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Foreign Currency Deposits in Developing Countries--Origins and Economic Implications

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Abstract

The growing importance of foreign currency deposits (FCDs) in some developing countries has raised numerous issues, particularly regarding the effectiveness of economic policies. This paper discusses factors that influence the emergence of FCDs and their impact on key macroeconomic relations. It is shown that while FCDs render more visible the changes in the economic structure occasioned by the shift in residents' portfolio asset preferences, these changes essentially reflect currency substitution that often prevails prior to the introduction of FCDs. Moreover, FCDs provide only limited scope for effectively addressing the external and domestic imbalances that contribute to the growth in currency substitution.

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Summary

In recent years, a number of developing countries have witnessed a significant increase in domestic holdings of foreign currency bank deposits by residents. This growth has often taken place in situations in which foreign currency has increasingly replaced local currency in performing the traditional functions of money. Governments have tended to view these deposits as a means of raising the flow of foreign exchange resources through formal banking channels, thereby providing some scope for alleviating external payments pressures. However, their introduction has also appeared to have a number of implications for the design and effectiveness of various other economic policies, particularly in the fiscal, monetary, and exchange rate areas.

The paper discusses the factors that contribute to the growth in foreign currency deposits and their major economic implications. Their potential for growth is shown to depend on the degree of and prospects for currency substitution; actual holdings, however, will reflect the financial returns they offer, the regulatory environment governing their use, and general confidence in their liquidity and safety. Their impact on overall economic performance will basically depend on the pattern of financial intermediation through formal banking channels, compared with that prevailing in a context of informal currency substitution. It is also through this process of intermediation that foreign currency deposits influence the effectiveness of various policy measures, rather than through basic changes in the portfolio asset preferences of agents which, themselves, are more a reflection of the economic and financial conditions that contributed to the initial growth in currency substitution.

The paper suggests that the introduction of foreign currency deposits is unlikely to be effective in reducing the major economic and financial imbalances typically facing an economy that has widespread currency substitution. At the same time, these deposits, per se, do not appear to alter significantly the overall effectiveness of traditional economic policy instruments, even though they call for corresponding adjustments in the design of credit and other policies. Ultimately, foreign currency deposits serve essentially to highlight the changes in the underlying economic conditions caused by the spread of currency substitution.

I. Introduction

There has been a large increase in recent years in holdings of foreign currency deposits (henceforth FCDs) 1/ by residents of a number of developing countries. 2/ The introduction of these deposits has often taken place in situations where foreign currencies have already begun to assume the traditional functions of domestic money, i.e., ones in which the phenomenon of currency substitution--or "dollarization" as it is also referred to in the literature--is prevalent and extends beyond the stage warranted by consideration of normal asset diversification. The spread of currency substitution, in turn, usually has resulted from shifts in individuals' portfolio preferences occasioned by increasing economic and financial imbalances. These imbalances, as well as several noneconomic factors, have rendered the holdings of foreign currencies more attractive than that of competing domestic assets. While the resulting movement into foreign currencies may have been initially outside a legal framework, an intensification of this trend has tended to lead policy makers to consider the introduction of a legal system of FCDs as a way of directing existing foreign exchange through formal channels, thereby permitting greater control over its uses, as well as a way of increasing the overall supply of foreign exchange to the economy.

The potential of FCDs to alleviate external account imbalances by increasing the availability of foreign exchange to the economy, particularly in the medium-term, depends on a number of factors, including the return on, and liquidity of, such deposits and the thrust of government policies which accompany their introduction. However, even in circumstances where foreign exchange flows are augmented by the introduction of a system of FCDs, these deposits may appear to alter some of the structural parameters of the economy in such a way as to affect the ability of governments to implement corrective policies, particularly in the areas of fiscal, monetary, and exchange rate policies. This has led some observers to conclude that the introduction of FCDs, *per se*, will reduce the effectiveness of traditional economic management instruments. The following sections seek to investigate this phenomenon

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1/ Deposits denominated in foreign currency and held with the domestic banking system.

2/ Countries experiencing a rapid growth in such deposits include Argentina, Egypt, Mexico, Peru, Sudan, the Yemen Arab Republic, and Yugoslavia. In Argentina, FCDs as a share of total financial sector liabilities to the domestic private sector rose from 2 percent in 1980 to 10 percent in 1985; in Peru, the same ratio increased from around 31 percent in 1980 to about 50 percent in 1984 while, in the Yemen Arab Republic, it rose from 5 percent in 1980 to around 47 percent in 1985. In Egypt, FCDs accounted for about 40 percent of broad money in 1985, as compared to 28 percent in 1980. A similar trend took place in Yugoslavia during this period, with the share of FCDs in broad money in 1985 growing to 45 percent, as compared to 26 percent at the end of 1980.

and, in particular, provide a detailed analysis of the features and implications of FCDs, as distinct from those of currency substitution--a topic which has attracted much more attention in the recent economic literature. 1/ Toward this end, Section II analyzes the factors contributing to the emergence of FCDs, focusing on economic and financial conditions prevailing prior to their introduction and subsequent actions by the authorities. Section III examines the factors which determine the size of the deposits and, consequently, influence their economic impact. The latter is the subject of discussion in the subsequent section (Section IV) where it is argued that while FCDs may increase the authorities' control over foreign exchange, they are unlikely, without accompanying corrective policies, to effectively address the external imbalances facing the economy; in addition, they may in fact contribute to a delay in the introduction of the needed policy reforms. The impact of FCDs on the effectiveness of various economic policy instruments is considered in Sections V and VI. Based on the analyses of the earlier parts of the paper, the discussion in these sections traces the policy implications of FCDs, including those for elements of conventional economic stabilization programs, and compares them to those arising from currency substitution in the absence of a legalized system of FCDs.

II. Factors Contributing to the Emergence of Foreign Currency Deposits

The introduction of FCDs in many developing countries has tended to reflect the reaction of governments to significant increases in foreign currency holdings by residents, often at a time of official foreign exchange scarcity. This preference of individuals to hold substantial asset balances denominated in foreign currency is most often the result of inappropriate domestic policies which have given rise to strong inflationary pressures, and a weak external position. Such policies are likely to involve growing fiscal deficits, excessive injections of liquidity, growing exchange and trade restrictions, and relatively low rates of interest and overvalued exchange rates. In such circumstances, pressures on the official foreign exchange position and the domestic price level will reduce the relative attractiveness of holding domestic money, in terms of both financial return and purchasing power. Specifically, individuals are likely to face lower actual or expected financial rates of return on domestic money than those on alternative financial assets and, at the same time, experience a reduction in the value of domestic currency holdings in terms of the command over goods and services as a result of ongoing inflation and actual or expected

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1/ Brief overviews of the major issues associated with currency substitution in developing countries are contained in Tanzi, V. and M.I. Blejer (1982), "Inflation, Interest Rate Policy, and Currency Substitution in Developing Economies: A Discussion of Some Major Issues," World Development, Vol. 10, No. 9; and Ramirez-Rojas, C.L. (1985), "Currency Substitution in Argentina, Mexico, and Uruguay," International Monetary Fund Staff Papers, Vol. 32, No. 4.

devaluations. It is these factors, in combination with a worsening economic situation adversely affecting the expected returns from, and liquidity of, other domestic assets, that increase the relative attractiveness of foreign currency holdings and thereby encourage currency substitution. 1/ In the absence of suitable policies to tackle the major imbalances facing the economy, the process of currency substitution is likely to accelerate, with foreign currency units increasingly replacing domestic units both as a store of value and for transaction purposes.

In an environment of widespread currency substitution, a growing segment of the economy will operate mainly in foreign currency outside the channels of the "formal economy." This secondary economy will cater to illegal transactions--capital flight, smuggling, false invoicing of exports and imports--as well as other transactions squeezed out of the official market by the unavailability of foreign exchange. Where they are important, workers remittances are also likely to be increasingly diverted into a secondary market because of the overvaluation of the official exchange rate. It is against this background of a growing informal sector, and usually in the absence of adjustment policies needed to address the underlying economic and financial imbalances, that governments may attempt to integrate foreign currency transactions into the formal economy by introducing, and possibly promoting, a system of FCDs. As mentioned before, governments may view this action as having two distinct advantages. First, by diverting transactions to the banking system, the authorities may believe they will gain greater control over the uses of available foreign currency holdings. Second, governments may believe that the introduction of FCDs, by reducing the risk associated with domestic holdings of foreign currency, will encourage greater inflows of foreign exchange from migrant workers and residents with money holdings abroad, as well as reduce capital

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1/ The importance of the various factors explaining currency substitution has been examined in a number of recent empirical country studies. For example, studies on the growth of currency substitution in Argentina and Mexico have indicated that expectations of lower yields on domestic assets relative to those on foreign assets were significant in explaining changes in the share of domestic currency balances. (Ortiz, G. (1983), "Currency Substitution in Mexico: The Dollarization Problem" Journal of Money, Credit and Banking, Vol. 15, No. 2; and Ramirez-Rojas, C.L. (1985), Op. Cit.)

flight. 1/ Thus, from this point of view, the introduction of FCDs may be perceived as a recognition by the authorities of the growth of transactions outside the formal economy, and as an attempt to enhance the supply of foreign exchange and increase government control over available foreign balances.

III. Sources and Uses of Foreign Currency Deposits

The economic impact of introducing FCDs will depend, in the first instance, on their success in attracting foreign exchange to the formal banking sector. The following discussion analyzes the factors that determine the supply of funds for FCDs, focusing on individuals' motivations to hold such deposits. The implications for the macroeconomy of the associated changes in the process of financial intermediation are discussed in Section IV.

The growth of FCDs will reflect not only the size of the foreign exchange pool available to be channelled through the newly created domestic banking facility (the "potential/notional supply"), but also the perceived attractiveness of transferring money into this facility (which determines the "effective supply"). As detailed below, the notional supply will depend on the stock of existing foreign balances held outside the formal domestic banking system, both within the country and abroad, and the flow of new foreign exchange earnings. The effective supply will be influenced by the expected financial returns on FCDs and by individuals' perceptions of the liquidity and risk associated with these deposits. 2/

At any one time, the stock of foreign exchange held by residents, both domestically and abroad, is the outcome of economic, social and political conditions affecting the economy's capacity both to earn foreign exchange and to utilize it. Prior to the introduction of FCDs, the holdings of foreign balances domestically will reflect the accumulation of flows (resulting from export and service transactions, unrequited transfers, and capital inflows) that have, legally or illegally, bypassed the banking system. At one end of the spectrum, if all foreign exchange is to be surrendered to the authorities and if possession of foreign exchange domestically by individuals is

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1/ For example, the introduction of FCDs in Yugoslavia in the 1960s reflected attempts by the authorities to induce greater remittance inflows through the introduction of an additional channel for the repatriation by nationals of foreign exchange earned abroad. A similar intention contributed to the introduction of FCDs in Egypt in 1974 within the context of a more general liberalization of the economy. In Argentina, the establishment of FCDs in the 1970s was undertaken within a policy framework aimed at broadening the spectrum of financial services offered domestically.

2/ As noted by Ortiz, G. (1983), Op. Cit., the perceived safety of these deposits is greatly affected by perceptions of political stability.

prohibited, then only illegal channels will be available for accumulation of foreign balances. In these circumstances, various practices, such as underinvoicing of exports or overinvoicing of imports, are likely to develop, which will allow the retention of some foreign exchange by individuals. The more widespread are these practices, the larger will be the potential for illegal accumulation. On the other hand, lower surrender requirements and less restrictive regulations on holdings of foreign exchange will result, ceteris paribus, in a higher potential for the legal spread of currency substitution.

The degree of retention of legal and illegal foreign currency balances domestically will depend on the individuals' own motivation for holding foreign balances, as compared to the regulations governing their utilization, and on the perceived risk associated with holding such balances. In circumstances where the utilization of these balances is highly constrained by legal restrictions, one would expect that the foreign exchange will be used for speculative purposes, for capital flight, or for financing illegal imports and expenditures abroad. In the case of capital flight, the associated transfers will supplement balances of expatriate savings which, as a result of unfavorable domestic conditions, are held in financial centers abroad.

The factors just cited set the limit on foreign exchange available for deposit upon the introduction of FCDs. The actual level of deposits, however, will be determined by the relative attractiveness of such holdings, in terms of risk-adjusted liquidity and return considerations. Thus, while the authorities' action to establish FCDs may reflect a desire to increase the supply of foreign exchange to banking channels, the actual impact of this measure will depend on (i) individuals' confidence in the liquidity and safety of these deposits, (ii) the financial return offered on FCDs, and (iii) the regulatory environment governing the utilization of FCDs.

The willingness of individuals to hold FCDs will depend fundamentally on their confidence in the domestic banking system. Thus, doubts regarding the stability of the system or the authorities' commitment to maintain the integrity of FCDs, will weaken the inducement to transfer funds into these deposits. An important factor will be the extent to which FCDs, as foreign exchange liabilities of the banking system, are perceived to be covered by corresponding foreign exchange assets. Given a certain degree of confidence, the attractiveness of the deposits will depend, in turn, on their rate of return relative to that on other available assets, both domestic and foreign (i.e., an evaluation of returns from alternative assets, after account is taken of expected exchange rate developments which determine common currency yields of various assets). Of particular importance in this respect will be whether yields from the deposits will be guaranteed in foreign exchange and the extent of the public's faith in such a guarantee. In light of the circumstances prevailing in the economies under consideration, this financial assessment will be supplemented, and may be dominated, by an evaluation of the liquidity of the deposits. Specifically, the tighter the regulations governing the "feeding" and utilization of FCDs, the less their attractiveness to individuals as a store of purchasing power. Thus, individuals' desire to hold foreign balances in FCDs will be reduced in cases where the legal environment restricts their ability either to transfer funds into FCDs (e.g., by placing limits on "allowable" sources), or to use FCD withdrawals for various purposes (e.g., by specifying the type of transactions which can legitimately be financed). In cases where the authorities adopt very restrictive regulations, the introduction of FCDs will do little to reduce the size of foreign exchange transactions outside the formal banking channels.

Individuals' utilization of FCDs will reflect their motivation for holding such deposits, given the structure of prevailing regulations. Thus, FCD funds may be used either for current transaction purposes, or as a store of value for future transactions. Both types of transactions can be undertaken either domestically or abroad. In addition to distinguishing between the destination and timing of the transactions, it is possible to identify whether the FCD funds are used for consumption or investment. Clearly, the economic impact will depend, at this level, on the configuration of transactions. In particular, the allocation of these holdings to investment purposes will, <u>ceteris paribus</u>, contribute to the economy's potential for sustained growth in a context of financial stability. However, there is no reason to expect that the factors determining the allocation of foreign exchange balances to consumption and investment, both domestically and abroad, will be substantially affected by the introduction of FCDs, and therefore differ from those prevailing under the prior situation of nonformalized channels for currency substitution. In particular, with the exception of the impact of reduced risks associated with foreign currency holdings (which, in fact, may lead to a growth in currency substitution) and in the absence of other significant changes in underlying financial and economic conditions, one would expect that the individual holders' pattern of transactions prevailing after the introduction of FCDs will be similar to that existing earlier. This is due to the fact that the underlying factors affecting the phenomenon of currency substitution, discussed earlier, are basically unaltered. Therefore, the important changes in the behavior of the economy will not result from variations in individuals' transaction patterns; rather, they will reflect changes in the process of financial intermediation--in particular the use of "idle" foreign exchange balances. Thus, idle funds that are now held in FCDs will allow increased intermediation through the banking system while reducing the level of intermediation in the informal market. This, in turn, potentially affects the uses of the foreign balances, the sectoral destination of the funds, their velocity of circulation, and their economic impact.

IV. Macroeconomic Implications of Foreign Currency Deposits

The previous section suggested that the impact of FCDs on individuals' transaction patterns are likely to be small if there is already widespread currency substitution. In effect, the significant macroeconomic consequences will arise from variations in the stock of foreign currency held domestically, changes in the process of financial intermediation, and their impact both on the pattern of credit extension and on the financial integrity of the banking system. The operation of these factors will depend on the practices and procedures governing the utilization of idle balances, including reserve requirements, banks' prudential ratios, currency and maturity coverage, and credit ceilings.

FCD funds will be utilized in an environment where banks, given both the regulatory environment and their prudential concerns, are both able and willing to provide credit on the basis of these deposits. The recipients of such credit, in particular the distribution between the private and public sectors, will depend on the way in which credit regulations and/or bank allocative procedures are applied. Given the traditional banking regulatory context, it is likely that the authorities' ability to influence the allocation of credit will be greatly enhanced as compared to the situation prevailing prior to the introduction of FCDs where the process of intermediation took place outside the banking system. The impact of this process on the economy will depend on the extent to which the credit is used to meet genuine financing requirements for production and trading purposes; in particular, whether transactions previously financed in the informal sector are replaced by more productive operations through the banking system.

It is not clear, *a priori*, whether increasing the flow of foreign exchange through legal channels will result in the promotion of overall production and economic growth. In effect, it is evident that the potential and actual macroeconomic impact emanating from the introduction of FCDs, given a particular size of deposits, will depend on the nature of the activities financed by the associated balances relative to those previously taking place in the informal sector. For example, in circumstances where the funds were used in the informal market to finance illegal imports of consumer goods, or activities with limited overall economic returns, the potential for a generalized gain following the introduction and growth of FCDs will be high; the actual gain, if any, will be small if the redirected resources are utilized, however, to finance wasteful operations through formal banking channels. If, on the other hand, the funds in the informal market facilitated the financing of imported inputs in an environment of cumbersome import regulatory procedures, the diversion of funds to the banking system, if not associated with their efficient utilization, may result in shortages of important inputs.

In addition to affecting the pattern of utilization of funds, the introduction of FCDs will have consequences for the portfolio structure of the banking system. Banks should not only strive to cover with foreign currency assets the deposit liabilities held within the banking system--taking account of both maturity and currency composition considerations--they must also ensure that they secure sufficient returns to service these foreign currency liabilities. In the absence of this, the income position and balance sheet of the banking system will deteriorate, with potential adverse effects on the public's confidence. This, in turn, could have unfavorable consequences for the mobilization of savings and the efficiency of financial intermediation. This concern is highlighted by the impact of a devaluation of the exchange rate on the banking system's balance sheet. Specifically, if individual banks have net liability positions in foreign currency, a devaluation will weaken the banking system by causing capital losses and worsening the banks' capital adequacy, both of which are denominated in domestic currency. Such considerations may, in some cases, add to the authorities' reluctance to undertake needed exchange rate devaluations.

The implications of FCDs for the financial integrity of the banking system will depend on the banks' own practices, the <u>de facto</u> and <u>de jure</u> regulatory environment governing banks' operations, and general conditions affecting the economy's balance of payments position. In the absence of binding regulatory procedures, the approach banks adopt will depend on their perception of risk-adjusted potential returns on FCD-based lending. The lower their risk aversion, the greater the potential for profits at the cost of a higher probability of a significant deterioration in their balance sheets. In a worsening economic environment, this probability will increase for a given level of profits. However, in most developing countries facing severe financial imbalances, banks' operations are likely to be subject to binding regulatory practices. Accordingly, the financial integrity of the banking system will be affected by the authorities' policy stance toward the size and distribution of credit. Since the introduction of FCDs implies new types of assets and liabilities, the authorities will need to ensure that credit policy is adjusted correspondingly. This factor takes added importance since the Central Bank will be unable, in the absence of large foreign exchange reserves, to perform the role of "lender of last resort" in foreign currency as an ultimate means of securing the stability of the banking system.

V. Implications for Economic Policies

The emergence of currency substitution and the growth of a corresponding informal sector has been shown to affect the task of macroeconomic policy formulation by rendering the economy more open to external influences and by reducing the effectiveness of various policy instruments. Against this background, the introduction of FCDs has been perceived by some as extending the range of instruments available to the government as compared to a situation of informal currency substitution. Other observers, however, have noted that FCDs may add further to the difficulties of implementing effective and predictable macroeconomic policies, to the extent that they increase the substitutability between foreign and domestic money. Any attempts to clarify and evaluate these divergent views need to carefully delineate the effects of FCDs, per se, from those arising from conditions of widespread nonformalized currency substitution.

a. Policy implications of currency-substitution

The holdings of foreign currencies by residents affect policy formulation by changing the environment in which policies are implemented. There are two interrelated aspects to this change. First, currency substitution opens up new channels through which economic conditions abroad may directly affect the domestic economy. As a result, the economy becomes more vulnerable to external shocks, even in the presence of well designed policies. Thus, a change in foreign rates of return, by altering the relative attractiveness of various domestic assets, may have a direct influence on the level of aggregate domestic demand. 1/ This factor is in addition to the initial impact of currency substitution which leads to intensified foreign exchange pressures as residents replace domestic currency with foreign currency. The second, and possibly more important, aspect of the change in policy environment relates to the growth in the informal sector and the increasingly important parallel exchange rate--a rate that is likely to be highly responsive to changes in demand and supply conditions, and under limited, if any, government control. As the informal sector expands, it will represent for residents both a means of reducing risks associated with deteriorating circumstances in the formal sector and a shelter from the effects of government policy actions. In framing policies, the government must therefore be sensitive to the impact of its actions on the informal sector and the potential for individuals to further switch transactions away from the formal economy.

In such an environment, both exchange and monetary policies may lose some of their effectiveness; furthermore, fiscal policy will face additional constraints. The effectiveness of a given exchange rate action is diluted partly because of a weakening of the absorption, or real balance, effect of an exchange rate movement. Under conditions where residents hold all their wealth in domestic currency denominated assets, a depreciation of the exchange rate will normally lessen purchasing power by effectively reducing individuals' ability to purchase foreign goods and services. Where the wealth of residents is in part denominated in foreign currency, however, a depreciation of the exchange rate would not have--in domestic currency terms--a contractionary wealth effect on this component; this could partly offset the conventional aggregate demand reduction effects. The importance of

1/ This issue is discussed in detail in Girton, L. and D. Roper (1981), "Theory and Implications of Currency Substitution," Journal of Money, Credit and Banking, Vol. 13, No. 1; and in Ortiz, G., (1983) Op. Cit.

this offsetting factor depends on the degree of currency substitution, on whether individuals hold foreign currency as a store of purchasing power over domestic or foreign goods and services, and on the relative demand elasticities. At one extreme, if residents maintain foreign currency balances essentially to finance transactions denominated in foreign currency, then the effect of the windfall wealth gain on domestic absorption will be very limited. If, on the other hand, foreign currency balances are to be used mainly for domestic purchases, then the effectiveness of the absorption-reduction element of a depreciation will be lowered.

The ability of policy-makers to influence the economy through discrete changes in the exchange rate will be further constrained by the presence of an unofficial secondary market in foreign exchange which, itself, is a reflection of previous policies. As currency substitution becomes more widespread and the informal economy expands, the government will find it increasingly difficult to maintain an exchange rate policy independent of the level of the secondary market rate. 1/ For example, if the official or policy-determined rate is overvalued then there will be a tendency for supplies of foreign exchange to be increasingly diverted into the secondary market, even in contravention of the regulations of the exchange system. The wider the gap between the officially-determined rate and the parallel rate, the greater will be the pressure on the reserves of the official market.

As currency substitution develops, the operation of monetary policy is also affected, as movements in the parallel exchange rate will have a growing impact on money supply (defined to include foreign currency balances and expressed in domestic currency), as well as on the relationship between money supply and the components of aggregate demand. These two changes have important implications for widely used instruments of monetary policy which assume, first, that the authorities can control money supply growth, and, second, that there is a stable demand for money function. Currency substitution may weaken both of these assumptions. First, foreign currency balances are likely to be outside the direct control of the authorities (and, in the absence of a formal system of FCDs, will be omitted from the statistical or measured concept of money supply.) Second, the structure of the demand for money will change in line with the widening of portfolio balance considerations (e.g., money demand will depend additionally on the rate of change in the parallel exchange rate which, as discussed above in the

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1/ The underlying reasons for this phenomenon are similar to those observed in investigating the impact of currency substitution on industrial countries' exchange rates in a context of a system of generalized floating. A discussion of this issue is contained in Brillembourg, A. and S.H. Shadler (1979), "A Model of Currency Substitution in Exchange Rate Determination, 1973-78," International Monetary Fund Staff Papers, Vol. 26, No. 3; and in McKinnon, R.I. (1982), "Currency Substitution and Instability in the World Dollar Standard," American Economic Review, Vol. 72, No. 3.

context of exchange rate policy, can have differing wealth effects). The effectiveness and predictability of monetary policy may thus be weakened in conditions of currency substitution, as the foreign balance component of money supply will be determined in part exogenously, while at the same time, the demand for money relationship will become at least more complex and possibly less stable. 1/ The difficulties imposed on monetary policy will become more significant as the degree of substitutability between domestic and foreign currency becomes greater and currency substitution more widespread through the economy.

The growth of currency substitution also constrains the operation of fiscal policy insofar as the informal sector will represent to individuals both a shelter from inflationary government policies and a sector where tax laws cannot be adequately enforced. Thus, if there is pervasive false invoicing of exports or imports, or smuggling of goods, or large flows of private remittances through non-bank channels, the revenue base for government operations will be severely curtailed. In particular, international trade taxes and individual income and profits taxes are likely to have much smaller yields than would otherwise be the case in the absence of currency substitution. In addition, the increased ability to substitute foreign money for domestic money will adversely affect returns from the inflation tax. 2/ 3/

b. Policy implications of foreign currency deposits

The introduction of FCDs tends to bring into sharper focus the policy difficulties experienced as a result of currency substitution. Once FCDs have been introduced, foreign currency holdings by residents

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1/ Models of the demand for money under conditions of currency substitution are contained in King, D.T., B.H. Putman, and D. S. Wilford (1986), "A Currency Portfolio Approach to Exchange Rate Determination: Exchange Rate Stability and the Independence of Monetary Policy," in Putman, B.H., and D.S. Wilford (ed), The Monetary Approach to International Adjustment; and in Bordo, M.D. and E.U. Choudhri (1982), "Currency Substitution and the Demand for Money," Journal of Money, Credit, and Banking, Vol. XIV, No. 1.

2/ The growth in currency substitution will also have a quasi-fiscal impact on the Central Bank as there will be a loss in seigniorage (i.e., the command over resources obtained by the government through the creation of high-powered money) as a result of the decline in the relative importance of domestic currency. Statistical analyses indicate that such a process has a potentially greater impact in developing countries than in industrial countries (Fischer, S. (1982) "Seigniorage and the Case for a National Money," Journal of Political Economy, Vol. 90, No. 2).

3/ An analysis of this and related issues is contained in Khan, M.S. and C.L. Ramirez-Rojas (1984), "Currency Substitution and Government Revenue from Inflation," (Unpublished; International Monetary Fund). The issue is also discussed in Tanzi, V. and M.I. Blejer (1982), Op. Cit.

become, in part, measurable, 1/ and their effects on macroeconomic variables become more evident to both analysts and policy makers. With increased visibility, FCDs are often mistakenly identified as a source of the constraints on economic policies. In fact, as discussed above, the complications for policy formulation emerge as a result of currency substitution, and the inappropriate policies which led to this situation, rather than because of FCDs per se. It could be argued that, rather than limiting policy choices, the introduction of FCDs allows the authorities greater monitoring and control over foreign balances than they would have in an informal currency substitution situation insofar as FCDs help to reroute secondary market transactions through formal channels. For example, if FCDs are allowed as a legitimate source of funding for imports, or credited with a part of export receipts, then the incentive for smuggling and false invoicing may be reduced. Similarly, if private remittances are routed through bank channels they may become a feature of a widened revenue base for the government.

In a legalized system of FCDs, the authorities may appear to have certain additional policy instruments available compared with a situation of informal currency substitution. For instance, interest rates payable on the accounts may be determined by the authorities, thereby supplementing the domestic interest rate instrument for influencing the mobilization and allocation of loanable funds. In addition, there may be various regulations covering legitimate sources and uses of funds, or different tax treatments for accounts, or incentive schemes for depositors may be introduced. It should be stressed, however, that the ability of such policies to affect the level of FCDs may be limited. On the one hand, policy choices will be bounded by the level of return available on alternative uses of funds, including the return on deposits kept abroad. If the FCDs are not competitive, then few funds will be attracted. On the other hand, the degree to which the authorities can promote FCDs by making them more attractive in terms of liquidity and rates of return will be constrained by the actual returns from the use of the deposits when they are on-lent by the banking system or utilized by the government. Within these limits, the authorities may be able to vary the terms and conditions of the accounts and thereby affect the level of deposits. However, it is unlikely that the policy instruments available could be used in a sufficiently flexible manner to counteract the difficulties, discussed earlier, for monetary and exchange policies caused by currency substitution.

The introduction of FCDs does involve a particular set of problems that are in addition to those associated with an informal currency substitution situation. This arises because of the impact of FCDs on the balance of resources within the banking system. By attracting foreign currency to the banking system, the authorities are effectively increasing the gross foreign currency denominated liabilities of the financial system. Although these liabilities are to residents, the

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1/ Monetary data will continue, however, not to capture foreign exchange holdings that do not transit through the banking system.

servicing of the associated "indebtedness" and the potential requirement of repayment of principal will be in foreign exchange. As noted earlier, and unlike the case of domestic currency transactions, the Central Bank cannot be regarded as automatically able to fulfill the role of lender of last resort in foreign currency and, therefore, special attention needs to be paid to preserving the integrity of the foreign currency accounts and maintaining the confidence of depositors and foreign correspondents in the banking system. The first point, which has been emphasized earlier, is that every care should be taken to ensure that the funds which become available through FCDs are utilized so as to effectively yield a return in foreign exchange terms in excess of the debt servicing costs. In conditions of foreign exchange scarcity, this will call for restraint, in particular on the part of the authorities, in not using the resources for purely consumption purposes and to temporarily ease the balance of payments situation. Moreover, the authorities may also need to protect the banking system against any confidence loss by depositors and foreign correspondents by taking appropriate measures that ensure that the commercial banks maintain a balanced position in foreign exchange, in terms of both maturity and currency composition.

VI. Foreign Currency Deposits and Economic Stabilization Programs

Economic stabilization programs have traditionally aimed at the restoration of external and internal financial stability in order to promote sustained growth over the medium term. These programs have tended to include both demand containment and supply enhancement elements. Accordingly, the above cited considerations relating to the effects of currency substitution on policy instruments--principally fiscal, monetary, and exchange rate measures--have to be taken into account in the formulation of such programs in situations where the substitution by residents of foreign currency denominated assets for domestic ones is widespread and/or growing. In addition, the introduction of FCDs *per se* has particular implications for the specification of monetary and credit policy which plays a central role in ensuring, in combination with other aspects of the economic and financial programs, an appropriate level of aggregate demand. These must be taken into account in the setting of targets for the growth in various monetary aggregates, as well as for key financial indicators.

Credit policy adjustments will be necessary to ensure that the financial integrity of the banking system is not adversely affected by the introduction of FCDs. Accordingly, a strong case exists for explicitly taking into account in the formulation of stabilization programs measures affecting the magnitude and nature of, and variations in, banks' exposures in foreign currency. Moreover, in addition to the conventional banking concerns, it is important to note that FCDs incorporate a number of the characteristics usually associated with external borrowings. In light of the implications for the external payments prospects of debt servicing associated with foreign exchange liabilities, some stabilization programs may have to place limits on the net foreign currency exposure associated with FCDs. Since it is not advisable to make use of ceilings on the contracting of such deposits by banks, as is usually done with non-concessional external borrowing, it becomes appropriate to use traditional banking instruments to ensure that the liability positions of banks are adequately covered by foreign exchange assets. For this reason, action must be taken not only to ensure that banks themselves retain appropriate maturity and currency coverage, but that, when such coverage is maintained with the Central Bank, it is not imprudently deployed. This consideration takes added importance when the large potential volatility of holdings of FCDs, as well as the shortages of foreign exchange in the official market, are taken into account.

In addition to concerns related to the financial health of the banking system, the introduction of FCDs will have a number of implications for the setting of the credit ceilings of a financial program. Thus, recorded monetary aggregates, which now include a foreign currency component, will be subjected to valuation adjustments in the presence of any exchange rate change. Such adjustments, which reflect only stock influences, must be fully taken into account when setting ceilings on net domestic assets over the program period. The degree to which ceilings on the extension of credit will have to be tightened further than they would have been otherwise will depend on the economic implications of the wealth effects experienced by holders of FCDs. Specifically, a devaluation in real terms of the domestic currency will increase holders' purchasing power over local resources. The degree to which this notional increase is made effective will depend, as noted earlier, on individuals' transaction patterns. Thus, in cases where FCDs are held as a store of purchasing power for external transactions, the increase in recorded money supply resulting from the valuation effects will have no direct implications for domestic aggregate demand and therefore no offsetting action will be warranted. This can be contrasted to the case where the domestic component dominates the expenditure patterns of FCD holders. In this case, the increase in recorded money supply has direct implications for domestic liquidity and, in the case of a restrictive monetary policy, should be offset by additional demand containment measures. In the intervening cases, it is necessary to ascertain the implied distribution between domestic and external transactions, as well as the relevant wealth/income elasticities. This information would provide an indication of the potential expansionary impact associated with the FCDs wealth effects and the need for offsetting action within a broader based economic stabilization effort.

VII. Concluding Remarks

The introduction of FCDs in developing countries has often occurred in a context of widespread, often illegal, currency substitution. In such circumstances, FCDs have been perceived by the authorities as a means of attracting foreign exchange to the banking system, thereby providing them with increased control over the mobilization and allocation of scarce resources. At the same time, however, FCDs have appeared to constrain some of the traditional economic management instruments, thereby raising a number of other policy issues. It is in this context that the present paper sought to analyze the origins and economic implications of these deposits, as distinct from those arising from conditions of nonformalized currency substitution.

The analysis of the sources and uses of FCDs suggests that the introduction of these deposits can lead to a channeling of existing foreign exchange resources into the formal sector of the economy, as well as contribute to an increase in the overall availability to the economy of these resources. The higher the return on the deposits and the fewer the restrictions on their sources and uses, the greater the potential for attracting foreign exchange into the banking system. However, it is important to stress that the increase in the supply of foreign exchange, if any, is unlikely to be sustained unless the imbalances that led to the emergence of currency substitution are adequately addressed through appropriate adjustments in policies that go beyond the imposition of increased restrictions on foreign exchange transactions. In fact, in the absence of appropriate adjustment measures, FCDs may have a perverse impact by facilitating capital flight, thereby aggravating the external payments pressures.

As regards the policy environment, it is clear that the introduction of FCDs has a number of implications for the conduct of economic management. However, it is important to distinguish between those attributable solely to these deposits and others which, while appearing to result from them, are in fact occasioned by other factors. FCDs, by affecting the structure of the banking system's balance sheet, necessitate a corresponding adjustment in banking practices and the supervisory environment (as well as the formulation of various credit ceilings in financial programming). At the same time, by rendering the formal economy "more open," it would appear that policy adjustments are required to offset the sector's increased vulnerability to external shocks, as well as the apparent reduction in the effectiveness of fiscal, monetary, and exchange rate policies. However, as demonstrated in the paper, the underlying factors necessitating such adjustments reflect the importance of the process of currency substitution, irrespective of its formalization through the introduction of FCDs. In effect, FCDs serve essentially to render the required adjustments more "transparent."

In concluding, it is evident that the introduction of FCDs is unlikely to provide an effective and sustained means of addressing the external imbalances typically facing an economy characterized by widespread currency substitution. While these deposits may contribute to a temporary alleviation of foreign exchange constraints, their introduction, if unaccompanied by fundamental policy reforms, may compound the adverse impact of informal currency substitution, and further delay and complicate the process of economic adjustment.

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