of 1962, foreign exchange were earned by the private sector and held in balances abroad by commercial banks which acted as agents for local exporters. During this period, agricultural exports represented the bulk of foreign exchange receipts and holding of foreign exchange was largely private. The fact that Nigerian pound was tied to the British pound sterling at par, with easy convertibility, resulted in delayed action with regards to the development of an active foreign exchange market.

However, with the creation of CBN and the subsequent centralization of foreign exchange authority in the Bank, in addition to loss of status of direct convertibility of the domestic currency into sterling, the need to develop a local foreign exchange market distinct from those in the major international centres became paramount.

The displacement of agricultural exports by crude oil exports in the early 1970's, as the major foreign exchange earner in the country owing to the sharp rise in petroleum prices, enhanced official foreign exchange receipts and thus, the development of the market. It then became necessary for most economic agents to patronise the CBN for foreign international transactions. The foreign exchange market experienced a boom during this period and the management of foreign exchange resources, to ensure that shortages did not arise, came under sharper focus. The increase in economic activities beginning from the early 1970's, following enhanced foreign exchange receipts and the high demand for foreign exchange to fund heavy capital projects, provided a boost for the foreign exchange market.

The need to design an appropriate mechanism for determining allocation and management of exchange rate, during the period when foreign exchange was in abundance was not given adequate attention. The prevailing exchange control mechanism as earlier stressed was based on administrative controls. Thus, foreign exchange allocation was not based on any formalised criteria. The foreign exchange crisis that erupted in 1982 as a result of the oil glut of the proceeding year was a major challenge to foreign exchange managers. Nigeria had accumulated payments arrears that could not be settled as a result of declining foreign exchange earnings. Many countries refused to extend further credit to Nigeria at that time, international community stopped guaranteeing imports coming into Nigeria, in fact, there was a serious downturn in the economy, y, this marked a turning point in the history of the country's development. The foreign exchange situation was very tight and exchange control measures were reactivated and made more stringent. These measures included, advance deposit requirements for imports, and import licensing requirements for a large number of imported items. These measures mentioned in addition to the scarcity of foreign exchange increased activities in the foreign exchange market. The activities of speculators and numerous middlemen increased during this period. The increasing demand for foreign exchange at a time when the supply was shrinking encouraged the development of a flourishing parallel market for foreign exchange.

In 1986, a revolutionary exchange rate policy was introduced as the cornerstone of the Structural Adjustment Programme (SAP). The Second-

Tier Foreign Exchange Market (SFEM) operated along with the existing (then known as the first-tier) foreign exchange market in order to attain a realistic exchange rate for the naira previously considered unrealistically overvalued. The market forces, that is forces of demand and supply under the guidance of the CBN are supposed to determine the equilibrium exchange rate for the naira. In July, 1987, the two markets were merged to form the Foreign Exchange Markets (FEM) and in January, 1989 the Inter-Bank Foreign Exchange Market (IFEM), a variant of the SFEM, was established in place of FEM. Bureau-de-change were also set up to take care of small buyers and sellers of foreign exchange.

Developments in the parallel market did not constitute very serious treat to the attainment of the goal of internal balance. However, as efforts were made to improve the value of the naira in the official market, the parallel market premium increased sharply, Foreign exchange malpractices became rampant as some authorised dealers charged premium on official foreign exchange which they sold to their customers. The parallel market premium that emerged strongly as a result of disequilibrium in the official foreign exchange led to various abuses including under-invoicing of export and over-invoicing of imports, capital flight and diversion of official foreign exchange to the parallel market (round tripping). In order to reduce the wide divergence between rates in the various markets and eliminate the need for foreign exchange abuses, a more deregulated market based system was introduced on March 5, 1992. The CBN floated the Naira, discontinued the system of pre-determined quotas for banks and allowed allocations to be

based on rates which emerged in the market. The changes or foreign exchange reforms during this period was necessitated by a sharp rise of premium in the market, which grew to the tune of 80 percent, the existence of which benefited the bank official and constituted an implicit subsidy on the part of, and at expense of, the government. Many operators engaged in "Round Tripping" while many end users of forex sourced their foreign exchange needs from the official market and diverted their own non-oil foreign exchange from export proceeds to the parallel market to take an undue advantage of "arbitrage" in the market. The country witnessed an unstable economic environment especially in terms of its foreign exchange earnings. The official market rate depreciated by 43.7 percent from ₦10.5564 to U.S$1.00, to ₦18.7500 to U.S$1.00. The premium on the official exchange rate before the intervention of CBN in March, 1992 was close to 100 percent. In the effort to stabilise the exchange rate, the government has had to resort to borrowing from external sources to fund the official foreign exchange market. Under the March 5, 1992 scheme, the CBN became a more active participant, buying and selling as occasion demands. As a result of difficulty of continuing to supply foreign exchange to meet increasing demand backed by Naira conversion in the face of low external reserves and declining foreign exchange receipts, the system was discontinued on December 15, 1992. Investigations by the Central Bank revealed that most of the demand pressures were due to payment on open account and bills for collection (CBN, 1993), that is, transactions outside the generally accepted import procedures of the CBN, where letters of credit

and subsequent confirmation by correspondent banks recommended by the CBN abroad are required. Payments on theses categories were accordingly suspended by the CBN effective from February 24, 1993. The bank also introduced a pro-rata system of foreign exchange allocation to ensure that all participants (banks) get some allocations of foreign exchange.

From the foregoing analysis, we could deduce that the major turning point and the most important period of foreign exchange systems dates from September, 1986, when the rigid official control of the naira exchange rate and allocation of foreign exchange were allowed to respond, though guidedly, to market force (SFEM). This study will in this regard examine the foreign exchange market before and since the Structural Adjustment Programme (SAP) of September, 1986 was introduced.

3.1.1 FOREIGN EXCHANGE MARKET BEFORE THE STRUCTURAL ADJUSTMENT PROGRAMME (SAP)

Prior to 1986, the foreign exchange market in Nigeria was largely passive. The major participants in the foreign exchange market were authorised dealers, the public sector, including the CBN, the private sector especially the industrial sector and correspondent banks abroad. Authorised dealers were banks and other entities granted license or permitted to deal in foreign exchange. Although approved hotels were allowed to buy foreign exchange from the tourists and surrender same to the CBN, they were not considered as authorised dealers since they could not sell foreign exchange.

Importers and exporters of non-oil commodities were required to get appropriate licences from the Federal Ministry of Commerce before they

could participate in the foreign exchange market. The authorised dealers pass such applications for imports backed by the licences and other relevant documents to the CBN for approval and foreign exchange cover, while they deposited the domestic currency equivalent with the CBN. In the same way, exporters applications were routed through authorised dealers to the CBN and foreign exchange receipts from such transactions were expected to be surrendered to the Bank in exchange for domestic currency (CBN, 1993)

The authorization of foreign exchange disbursement was a shared responsibility between the Federal Ministry of Finance and the CBN. The Federal Ministry of Finance had responsibility for public sector applications while the Bank allocated foreign exchange in respect of private sector applications. The CBN effected payments in all cases. The foreign exchange allocation was decentralised in 1984, licensed banks were allowed to approve applications and allocate foreign exchange to customers subject to the maximum allocated to them by the CBN. However, this method was revoked in 1985 because of abuses and the CBN took over direct allocation of foreign exchange. Allocations were made weekly by the CBN to the licensed banks before the revocation.

Under the exchange Control System (1962-1986), economic objectives played a major role, although adhoc measure were made used to determine the naira exchange rate. The Nigerian currency was pegged to the 1 to 1 ratio from 1960 till 1973 when it was devalued by 10% and allowed to move independently of the Sterling.

In 1974, a policy of "progressive appreciation" of the naira was

introduced as a first attempt to break away from the IMF per value system. This encouraged reliance on imports which eventually led to the depletion of external reserves.

In 1978, a system of "import weighted" value of a basket of currencies of Nigerias major trading partners was adopted. This method had the advantage of reflecting more accurately the true picture of international foreign exchange markets and did not subject the naira to wide swings in value. The value of the naira peaked in 1980 when it averaged 55 kobo per dollar.

In 1980, however, because of the sudden crash in oil prices and a general shortages of foreign exchange, a policy of "gradual depreciation" was embarked upon. By 1985, One dollar exchanged for approximately 89 kobo, there was sustained pressure on the external sector, that is, inadequate foreign exchange earnings worsened the balance of payments position and this was again heightened by an overvalued Naira.

A realistic value for the Naira was sought in 1986, with the introduction of the Structural Adjustment Programme (SAP) in September, 1986. This saw a major break in Nigerians system of foreign exchange management when the exchange control regulations were placed by a two-tier foreign exchange market.

The major shortcoming of the exchange control system (1960 - 1986) was its inability to achieve internal balance in the short term and guarantee external equilibrium in the long term. Over-valuation of the currency under the system was a major obstacle that made the achievement

of internal balance difficult. Specifically, the problems with the administration of the Exchange Control System can be summarised as increased dependence on imports, depletion of external reserves, encouragement of parallel market activities, reduction of competitiveness in export activities, reduced capital inflow, and the inability to pay on current basis. This led to the accumulation of payments arears which compound the external debt problem.

Exchange control had to be discarded on September 26, 1986 with the inception of SAP in order to evolve an exchange rate mechanism that would be more responsive to prevailing economic conditions. This marks a major turning point in the history of foreign exchange markets in Nigeria.

3.1.2 FOREIGN EXCHANGE MARKET IN NIGERIA SINCE S.A.P

Nigeria introduced a market determined exchange rate system in 1986, but in reality this market was not in perfect competition due to some intervention by the Central Bank and Government. This system was tagged the Second-Tier Foreign Exchange Market (SFEM). Under the new system, the exchange rate became an active instrument of economic management and the rate derived in the market served as the means for allocation of foreign exchange as opposed to the former system, where it was administratively determined.

The modalities of the foreign exchange market have changed substantially since the introduction of SFEM, in line with the principles of SAP which emphasized the market-oriented approach to price determination. The supply of foreign exchange has continued to be mainly from oil

receipts. The supply of non-oil foreign exchange receipt to the CBN fell as a result of the provision that exporters could retain their entire foreign exchange proceeds in their domiciliar accounts (CBN, 1993). This in fact, has increased the rate of smuggling and parallel market foreign exchange deals, because exporters will make more money by transacting in the parallel market that offers a higher rate of exchange.

The supply of foreign exchange is largely carried out by the government, Nigerian Government is a net seller, that is, about 90 percent of foreign exchange earnings by Nigeria accrues to the Government through oil sales (Pinto, 1990).

One of the unresolved problems that has bedeviled the operation of the foreign exchange market since September, 1986 has been the choice of the best method of determining the exchange rate for the Naira.

The Federal Ministry of Finance had its allocative powers transferred to the Central Bank of Nigeria (CBN), but retained approving powers on public sector transactions. Its powers were also enhanced in 1989 when it was assigned the responsibility of licensing bureaux-de-change. Bureaux-de-change were set up principally to enlarge the scope of the officially recognised foreign exchange market, unification of the exchanges rates, accord access to small users of foreign exchange in a less formal manner and enhanced macroeconomic management. They were required to deal only in privately sourced funds and were not allowed to finance imports.

The role and objectives assigned to the foreign exchange market when the Second-Tier Foreign Market (SFEM) was introduced in 1986 are

as follows:

(a) to determine the real market value of the Naira in relation to major international currencies and hence achieve an optimal allocation of the country's scarce foreign exchange resources;

(b) to promote the production of a higher volume and broader range of exports in order to earn more foreign exchange and reduce imports and hence achieve external balance;

(c) to attract a greater inflow and discourage the outflow of funds;

(d) to redress the gross imbalance in urban-rural incomes and welfares;

(e) to eliminate black market currency trafficking and gradually absorb the unofficial parallel foreign exchange market;

(f) to dismantle the administrative controls particularly, import licensing and;

(g) to restore the confidence of the nations' creditors in economy thereby leading to the reduction in the countrys' external debts.

The establishment of the SFEM was primarily intended to ensure a more efficient utilization of the country's foreign exchange resources, attract capital inflow and eliminate the activities of the parallel market.

The CBN allocated foreign exchange to banks based on individual bank quota since the inception of the SFEM until March 5, 1992 when the system of the pre-determined quotas was discontinued, though import

procedures have remained largely the same.

At the commencement of the SFEM, a dual exchange rate system for tha allocation of foreign exchange was adopted. Pre-SFEM or transitional transactions, debt service payments, contributions to international organisations and expenses of embassies were excluded from the SFEM and settled at the First-tier rate. The Second-tier rate was determined by auction at the SFEM. At the first bidding, the "average bidding rate" system was used. Under this system, the average of successful bids of authorised dealers was used to determine the exchange rate. The "Marginal bid pricing" system replaced the average rate system after the third bidding session. Under this system, the last successful bid determined the clearing price which was also the ruling rate. This method, had an inherent disadvantage of continuously depreciating the Naira and was abandoned for the "Dutch auction" system. The Dutch auction system was adopted in April 1987 when individual Bank rates were used to allocate foreign exchange up to the marginal rate which cleared the market. It is essentially the same marginal rate which fitted with a mechanism to penalize "over-bidding". Under this system the marginal rate is still exact rates they submitted. This system however created the problem of multiplicity of rates while the Naira depreciated further.

The development of the autonomous foreign exchange market in which authorize dealers trade in foreign exchange from non-oil sources was one of the major features of the Nigeria experiment. Others include the unrecognised 'parallel' or 'black' market which survives through unofficial

sources of foreign exchange and its ability to transact business quickly. The merging of the first and second tier market in July 1987, and the deregulation of inter-bank exchange rates led to significant divergence between foreign exchange market rates and autonomous rates. The merging increased demand pressures and contributed to the persistent depreciation of the Naira exchange rate between July and November, 1987.

In 1988, the inter-bank market (where banks were allowed to transact official foreign exchange themselves) was separated from the official market and an autonomous market for privately sourced foreign exchange emerged with its independent rates. That is, three distinct markets for foreign exchange, each with its own rate existed in Nigeria. There was no 'realistic' exchange rate, but a confusing multiplicity of exchange rates. The autonomous market was highly destabilising as its rates depreciated continuously.

Under this regime, the exchange rate was determined through one or more of the following methods - marginal rate pricing, average rate pricing, highest and lowest bids, weighted average pricing, average of successful bids and consideration of developments in the exchange rates of the major international currencies. Its unique feature was that auctions were held daily.

To further reduce exchange rate instability, the CBN modified the inter-bank procedures in December 1990 when the Dutch auction system was re-introduced and in August, 1991 when it introduced the 'modal weighted average' method of exchange rates determination. Under this

system, the rates tending towards the mode (occurring most) were applied to determine the market exchange rate. This method was designed to reduce wide fluctuation in the naira exchange rate.

The major problem that has characterized developments in the Nigeria foreign exchange market is the persistent downward pressure on the exchange rate leading to continuous depreciation, particularly of the parallel market and the bureau-de-change rate (CBN, 1992). The rate of depreciation in the parallel/bureau-de-change rates has been faster than of the official foreign exchange market rate, leading to the widening of the gap between the rates in the markets (Ogiogio, 1993). Between March and December 1992, the official rate experienced a depreciation of 6.88 percent. For the Bureau de change, and the parallel market, the exchange rate depreciated by over 20 percent, over the same time period. Over the period, the Bureau-de-Change rate were consistently higher than the rate in the parallel market. For the 1992 period, the Bureaux rate averaged ₦21.0142 to the US$1 dollar with a variance of 3.4529 while the parallel market rates had an average of ₦20.6550 with a variance of 3.2494.

The bureaux-de-change/Parallel market rate fell (depreciated) by over 33 percent in 1993. In a bid to curb the sharp depreciation of the Naira exchange rates, the CBN re-introduced the Dutch Auction System (DAS) with weekly biding in February, 1993. This foreign exchange management scheme lasted barely one month. Between February and March 1993, the scheme stabilized the official rate at ₦24.990, but there was no effect on the increasing depreciation in the bureaux-de-change and the parallel market

rates. The parallel market premium has been on the increase since March, 1992; it was as high as 79.2 percent in that year compared to only 20 percent in 1990, 35.5 percent in 1991 and Universally recommended limit of 5.0 percent. At different periods, attempts at unifying the exchange rates were carried out, upward adjustment of the official exchange rate reduces the parallel market premium, though for a limited period, the parallel market premium declined gradually while demand by banks for foreign exchange fell short of the supply. However, as a result of renewed demand pressures and speculative activities, the parallel market premium widened further.

Demand management and supply increasing policies were applied to Nigerians foreign exchange resources. The demand management policies are meant to streamline demand for foreign exchange by curtailing foreign exchange expenditure. The objective has been pursued through external debt management as well as fiscal and monetary measures. New external borrowing have been restricted to key projects and a Debt conversion programme was introduced in 1988 to further reduce the debt stock. In order to reduce short term fluctuations and instability in the foreign exchange market, tight monetary, credit and fiscal policies have been applied by the authorities. In this regard, the Federal Government in 1989, directed its agencies to transfer their deposits from the Commercial Banks to the CBN. The tariff structure was also re-aligned to reduce the importation of non-essential items. The mopping - up of excess liquidity from the banking system in order to reduce demand pressures and ultimately the demand for foreign exchange were part of measures under the demand

management scheme.

Measures meant to increase the supply of foreign exchange to the economy have been directed mainly at the non-oil export sector. Licensing requirement for non-oil export was abolished in 1986 to encourage more people to go into the export business and thereby enhance non-oil receipts. Commodity Boards were also abolished in 1986 to make non-oil export business more competitive. The CBN and the Government have also actively promoted and supported various schemes designed to increase foreign exchange receipts from non-oil exports.

The CBN introduced the Pro-rata allocation of foreign exchange to authorized dealers when the former system failed at reviving the drifting rates. Under this system, the bank allocates available foreign exchange each week to authorized dealers that back their demand effectively with adequate naira deposits at the Central Bank. Allocation to banks were made by multiplying individual bank demand with the proportion of total demand that the available supply can cover. Thus, the product of individual bank demand and the supply ratio gives the pro-rata formula for foreign exchange allocation under the current scheme. Since the operation of this scheme in march, 1993, the official exchange rate has appreciated marginally; it appreciated from about ₦25.00 to U.S. $1.00 in march to about ₦22.00 in may 1993, 16 percent and 13 percent appreciation accursed between April and May 1993, in the Bureaux-de-change and the parallel market rates, respectively. Since May, however, the situation was that of steady depreciation. Between May and November 1993, the rates in the Bureaux-

de-change and the parallel market depreciated by 29 percent and 32 percent, respectively. As at December, 1993, while the official rate was ₦21.9960 to U.S. $1.00 the rates in the bureaux-de-change and the parallel market were, ₦43.500 and ₦43.300, respectively. There was therefore about 100 percent premium on the official exchange rate. This gross in efficiency in the foreign exchange market obvious from the size and consequent effect of the premium led to the fixed exchange rate system introduced in January 1994. The exchange rate was fixed at ₦22.00 to U.S. $1.00. The parallel market was declared illegal and operators were to face the wrath of law if caught in the act of foreign exchange transactions. Deals in this regard were abolished. The bureaux-de-change were made to operate in different manner. They were turned to agents of the CBN, and were to sell foreign exchange at the rate prescribed by the CBN plus a fixed commission.

The new guideline abolished the former mode of operation of Bureaux-de-change, crippling their existence and even gave limits to their operation. For instance, they were not allowed to sell more than $2,500 or equivalent to any customer and their returns on transactions were made to the CBN every month, this control did not give the operations a substantial margin to stay in business.

One of the supply increasing policies in place in 1994 was that, companies, agencies and individuals bringing foreign exchange into the country could not do so only through the CBN or approved banks. Such foreign exchange were made withdrawable freely either in Naira or foreign exchange with interest at the prescribed rate. Throughout the first quarter,

the foreign exchange policy put in place in 1994 - which came in late anyway, was altered on several occasions. Rules on the operations of the bureaux-de-change partial utilization, multiple bidding, domiciliary accounts and sectoral distributions were all altered (Financial Guardian, May 30, 1994).

With demand exceeding supply, the informal sector can therefore not be scrapped away. The premium increased by about 100 percent, with black market rate at about ₦50.00 to U.S. $1.00 in June, 1994. It was justifiable that exporters and other foreign exchange holders would rather than declare at ₦22.00 their foreign exchange, transact deals with the black market operations, who inspite of their illegality of operations still exist in reality. Manufacturers through their banks under the pro-rata scheme got 50 percent, later 60 percent of all foreign exchange available in the country, the resulting acute scarcity ensures that informal marketers do not lack patrons, round tripping was encouraged and manufacturers had to source for their forex in the informal sector. A system of priority rating of industries or institutions that utilise foreign exchange resources was introduced at the later part of 1994.

TABLE 3.1. MOVEMENT IN NAIRA EXCHANGE RATES IN FEM. BUREAU-DE-CHANGE AND PARALLEL MARKETS, 1985-93

YEAR	OFFICIAL RATE	% IN (1)	BUREAU-DE-CHANGE	% IN (3)	PARALLEL MKT. RATE	% IN (5)
1985	0.892	14.0	-	-	-	-
1986	1.730	48.5	-	-	-	-
1987	3.870	56.5	-	-	4.600	-
1988	4.564	12.6	-	-	6.051	-13.9
1989	7.365	38.0	10.517	-	10.490	-42.3
1990	8.037	8.4	9.598	9.6	9.700	7.2
1991	9.029	11.0	13.350	-28.1	13.711	-29.2
1992	17.376	48.0	20.283	-34.2	20.220	-32.2
1993	21.996	20.6	42.970	-52.8	43.170	-55.2

SOURCE: BASIC DATA FROM CENTRAL BANK OF NIGERIA.

3.2. PARALLEL CURRENCY MARKET IN NIGERIA

Exchange Control measures constitute the bed rock of the parallel market in the foreign exchange. In a low income country, the imposition of controls such as tariffs and quotas create incentives for smuggling and fake invoices as well as demand for imported goods at illegal prices. Illegal trade creates a demand for currency illegally which in turn stimulates its supply and leads to the creation and establishment of a parallel currency market particularly when the Central Bank is unwilling or unable to meet all the demand for foreign exchange at official rate.

It has been argued that the correct indicator of the scarcity value of foreign exchange is the parallel market rate. The premium between the two rates is considered as a measure of the extent of devaluation in the official exchange rate to be eliminated through any unification method (Pinto, 1990).

In 1981, following a decline in oil earnings, which was as a result of a collapse in the international prices, trade arrears became manifest in Nigeria. The policy of reserve intervention was found to be increasingly inadequate and policies of gradual depreciation of the exchange rate and strict import licensing programme were put in place. These were meant to increase foreign exchange receipts through increased export volume, and value, reduce outflow of foreign exchange and reduce pressure on the balance of payments.

The development of parallel market are inevitable in a situation where the demand for foreign exchange glaringly outstripped its supply.

In 1982, a foreign exchange budget constraint and priority allocation fomular were imposed on issuance of licences.

In February, 1984, the licensing scheme was completely revised with the scrapping of Open General Licence (OGL) System. Advance Import deposits were reintroduced in 1982 for all goods (Pinto, 1987). This foreign exchange rationing created excess demand pressure for foreign exchange and marked the accentuation of the problem of foreign exchange premia in Nigeria.

With private capital transactions and a large fraction of private commercial transactions rationed out of the official foreign exchange market, the premium on foreign exchange in the parallel market started growing. The parallel market satisfies the demand of those who need foreign exchange to make unofficial imports and, or to hold as an asset. Thus, the marginal cost of foreign exchange was determined largely in the parallel market and increased reliance on this market following declining oil prices made the premium to continue growing.

The development of parallel market in Nigeria, like every other developed country, could thus be traced back to the period when exchange control measures were reactivated in 1982 as a result of the oil glut of the preceeding year some of these measures were advance deposit requirements for imports and import licensing requirements for a large number of imported items. These measures, in addition to the scarcity of foreign exchange, increased activities in the foreign exchange market. The activities of the speculators and numerous middlemen increased during this period.

The increasing demand for foreign exchange at a time when the supply was shrinking encouraged the development of a flourishing parallel market for foreign exchange.

The parallel market though illegal, has existed over time. It survives through unofficial sources of foreign exchange and its ability to transact business quickly.

By 1988, three distinct markets for foreign exchange, the official, Bureau-de-change and parallel market, each with its own rate existed in Nigeria. It is evident in Nigeria that the official exchange rate is usually a poor reflection of a reasonably, realistic exchange rate. This realization informed the devaluation of the official rate by over 40 percent in March, 1992 in the effort to reduce Bureau-de-change and parallel currency market premia (CBN, 1993).

Ogiogio (1994) confirmed that the official market is relatively less efficient and that official exchange rate did not respond freely to the supply of, and demand for, foreign exchange in its market. Both the Bureax-de-change and the parallel market tend to show a more realistic rate of the Naira.

The parallel market, not until 1994 when its co-existence was declared illegal and operators were to face the wrath of the law if caught in foreign exchange deals, has been flourishing and recognised but not legal. The informal market will always be there until the official foreign exchange market can be adequately financed. Operators are now re-adjusting , changing their appearances and locations, servicing only known patrons

mostly at their offices and houses.

The bureaux-de-change apart from the basic objectives for its legislation in 1989, that is, to broaden the scope of legitimate foreign exchange transactions, improve fiscal efficiency, provide free access to foreign exchange transactions to small users in a convenient and informal manner, thereby filling the gaps under the existing arrangements, was an attempt to curtail the activities of the parallel market.

3.3. MACROECONOMIC CONSEQUENCE OF EXCHANGE RATE POLICY IN NIGERIA

The basic macroeconomic objectives an exchange rate policy should endeavour to achieve include a desirable level of economic growth, price stability, and equilibrium in the balance of payments.

Demand management policies are meant to streamline demand for foreign exchange by curtailing foreign exchange expenditure. The objective has been pursued through external debt management as well as fiscal and monetary measures. For foreign exchange expenditure to be curtailed, policies aimed at reducing imports should be put in place, that is, import-substitution policies restricted to key projects and a debt conversion programme was introduced in 1988 to further reduce the debt stock. In addition, various debt rescheduling agreements concluded with the London and Paris Clubs of creditors have restructured maturities falling due over a period stretching beyond twenty years.

The claim of any country on the world's output, including her own,

is the value of what she produces. Apart from grants made to her by other countries, she cannot get something for nothing. It is when a country consumes and invests more than she earns by her output that she's living beyond her means and runs into difficulties. A deficit in her balance of payment is only a symptom. The fundamental cause of disequilibrium is that she is consuming more than she produces. Subsequently, solving the problem is for the country to increase her production relatively to her consumption; in other words, to save more. Average savings deposit rate though increased from 9.5 percent in 1986 to 18.0 percent in 1990, it fell drastically in 1991 to 13.8 percent. There has been inconsistencies in savings rate in Nigeria. The culture of saving has not been imbibed in most Nigerians and probably the reason why most towns are underbanked. Transmission of savings to investment in Nigeria has been engendered with soaring problems. These include, inadequate information about investment opportunities; unpredictable economic/industrial environment; non-availability of viable productive ventures; and a poor enabling environment/lack of adequate infrastructure. All these and other factors not mentioned above contribute in a way to difficulties facing the country as regards debt management and a total revitalisation of the economy.

A desirable exchange rate management policy in the Nigeria context today must address the following fundamental issues. These are; availability of, and ease of accesssiblity to, foreign exchange by all users; unified or minimal difference among foreign exchange rates across markets; minimization of waste in the utilization of available foreign exchange; and

encouragement of inflow and increased share of autonomous foreign exchange earnings. The ability to deal with these issues goes far beyond the current passion for control of the foreign exchange market in Nigeria.

The existence of parallel market means that the true rate for the Naira has not yet been found. A realistic rate will be that which clears the market and makes black marketing unprofitable. This rate cannot be obtained unless the official market mobilizes enough funds to reasonably match the demand for foreign exchange. Parallel market in the economy has been seen to have adverse impact on the economic development through various indicators, such as GDP, CPI etc.

Measures meant to increase the supply of foreign exchange to the economy have been directed mainly at the non-oil exports sector. Licensing requirement for non-oil exports was abolished in 1986 to encourage more people to go into the export business and thereby enhance non-oil receipts. Commodity Boards were also abolished in 1986 to make non-oil export business boom within the economy. The foreign currency domiciliary account scheme was also introduced, in which exporters could retain 100 percent of their export proceeds in foreign currency accounts domiciled in Nigeria. This scheme though meant to boost export business, in reality, it has not achieve much as regards inspiring exporters to retain their proceeds in this account. The reason being that, the existence of parallel market seem profitable in terms of foreign exchange transactions, though risky. The exporters in this sense will leave some of their proceeds undeclared for better deals in the parallel market. In this context, foreign exchange

resources will be reduced in the official market.

In 1987, which was the first year or SFEM, the economy recorded a boost in non-oil exports in response to the change in relative prices through the exchange rate adjustment. Access to foreign exchange by the productive sector became easier. There was a more efficient utilization of foreign exchange and other resources which led to a drastic reduction in wasteful, frivolous and fraudulent transactions. However, the nation experienced foreign exchange shortage relative to the needs of the economy. According to the Central Bank Circular No. TED/AD/1/88 dated January 4, 1988, the foreign exchange receipts for 1987 were grossly inadequate to meet the basic needs of the economy, including the funding of the foreign exchange market, debt servicing, payments of pre-SFEM trade arrears and strengthening the external reserves. This was reflected by the sudden depreciation of the Naira exchange rate to about ₦5.00 per U.S. $1.00 in 1987 from ₦1.54 to US $1.00 as at August, 1987. The country's debt position worsened further from the World Bank estimated figure of $18.5 billion in 1986 to about $30 billion in 1988. With the parallel market premium averaging 42.48 percent in 1989, the consumer price index (CPI) increased from 38.3 percent in 1988 to 50.5 percent in 1989. The balance of domiciliary accounts was below expectation judging from the liberal environment and age of the scheme by the end of 1987. This has been the trend of events to date. The increase in demand for foreign exchange relative to supply and higher incidence of speculation exerted further pressure on the exchange rate of the Naira in 1993. In the official segment

of the market, the Naira exchange rate depreciated persistently in the first quarter and the last quarter. On the average, the Naira depreciated from ₦15.4704 to US $1.00 in the first half of 1992 to ₦22.1892 to US $1.00 in the first half of 1993. The movement in the Naira exchange rate exhibited a similar pattern in the bureaux-de-change and parallel markets. Consequently, the parallel market premium during this period widened to 41.9 percent from 21.0 percent in the corresponding period of 1992. These events have a great consequence on macroeconomic indicators of the economy.

There has been an upward trend in the domestic inflation rate, reflected by the CPI. For instance, the rate of inflation at the end of the first six months of 1993 was 54.3 percent compared with 44.6 percent at the end of December, 1992 and 26.8 percent in the corresponding period in 1993. The upward trend in the domestic inflation rate resulted largely from the effects of the continuing incidence of excess liquidity in the economy, increase in transportation cost, inadequate growth in the supply of goods and services and most importantly, the slide in the Naira exchange rate. The rise in CPI is not unconnected with the level of parallel market premium.

Though the current account position of the balance of payments in 1993 showed a surplus, thereby continuing the trend since 1990, the persisting source of concern to the authorities were the resort to deficit financing from the banking system, inadequate supply of foreign exchange, exchange rate depreciation, heavy debt burden and massive inflationary

pressures. These problems will continue to constrain economic growth and employment generation in Nigeria.

In a bid to reviving the economy, that is, achieving the basic objective of the 1994-1996 rolling plan which include, effective debt management strategies to reduce the debt service burdens on domestic commitments and obtain debt relief from external creditors; rehabilitation of socio-economic infrastructure and strengthening of law and order apparatus to provide a conductive environment for legitimate economic pursuits and private initiative and most importantly; exchange rate stabilization and reversal of the high incidence of capital flight, the National Foreign Exchange Account was raised in 1994 and the Government fixed the Naira exchange rate of ₦22.00 to US $1.00. This decision was fuelled by the deterring economic performance in the preceding year (1993).

The nations balance of payment position, which had shown a modest surplus between 1989 and 1991 recorded a deficit of $3,773.3 million in 1992 as oil prices slumped and debt service payments remained high; the resultant effect was a fall in foreign exchange supply in the country. The external debt service amounting to about $4.5 billion in 1993 could not be paid. The precarious debt service position has been reflected in declining reserves. The nations external reserves stood at only $972.3 million at the end of October, 1993 and was declining to less than one month's imports bill by the end of 1993. The downward trend in the value of Naira resulted in a decline in consumer purchasing power, falling standards of living and the value of output and assets. It also meant higher prices for imported

inputs which is translated as higher prices for goods and services, this in turn led to higher inflation, larger stocks of unsold inventory and uncertainties in business transactions and national planning.

In the light of the above context, we should therefore embrace an appropriate and sustainable exchange rate management policy that will address the key issues for fostering economic development.

CHAPTER FOUR:

RESEARCH METHODS

4.1 MODEL FORMULATION/SPECIFICATION

In this study, we take the view that, especially in the short-run, the parallel currency market premium (that is, the spread between the official and the parallel exchange rates) is primarily determined by the evolution of macroeconomic variables.

While the structuralist school of thought view the determinants of premium as variables which took its path from real trade models, portfolio balance approach, the currency substitution models and partial equilibrium analysis by Boulding (1947), the monetary approach views the premium as being determined purely by monetary variables, such as inflation, broad money interest rates and so.

The real trade model of the parallel currency market premium focus solely on the parallel market itself and neglect its interactions with the rest of the economy. Specifically, the parallel market for foreign exchange is modelled as reflecting the demand for foreign currency to purchase illegal imports and the supply of foreign currency deprived from illegal sources.

I present therefore two classified hybrid models, one developed by Ansu (1991) and another, a reduced-form model. The models are classified into the structuralist and monetarist approach to the determinants of parallel currency market premium.

The parallel market premium is derived from the market clearing condition for the demand and supply of foreign exchange. The total

demand for foreign exchange is assumed to be made up of two components; demand for trade and services through the official channel (Do); demand for trade and services through the parallel market. The supply of foreign exchange is also assumed to be made up of two component parts; inflows through the official channel (So) and inflows through the parallel market (Sp). The identity below therefore expresses the market clearing condition.

$$Do + Dp = So + Sp \quad \text{----------(1)}$$

The foreign exchange for trade services through the official channel, Do, is assumed to depend positively on the real exchange rate, denoted by e. The higher the value ratio, the more over-valued the official exchange rate is, and hence the greater the demand for foreign exchange through the official window for imports. The demand for foreign exchange through the official channel is also positively related with the level of imports, m. The higher the value of imports, the higher will be the demand for foreign exchange in the official channel. The foreign exchange demand through the official channel is also positively influenced by the level of income in foreign currency terms; that is, gross domestic income deflated by the official exchange rate, denoted by Y. We have therefore, the demand for foreign exchange in the official channel equation as

$$Do = f(e, y, m) \quad \text{---------- (2)}$$

The expected a-priori signs are

$$f(e, y, m) > 0$$

The above function states that, foreign exchange demand through the official channel is a function of the real exchange rate, the level of income

in gross domestic terms and imports.

Foreign exchange demand on the parallel market for imports of goods and services, Dp, is assumed to depend negatively on the ratio of the parallel market foreign exchange rate to the official rate, P, referred to as the premium. That is, if the ratio or premium is high, then the demand for parallel market foreign exchange will fall, an inverse relationship exist in this case. The demand on the parallel market for imports is also assumed to be positively related to level of income in foreign currency term, Y, that is;

$$Dp = f(p, y) \quad \text{---------- (3)}$$

where the a-priori signs are;

$$f'(p) < 0; \; f'(y)$$

Inflows of foreign exchange in Nigeria as earlier specified will take two channels, the official and the parallel markets. Inflows through the official channel is assumed to depend on exports through the official channel. Exports through the official channels depend positively on the total volume of export production, x, and on the foreign prices of exports, px, that is the value of export production. The inflow of foreign exchange in the official channel is also affected by the level of premium, p, exhibited between the two channels of foreign exchange inflow. The official inflow is affected also by the official price of the foreign exchange that is, the official exchange rate, Q. Since Q and P, that is, official exchange rate for naira and premium, both positively affect smuggling, each of them negatively affects exports through official channel. We thus have as equation;

$$So = f(x, px, Q, P) \quad \text{---------- (4)}$$

The expected a-priori signs are;

$f'(x) > 0; f'(px) > 0; f'(Q) < 0; f'(P) < 0$

All the specified variables of identity (4) equally affects inflow of foreign exchange in the parallel market. The inflow through the parallel market is thus, expressed as;

$$Sp = f(x, px, Q, P) \text{ ---------- } (5)$$

the priori signs shows the relationship we would expect above;

that is; $f'(x) > 0; f'(px) > 0; f'(Q) > 0; f'(P) > 0.$

Aggregating the demand as well as the supply equations above give the following equation, with the signs of the derivatives underneath.

$$D(e, y, p, m) = S(x, px, Q, P) \text{ ---------- } (6)$$

$De, Dy, Dm, > 0; Dp < 0;$

$Sx, Spx > 0; SQ, Sp >;< 0$

The signs of all derivatives follow directly from the foregoing discussion except those of Q and P in the supply equation. It is assumed that smuggling entails additional costs to the economy as a whole. Hence, for a given foreign price level when a unit of export is diverted from official channels and smuggled out, the foreign exchange accruing to the federation account is less than would have been available without the diversion. Since the Nigerian Government is a net-seller of dollars (the Government sells dollars to the private sector) any rise in the black market premium meant a bigger real transfer from the Government to the private sector (Pinto, 1989). Smuggling depends on the official producing price and the tariff rates, and most importantly, the level of premium. Hence, the net

impact of an increase in 'Q' or in 'P' on the supply of foreign exchange to the economy is assumed to either be negative or positive.

Adopting a linear specification for the functions in equation (6) we can solve for the premium to obtain the following equation with the signs of the derivatives indicated below.

$$P = \beta_o + \beta_1 X + \beta_2 P_x + \beta_3 Q + \alpha_1 e + \alpha_2 Y + \alpha_3 M + U_t \text{ ------- (7)}$$

where β Coefficients are supply variables and α coefficients are demand variables. Priori signs of derivatives are;

$$\beta_1, \beta_2 < 0; \ \beta_3, \alpha_1, \alpha_2, \alpha_3 > 0$$

the log-linear format of the structuralist list model is given as;

$$\text{Log } P = \beta_0 + \beta_1 \log X + \beta_2 \log P_x + \beta_3 \log Q + \alpha_1 \text{ Log } e + \alpha_2 \log Y + \alpha_3 \log M + U_t \text{ ---------- (8)}$$

The monetarist approach to the determinants of the parallel currency market premium is estimated using a reduced form model which originated from the works of Kiguel and Ghei (1992), Kesekende and Ssemogerere (1992), Pinto (1990) and Mbelle (1993).

This approach has to do with the effect of monetary variables on the parallel currency market premium. The monetary variables include broad money, domestic credit, interest rate, international reserves etc.

An excess supply of money implies an excess demand for both domestic and imported goods that is, an excess demand for foreign currency in the parallel market, since demand for foreign exchange in the official window is rationed. This will automatically mean widening of the gap between the parallel currency market and the official currency market-

increase in the premium. Consequently, an increase in money supply is directly proportional to the increase in the parallel currency market premium. In the model estimated, we use the ratio of broad money to the official exchange rate, to determine the effect of money supply level of parallel market premium. This will make us measure the money growth in excess of the rate of official depreciation, we therefore have that;

$$P = F(M_t) \quad \text{.....(9)}$$

a-priori sign is depicted as;

$$F(M_t) > 0$$

Blejer (1978) emphasized the role of monetary factors in the behaviour of parallel market exchange rates. According to him, parallel exchange rate is negatively related to foreign prices, and positively related to the growth of domestic money supply, the official exchange rate, the level of output, changes in the one-period ahead expected differential between that rates of return on domestic and foreign currencies and to excess real money balances.

Instead of finding the differential between the rates of return on domestic and foreign currencies, we used the opportunity cost of holding domestic money as a proxy, that is, domestic interest rate. Its effect on premium was therefore tested. A-priori, one would expect the domestic interest rate to be indirectly proportional to the level of premium, this link is derived from the fact that, the interest rate, when increased will reduce the money holdings which leads to a fall in the demand for foreign exchange and therefore a reduced pressure in the parallel market. It is expected that as

the interest rate increase, this will have inverse effect on the premium.

$$P = f(i_t) \quad \text{.....(10)}$$

a-priori sign denotes;

$$f(i_t) < 0$$

We also tested for the effect tariff/tax rates has on the level of premium. One would expect that as a result of the effect of high tariffs on imported goods, in a bid for the Government to raise more revenue and protect infant industries, its real fiscal burden increases; because this will make goods more expensive, smuggling increase and consequently, lead to an increase in the level of parallel market premium, because illegal exports and imports are financed in the parallel market while trying to evade tax/tariffs. The tariff/tax rates a-priori is directly proportional to the level of the parallel currency market premium.

$$P = f(T_x) \quad \text{.....(11)}$$

a-priori sign denotes;

$$F(T_x) > 0$$

The previous period level of premium, that is, lagged premium also has an effect on the present level of premium. Users demand for foreign exchange is strongly determined by the preceding price of the same currency. The level of premium is determined by many factors such as smuggling, bunkering, illegal trade and so on. If the premium rises, investors will prefer the official market because the parallel market rate would have increased, while private sellers will make excess gain transacting in the parallel currency market. The function is thus shown as;

$$P_t = f(P_{t-1}) \quad \text{.....(12)}$$

a-priori, we expect that;

$$F(P_{t-1}) < 0$$

The country's international reserves is also an important determinant of parallel currency market premium. We used the stock of non-gold international reserves dominated in US dollars as a variable - US dollars because bulk of our foreign sales and purchases are made in the United State dollars. A-priori, parallel currency market premium is negatively related to the level of international reserves. If reserves increase, one would expect, following the principles that the parallel currency market premium will fall. This is based on the assumption that, demand for foreign exchange in the official window will be adequately funded, so as not to encourage parallel currency market transactions. We therefore have a single specified function as follows;

$$P = F(R_t) \quad \text{.....(13)}$$

a-priori, we have that;

$$F(R_t) < 0$$

Aggregating all the functions and adopting a linear specification for various functions, we have;

$$P = F(M_t, i_t, T_x, P_{t-1}, R_t) \quad \text{.....(14)}$$

Linearly,

$$P = \beta_0 + \beta_1 M_t + \beta_2 i_t + \beta_3 T_x + \beta_4 P_{t-1} + \beta_5 R_t + U_t \quad \text{.....(15)}$$

a-priori signs of derivatives are;

β_1 , $\beta_3 > 0$; $\beta_2, \beta_4, \beta_5 < 0$

The log linear format of the monetarist model is thus given as;

$$\text{Log } P = \beta_0 + \beta_1 \log M_t + \beta_2 \log I_t + \beta_3 \log T_x + \beta_4 \log P_{t-1} + \beta_5 \log R_t + U_t \quad \ldots\ldots(16)$$

4.1.1 THE COMPLETE MODEL

Our model of the parallel currency market premium in Nigeria is based on the structuralist and monetarist determinants. This is presented explicitly as follows;

STRUCTURALIST MODEL

$$\text{Log } P = \alpha_0 + \beta_1 \log X + \beta_2 \log Q + \alpha_1 \log E + \alpha_2 \log Y + \alpha_3 \log M + U_t \quad \ldots(1)$$

MONETARIST MODEL

$$\text{Log } P = \beta_0 + \beta_1 \log M_t + \beta_2 \log I_t + \beta_3 \log T_x + \beta_4 \log P_{t-1} + \beta_5 \log R_t + U_t \quad \ldots\ldots(2)$$

NOTATIONS:

P = Premium

X = Value of exports

Q = Official exchange rate

E = Real official exchange rate

Y = Level of income in gross domestic terms

M = Value of imports

Rt = Stock of non-gold international reserves

Mt = Broad money

It = Domestic interest rates

Tx = Tariffs/Tax rates

P_{T-1} = Lagged premium.

4.2 MODEL ESTIMATION

4.2.1. DATA DEFINITION AND TECHNIQUES OF VARIABLE MEASUREMENT

In formulating a model which will expose the effect of macroeconomic variable on the parallel currency market premium using single equation regression estimates, two main equations will be estimated for the period 1986 - 1993 . The two equations employ time series quarterly data. Time series so as to be able to capture the trend in the premium since the commencement of the reform programme.

Our preference for quarterly data rather than annual data stem from the fact that within the period covered, the foreign exchange market witnessed quite rapid changes. The quarterly data will reflect rapid changes that took place in the foreign exchange market within this period. The use of annual data under such circumstance will not yield sufficient number of observations, to adequately capture such rapid changes. It is our opinion that the use of quarterly data will, in fact, lead to more meaningful deductions.

The focus on the period 1986 - 1993 is desirable for this study in a bid to gain some insight into how the foreign exchange market has responded to one of the policies of structural Adjustment Programme (SAP) - the deregulation of the foreign exchange rates. In fact this policy exposed the fundamental aspect of this study - Premium.

Prior to 1986, the foreign exchange market in Nigeria was largely passive. As a result of the sudden crash in oil prices and a general shortage

of foreign exchange, a policy of "gradual depreciation" was embarked upon. In 1985, one dollar exchange for approximately eighty-nine kobo. The problem of an over-valued naira was not solved, however, and so within the framework of S.A.P., a realistic value for the naira was sought for in 1986. September, 1986 therefore saw a major break in Nigerians system of foreign exchange management, when the exchange control regulation, were replaced by a liberalised system.

4.2.2. SOURCE OF DATA

The data used in the estimation were obtained from different publications of the Central Bank of Nigeria (CBN) namely, Economic and Financial Review, the Annual Report and Statement of Accounts and the Monthly Reports. Economic and Financial Indicators published by the Federal Office of Statistics (FOS) was also consulted.

4.2.3. MEASUREMENT OF SPECIFIC VARIABLES

The quarterly data of the Gross Domestic Product (GDP) were derived form the annual (GDP) in order to suit our study using the following procedure.[6]

We used the relation; $Y = f(X)$ where Y = Annual GDP

and X = Annual value of export.

this relationship is based on the fact that over the years, export alone contributed more to GDP than any other component. Given the four quarters within a year, total exports (X) is expected as:

[6]Mordi, C. "Estimation of Demand and Supply function of Bank loans and Advances in Nigeria" In Economic and Financial Review CBN, March 1986, P.40

$$X = \sum_{i=1_s}^{4} x^i$$

where X_i are quarterly export figures. Also, annual GDP (Y) is expressed as;

$$Y = \sum_{i=1}^{4} y_i$$

where y^s are unknown quarterly GDP. Since X and Y and X^s are known, to construct the quarterly GDP (y), we then use the relation;

$$y^i = \frac{Y}{X} X^i$$

Therefore, $Y = \sum_{i=1}^{} y^i$

Tariff on imports is one of the trade factors we tested and analysed as a determinant of parallel currency market premium. Due to the changing policies of the Government over the years, tariff rates on imports were declassified. In 1986, 30 percent of total imports accounted for the annual tariff. Although in 1987, raw materials accounted for 33.5 percent of aggregate imports, which implies simply that 66.5 percent make up others. 30 percent import duty were chargeable on raw materials while duties on others had a weighted average of 85 percent.

In 1988, the dominant item on the import list, that is raw materials accounted for approximately 39.3 percent of the aggregate import duty on raw materials for the same year, while 35 percent of others were charged as import duty.

In 1989, a number of products were removed from the import prohibition list and high taxes were imposed on them. Duties on raw-

materials used in local industries were reduced from 45 percent to 25 percent. Duties on final consumable (others) were increased to an average of 85 percent, with a view to protecting domestic industries and increasing the utilization of installed capacities, ammendents to the customs and Excise Tariff structure of 1988 were introduced in 1990.

In 1990, there was a broad review of the import duties on a number of items and inputs used in manufacturing with a view to stimulating production. Most duties on raw-materials were removed while duties on finished goods were reviewed towards and increasing rate. In other to calculate for this period ahead, a chargeable weighted average of 30 percent was used.

The foreign exchange demand in the official market is positively influenced by income in foreign currency terms; that is gross domestic income deflated by the official exchange rate. In this study, in order to derive the Gross Domestic Income (GDP), we use as proxy the Gross Domestic Product (GDP) divided by the official exchange rate. This is because access to already computed data on GPI seems untraceable, GDP is the commonest and most acceptable measurement of economic growth and development (Ojo, 1976).

The GDP is deflated by the official exchange rate because the foreign exchange demand in the official market is positively influenced by the level of income in foreign currency terms.

The real exchange rate was calculated with a more operational method, that is;

$$RER = \frac{NER \times CPI\ (U.S)}{CPI\ (NIGERIA)}$$

where;

NER = Nominal exchange rate defined as number of units of domestic currency per unit of the foreign currency.

CPI (US) = consumer price index (United States).

CPI (NIGERIA) = consumer price index (Nigeria).

Data in most developing countries are unreliable and inadequate. Since there are no reliable data on volume of export production, probably because of leakages within the sector, we therefore used as proxy, the value of export production recorded.

With the advent of economic reforms in the third quarter of 1986, an era of fixed and low interest rates were gradually replaced by a deregulated one. Direct investment stimulation were curtailed and savings mobilization encouraged by the deregulation of interest rates. This has led also to the reduction of pressure on balance of payments and exchange rate, and enhancement of the external reserves. The interest rate deregulation will no doubt have an effect on the parallel currency market premium and is therefore investigated in this study. Quarterly data on the interest rate as computed by the Central Bank of Nigeria were employed for the period of study.

Data on the stock of non-gold international reserves in U.S dollars are available in published form and is employed in our analysis. We should note that the capacity to import is eventually a function of the volume of

exports. Therefore, taxing exports through the premium and thereby creating disincentive to produce exports ultimately lowers the ability to import intermediate goods, leading to "import compression" and its undesirable effect on all sectors of the economy. Import value is therefore tested in our model, because of its importance in the determination of the parallel currency market premium (as tested in some African Countries, (Pinto, 1990). Data on quarterly basis for the value of imports are obtained in the CBN Economic and Financial Review.

Finally, economic theory provides no a-priori rationale for choosing between the linear or the log linear format of model specification. Nevertheless, most empirical studies, including the present one, seem to favour the log-linear functional forms, which is also convenient, in that elasticities can be directly obtained from the estimated co-efficient.

4.2.4 STATISTICAL PROCEDURE:

The two equations were estimated for the period of 1986-1993 using the ordinary least square (OLS) techniques of analysis.

4.3 EMPIRICAL RESULT:

4.3.1 THE STRUCTURAL MODEL:

The structural function of the model is given below (with the statistic in parentheses):

$$\text{Log } P = 10.367 + 0.1341 \text{ x } -0.571 \text{ Q}$$

$$(0.9555) \quad (-0.6696)$$

$$-2.204e - 0.824Y + 0.347M$$

$$(-3.6215) \quad (-1.0535) \quad (0.3082)$$

$R^2 = 0.7496$

F stat = 14.3765

D.W stat = 1.7

The variables postulated to influence the premium explain about 75 percent of the variation in the dependent variable. 'F' statistic with 4 and 25 degrees of freedom is a highly significant relationship between the dependent variable, premium and the tested variables or determinants.

Exports came out with a wrong sign. The premium would expectedly fall as a result of an increase in exports, we may support the argument for positive relationship between the exports value and premium however, since we had the collapse of oil price at this period, oil being the major export in Nigeria, it resulted in adequatecy of foreign exchange to reduce the premium. Though the quantity of exports may have increased, this would not have affected the value of foreign exchange earnings in the same direction. In this wise, as exports increase, the premium widens. Again, we could not make distinctions between official exports and unofficial exports while estimating, therefore, if unofficial exports (smuggling) outweighs the official export, then the result could be justified, and this cannot be completely ruled out given the conditions of our borders. This will have an adverse effect on the income generated in the official channel and will therefore, lead to an increase in premium, inspite of an increase in the official exports.

The official exchange rate, real exchange rate and the level of income in gross domestic terms came out with negative signs. Like the

results obtained by Ansu (1991) in Ghana, the level of income in gross domestic terms came out with a negative sign, that is, has an inverse relationship with the parallel currency market premium. The value of imports positively influenced the premium in our priori expectation.

The D.W. statistic of 1.70 showed not too severe level of autocorrelation, since the model is not meant for forecasting, then the level of autocorrelation is not a set back for the study.

4.3.2 THE MONETARY MODEL:

The result of the monetary specification is shown below (with t-stat in parentheses);

$$\text{Ln } P = -86042 + 0.778\ M_t + 0.1012\ i_t$$

$$(0.6551) \quad (0.7776)$$

$$+0.095Rt + 0.583Pt\text{-}1 + 0.1231Tx$$

$$(0.4418) \quad (3.2031) \quad (0.5318)$$

$R^2 = 0.68$

D.W. = 2.01

F. stat = 10.223

About 68 percent of the variation in the premium is explained by the variables tested. The Dubbin-Watson statistic of 2.01 show no severe autocorrelation of the variables. The equation is also highly significant from the F-stat value of 10.223 at 5 percent. Though the t-statistics of all the variables except the lagged premium, are not statistically discernible (significant), there is a strong theoretical ground for their relationship, the

more reason for the positive t-ratio[7]

The broad money ratio to the official exchange rate, tariff/tax rates and the lagged premium level showed the expected signs, that is, these variables are positively related with the level of premium. This result thus confirm Kiguel and D'connel (1994), that, an expansion of money balances (measured in dollars at the official exchange rate) raises the premium both in the short and long run. An increase in tariffs/tax rates will make exporters more prone to evading this tax, their returns on sales is therefore diverted into the parallel market and this leads to an increase in premium (since the sources of foreign exchange in the parallel market are illegal (smuggling) activities. The lagged premium which shows a direct relationship with the premium is due to the increased patronage enjoyed in the parallel market as a result of the previous rate.

The interest rate and stock of non-gold international reserves also showed a positive relationship with parallel currency market premium, contrary to our expectations. The positive relationship between the interest rate and premium could be justified, if as a result of high interest rate, people channel their resources into the unofficial sector, that is buying foreign exchange in the official market with an expensive money at a relatively reduced rate and instead of using the foreign exchange as specified sell the foreign exchange at the parallel market; This will swell the rate in the parallel market so as to pay back expensive money from the

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[7] Wonnacott, R. and Wonnacott T (1979), Econometrics, John Wiley and Sons, Inc., Second Edition. P.88.

financial sector. This act called round tripping, is aided by the role of expectations in exchange rate and the scarcity existing in the official market. This result also confirms Kiguel and O'Connel's (1994) finding on developing countries in the long-run. The positive relationship between the international reserves and premium could be adduced to the fact that, during this period under investigation, external debt issue was given much attention as well, and over 40 percent of our foreign exchange earnings were being used in servicing debts instead of servicing the inadequacy in the official market. The resultant effect is continued pressure on the parallel markets where the foreign exchange is available, given rise to increase rates and thus, a rising premium, so, the non-gold international reserves could be increasing and not have a cushioning effect on the official rate in the official exchange market.

From our empirical results, the monetary model has performed better than the structuralist model, this has a consequent implication, that, monetary variables when properly managed will have a more significant effect on premium, that is, the premium responds more to monetary factors that the structural or trade factors.

CHAPTER FIVE:

POLICY IMPLICATION

5.1 INTRODUCTION

The parallel market has encouraged the perpetuation of the observed sharp practices in the official FEM in terms of diversion of official funds to this illegal market. The patronage in the parallel currency market is one of the factors that has widened the gap between the official foreign exchange market rate and the unofficial rate. However, the shortage in the supply of foreign exchange in the official market cannot be overlooked when considering the parallel currency market premium (see table 5.1).

The parallel currency market premium has affected all the sectors of the economy. In fact, its existence in our developing economy, dependent on primary commodity exports, will continue to persist in consonance with its name if stringent measures that will discourage its patronage are not put in place. The parallel currency market premium's effect determined by the tested variables will be examined to fit into our policy deductions. Its effect on macroeconomic objectives of stable domestic prices, favourable balance of payments, and the external sector will be critically examined in this section.

TABLE 5.1. ECONOMIC INDICATORS

	1986	1987	1988	1989	1990	1991	1992
IMPORTS (N,N)	5.9	17.9	21.4	30.9	45.7	89.5	143.2
EXPORT (N,N)	8.4	28.2	31.7	63.2	120.1	132.4	205.6
FOREIGN EXCHANGE INFLOW ($ US M)	6481.9	6539.0	6474.1	7760.2	9359.2	11347.5	8409.3
FOREIGN EXCHANGE BUDGET ($US M)	6844.3	6204.0	7404.0	6679.1	7789.0	11855.0	8998.0
EXTERNAL PUBLIC DEBT (N,N)	31.0	100.8	141.1	240.4	297.9	325.4	544.3
DOMESTIC PUBLIC DEBT (N,N)	28.5	36.8	47.0	57.1	84.1	116.2	161.5
INFLATIONS (%)	5.4	10.2	38.3	40.9	7.5	5.9	46.0
EXTERNAL RESERVES (N,N)	3587.4	4643.4	3272.7	13457.1	34953.1	44249.6	1392.5

5.2 PARALLEL CURRENCY MARKET PREMIUM AND THE EXTERNAL SECTOR

As observed from the results obtained in my structural model, there exists a positive relationship between the parallel currency market premium and the value of exports. This result is against the a-prior expectations and is refuted in Kamin (1991) which reported from empirical evidence, that recorded exports are inversely related to the size of the parallel currency market for a large group of developing countries. Edwards (1989) also confirmed the models prediction that recorded export growth will be negatively correlated with movements in the black market premium. During the period under study, export increase in Nigeria were due to increase priorities on non-oil exports liberalisation of export licensing procedures etc so as to increase the foreign exchange inflow and thus leading to the reduction in premium. This relationship is however hampered as a result of an increase in the export/debt ratio. With a falling confessional debt total external debt from 6.1 percent in 1980 to 3.9 percent in 1992 and an increase in export/debt ratio from 4.2 percent in 1980 to 28.9 percent in 1992 (World development indicators, 1994), the increase in export will not reflect a fall in premium.

A true reflection of foreign exchange inflow from exports is also made vague as a result of under-invoicing of exports, in this bid, the excess of foreign exchange on export is passed on to the illegal market that is the parallel market where the rates are often more attractive to business men.

The effect of the premium on the balance of payments can be observed from developments in the current and capital accounts. Excepting

1987, overall balance of payments has been in deficit (see Table 5.2) since 1986 due largely to the weakness of the capital account. The deficits averaged $3,188.9 million during the period, 1986-1992, and they have been financed through a combination of deferment of payments obligations falling due, debt restructuring and draw-down on foreign exchange reserves. These are strictly not exchange rate policies to reduce the premium.

Imports which have increased as a result of rising inflation during the period of study, show a positive relationship with the premium level. With a continued devaluation of the Naira, rising inflation and coupled with a rise in price of import demand, an increase in imports will lead to an increase in the premium level, this corroborates our empirical findings. It is important to note therefore, that exchange rate policies directed at reducing imports, local sourcing of raw materials, will improve the trade balance and reduce premium.

The premium has not encouraged foreign private investment in the trading and business sectors of the economy. The total net flow of foreign private capital which increased to ₦2499.6m in 1986 fell drastically to ₦680.0m in the following year, 1987. The total net flow showed a deficit of ₦439.4m and ₦464.3m in 1989 and 1990 respectively. This outflow in foreign private investment has negative impact on the level of income in gross domestic terms, which has also been transmitted to the premium. Policies that will improve the level of income in gross domestic terms will lead to a fall in the premium. This corroborates also our empirical findings of an inverse relationship between the two variables, that is, premium and

the level of income in gross domestic terms.

Our empirical investigation reveals that, there exists an inverse relationship between real exchange rate and the premium. The fall in the real exchange rate is as a result of the real depreciation of the naira consequent upon devaluation, in the face of continuous price inflation and increasing external debts leading to a rise in the black market premium. Amidst strict fiscal discipline, policies aimed at appreciating the real exchange rate will lead to a fall in the premium level.

Table 5.2. SUMMARY OF TRADE AND PAYMENTS (MILLION NAIRA UNLESS OTHERWISE STATED)

	1985	1986	1987	1988	1989	1990	1991	1992
TRADE AND BALANCE OF PAYMENT								
Export	12,137.0	9,380.5	31,342.3	31,992.54	62,034.7	118,356.5	130,331.4	237,348.5
Merchandise	11,720.8	8,920.5	30,443.5	31, 192.8	57,991.2	109,886.1	121,533.7	205,613.1
Non-factor serve	416.2	469.0	898.8	299.7	4,063.5	8,479.4	8,797.7	18,521.0
Import	7,962.3	7,985.1	19,892.6	23,268.7	37,324.4	55,235.9	101,024.0	156,348.1
Merchandise	6,655.7	5,476.6	16,392.5	19,757.8	27,200.9	39,771.2	76,855.2	124,612.7
Non-factor services	1,306.6	2,306.5	3,500.1	3,510.9	10,123.5	15,464.7	24,168.2	31,735.4
Current account bal.	2,215.4	2,999.1	(295.3)	(965.7)	8,232.3	44,731.2	12,655.4	39,422.0
Overall balance	443.4	(16.1)	1,385.4	(912.1)	(21,989.6)	(4,514.1)	(14,827.5)	99,333.6
External Reserves	1,641.0	3,587.4	4,643.7	3,727.7	13,457.1	34,952.9	44,249.9	13,992.5
Reserve in months of imports	2.5	5.4	2.8	1.7	4.3	7.6	5.3	1.2
GDP AT CURRENT PRICES	72,360.0	72,060.0	108,880.0	145,230.0	224,230.0	269,820.0	342,800.0	455,520.0
Percentage of GDP	16.8	12.9	28.8	21.7	27.6	43.9	40.1	52.1
Exports	11.0	10.9	18.3	16.0	16.6	20.5	31.1	34.3
Imports	3.1	4.1	-0.3	-0.7	3.7	16.6	20.5	31.1
Current account bal.	0.6	-0.0	1.3	-0.6	-9.8	-1.7	-4.6	-21.8
Total Net flow of foreign private capital	329.7	2,499.6	680.0	1385.4	-439.4	-464.3	N.A	N.A

Source: Central Bank of Nigeria. (CBN)

5.3 PARALLEL MARKET PREMIUM AND MONETARY FACTORS

Inflation is influenced by the domestic policies in an economy. From the empirical investigation, an expansion of money balances (measured in dollars at the official exchange rate) raises the premium. Given the link between Government deficits and money growth in Nigeria which is as a result of inconsistency between the deficit and exchange rate policy, the premium in the exchange market will remain a problem. Pinto, 1990 claimed there exists a trade-off between inflation and parallel currency market premium which corroborates also my empirical findings. This relationship is also supported by Ghei and Kiguel, 1992. As also discussed by Lizondo (1990), an increase in fiscal deficits, other things equal leads to an increase in the premium. The rate of inflation rose from 5.4 percent in 1986 to 38.3 percent in 1988 and reached a peak of 46.0 percent in 1992 (Table 5.1). The resultant effect of this scenario depicts a rising premium. It is therefore worthy to note that policies aimed at reducing, domestic money, balances, through a tight monetary and fiscal measures, and a strict fiscal discipline will reduce the parallel currency market premium.

The positive relationship in the rate and premium resulting from our empirical test is strongly supported by Kiguel and O'Connel (1994) in some developing countries. The rise in interest rates during our period of study could be adduced to two major reasons, one, interest rates rose as a result of financial liberalisation policy incorporated in the Structural Adjustment Programme (SAP) in 1986. The financial liberalisation has as its core, the removal of ceilings on both the deposit and lending rates. Interest rates

which were deliberately kept low before S.A.P moved from 9.5 percent in December, 1987 to 17.4 percent in December, 1990. Secondly, the increase in the observed interest rate could be adduced to the increased expectation of inflation, if a rise in price invokes fears of greater inflation, borrowers will be willing to pay higher interest rates and lenders will demand higher rates to compensate for the anticipated rise. The rise in interest rate, transmitted through a portfolio readjustment encouraged by foreign exchange laundering led to a rising premium as observed from this empirical investigation.

The increase in tax/tariff rates will induce the exporters to evade this rate by transacting business in the unofficial channel (i.e smuggling) and this channel funds the parallel currency market and thereby increases the premium. My empirical finding confirms this relationship. Policies aimed at reducing the tariff rates will reduce the premium, therefore liberalising exports and official imports channel will make the parallel market less effective and thus, reduce the premium.

As a result of deliberate policies aimed at diversifying and increasing reserves during the period under study, such as holding reserves in other international currencies apart from the major currencies we trade in (i.e pounds sterling and dollars), international reserves grew in size. Our international reserves which was ₦3,587.4m in 1986, increased to ₦13,457m in 1989 and reached an all time high of ₦64,764.1m in 1983. This could not serve as a stabilising tool in the official foreign exchange market because the debt (denominator) is rising more rapidly than reserves,

the international reserves/debt ratio has been falling. And this situation explains the ineffectiveness of reserves as a stabilisation tool.

The lagged premium is also a determinant of the present premium level, this shows a positive relationship because, the expectation that the parallel market rate will continue to rise keep dealers in the market and therefore increase the premium having also that the number of participants have increased.

Finally, the major policy measure as expressed above have as core, fiscal discipline and a tight monetary and fiscal policy. Reduction of newly acquired debts, that is, external borrowing should be de-emphasized and a reasonable debt management policy put in place.

5.4 UNIFICATION OF THE FOREIGN EXCHANGE MARKET

It has been discovered that straight forward devaluation, especially given the supply side of the foreign exchange market in Nigeria, will not reduce the parallel currency market premium (NCEMA, 1989).

Devaluation has not been successful in unifying the exchange rates in many developing countries that have tried this method. Whenever this method is chosen, and for its sustenance, we should consider the level of capital inflow, which has not been encouraging given the impact of a mounting external debt payment. When unification is expected, agents seeking to avoid capital losses and to realise capital gains will shift immediately into foreign currency assets if the floating official exchange rate is expected to depreciate relative to the existing parallel market rate.They will shift into domestic-currency assets if the rate is expected to

appreciate relative to the parallel market rate, the post unification effect will thus mean a further and steady depreciation of the parallel market rate (Agenor and Flood, 1972; Lizondo, 1987; Kiguel and Lizondo,1990).

Although a once-and-for-all nominal devaluation may be expected to reduce the premium, ceteris paribus, the reduction will only be temporary if fiscal and credit policies remain expansionary. Permanent unification of the official and parallel markets thus cannot be achieved by attempting to eliminate the spread solely by devaluation of the official rate.

Unifying the exchange rate, that is, official and parallel market rates is inflationary if the level of government spending is expansionary. Therefore, unification of the market rates cannot succeed without fiscal discipline (Agenor, 1990).

Pinto (1990) suggests the best approach to unification after studying misalignment of exchange rates in African countries to be that, countries relax foreign exchange rationing gradually in the official market, starting with commercial transactions and accompanying the liberalisation with discrete devaluations, the pace of reforms being set by the speed and credibility of fiscal adjustment.

Nigerians unification approach should involve a gradual liberalisation of the economy. We would suggest a strict adherence to strict and tight fiscal and monetary discipline as a major unification measure for our foreign exchange rates. Allocation of foreign exchange should be on priority basis and well monitored by a board in conjunction with the Central Bank of Nigeria. Efforts should be directed towards increasing non-oil export

proceeds by diversifying the export base of the economy. A relaxed Tariff/Tax structure in terms of reducing their rates, would lead to the reduction in cost and thereby a non-incentive for evading tax. This measure will increase the supply-side of the official foreign exchange market and will thus reduce the parallel currency market premium. Exchange rate restrictions are largely ineffective in the long run when directed at maintaining an overvalued exchange rate or imposing a balance of payments adjustments.

It is therefore assuring that if these policy trusts are well implemented, unification of official and parallel market rates will be achieved.

CHAPTER SIX:

SUMMARY, RECOMMENDATIONS AND CONCLUSION

6.1. SUMMARY

The study started off with analysing the foreign exchange market structure in Nigeria. It highlighted the parallel currency market models in most developing countries and its significance in Nigeria. Most Sub-Sahara African countries are presently involved in economic reforms, which has liberalisation of their economies as the main channel to economic development. They have been involved with the determination of their domestic currency value in the international sphere.

In a bid to determining the market clearing price of domestic currencies of these countries, that is Sub-Saharan African Countries, there has been the upsurge of parallel currency markets co-existing with the official markets. The resulting gap, encouraged by the effectiveness of restrictions mounted by various Government on trade and foreign exchange allocation has several macroeconomic implications in these economies. Empirical evidence of the existence of the parallel currency market premium was thus drawn in most of these developing countries.

In a view to achieving the most important objective of this study, theoretical underpinning of parallel currency market premium was analysed in the chapter two of the study. The determinants were selected through a thorough reflection of its existence in other developing countries. The need for differences in foreign exchange market system was then created by studying the market system in Nigeria, in chapter three.

The study though focused on the intricacies of the foreign exchange market(s) post reforms, institutional reforms were recalled by going through what the foreign exchange market entails prior to the Structural Adjustment Programme (SAP) in 1986. As the ´stuidy focused more on the parallel market rates, a sub-title was thus created for the parallel currency markets in Nigeria.

Chapter Four has to do with the main objective of the study, by specifying and estimating the basis for the monetary and structural determinants of premium underpinned in the theoretical framework of the study.

The research has sought to discuss the empirical developments of the parallel currency market premium in Nigeria. We concluded by suggesting solutions to the problems created by the parallel currency market premium, laying much emphasis on the unification of the exchange rates and making recommendations with which this will be achieved. The policy implications of the results obtained are analysed in chapter five.

The method of analysis used, is the ordinary least square (OLS) technique based on the model estimated. Some policy recommendations were attempted.

6.1. RECOMMENDATION(S)

The highlights of our recommendation include;

(i) Intensification of the diversification of the economy efforts through export zoning, export priority sectors, export incentives and funding, etc.

(ii) Effective liberalisation of the trade and exchange rate sector of the economy, to allow discouragement of illegal transactions in the parallel markets.

(iii) Strict and tight monetary policy, and fiscal discipline.

(iv) Rescheduling of external debts to allow the Government the opportunity of using a higher proportion of the scarce foreign exchange earnings for the development of the economy. That is, a reduction in the debt service/export ratio.

(v) Legal jurisdiction imposed against defaulters in the market; backed up by effective punishment to disallow illegal transactions such as round-tripping.

6.3. CONCLUSION

The experience of Nigeria in both exchange rate and foreign exchange management has been interesting, educative and at time, very frustrating to policy makers. The results especially during the recent past, have been at great variance with expectations at the time of designing the policy. This study have emerged with some contradictions over some previous empirical studies. For instance, the relationship between the value of exports and the parallel currency market premium a-priori, is inverse. Our estimation reveal that, this is in fact not true, that the exports and premium are positively related as against the views of Kamin (1991). This was also strongly supported by the fact that, due to inflationary pressure intensified by devaluation of the naira, there is the high tendency for the value of export to have increased in nominal terms.

In a bid to unify the exchange rates and sustain economic reforms programme, supply widening policies for foreign exchange should be encouraged. External Aid will play a significant role in the unifying scheme, sustain the level of imports, the performance in the industrial sector and the budget. It is again clear that, the debt burden has increased substantially at a time when oil receipts have shrunk considerably and non-traditional exports are yet to emerge as reliable foreign exchange earners. It has therefore been stressed that the need to develop the export sector cannot be played down.

This study like every other, is faced with some limitations, such as paucity of data in some areas analysed. Other factors beyond macroeconomic determinants, if revealed were not fully analysed

empirically-portfolio determinants of the premium, such as the seasonal factor, expectations of devaluation and capital flight. Government does not monitor the capital flight which goes through the unofficial sector even those that go through the official sector are false declaration. Inspite of the enormity of these limitations, we are confident that they have not hampered our analysis or rendered our results unreliable.

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