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Money and Credit Under Currency Substitution

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Abstract

This paper examines the effects on the supply of money and credit of a repatriation of foreign assets in an economy subject to currency substitution. In the absence of 100 percent reserve requirements, such a change in the location of deposits, which is not compensated by an increase in money demand, induces a credit boom that works itself out through a transitory current account deficit and real currency appreciation. These results are illustrated with data from the recent experience in Argentina and Peru where local banks have been authorized to capture dollar deposits from residents.

JEL Classification Nos:
E51, F32

1/ The author is Chairman of Centro de Estudios Macroeconomicos de Argentina (CEMA). He was a Visiting Scholar in the Research Department when this paper was written. The author is indebted to Guillermo Calvo, Leonardo Leiderman, Donald Mathieson and Carlos Vegh for helpful discussions on the subject. The views expressed in this paper do not necessarily represent those of the International Monetary Fund.

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Summary

In an economy operating under currency substitution, macroeconomic effects may derive from either shifts between denominations of currency holdings or shifts in the locational composition of foreign currency holdings. A shift from dollar deposits abroad to deposits in the local system increases the credit supply of the financial system without increasing money demand. Given an initial situation of credit constraint, the extra credit results in an equivalent accumulated current account deficit that is also associated with temporary real currency appreciation, which is expected to be hard to reverse. In contrast, when there is an excess demand for money, one would expect a general reduction in expenditure leading to both capital inflows and current account surpluses.

Data from Argentina and Peru following the stabilizations after hyperinflation show that the capital inflows have been associated with significant worsening in the current account. They therefore support the hypothesis that the inflows were induced by portfolio reallocations or by foreign investors responding to the lower interest rates in the United States.

Higher temporary marginal reserve requirements (nonremunerated) are one alternative for slowing down domestic credit expansion caused by the repatriation of foreign assets. In the case of dollar deposits in the local financial system, the higher reserve requirements should apply only to that part that is locally lent. For overseas operations, reserve requirements should be at rates compatible with international competition. Moreover, local taxes should not be imposed on the profits earned from financial intermediation based on dollar deposits that are reinvested overseas by local banks. Otherwise, deposit rates for local dollar deposits will not be able to compete internationally and, in consequence, the repatriation of assets could be hampered. The marginal reserve requirements should be lowered as monetization advances or as the ability of the economy to adapt to trade deficits without substantial relative price swings improves.

I. Introduction

Several factors associated with macroeconomic instability during previous decades have favored the presence of currency substitution in many Latin American countries. Most prominent among countries experiencing currency substitution are Argentina, Bolivia, Peru and Uruguay. Currency substitution took the form of cash holdings of dollars and also of foreign deposits that could not be reached by the local fiscal authorities. Lately, some of these countries, mainly Argentina and Peru, have been experiencing a repatriation of foreign assets that are being deposited in the local financial system. Since then both countries have simultaneously experienced a credit boom, high current account deficits and real exchange rate appreciation. The dollar cost of living in Argentina increased by 125 percent since March 1990 and in Peru it increased by 81 percent since September 1990. A summary of recent changes in monetary aggregates in Argentina and Peru, highlighting the currency substitution process is shown in Tables 1 and 2.

Following the hyperinflation, the stabilization packages of Peru and Argentina validated the ongoing currency substitution processes by allowing local commercial banks to hold dollar deposits of residents and to lend the proceedings domestically, subject to reserve requirements. As credibility in the stabilization plan increased, residents started transferring part of their foreign currency deposits into the domestic banks. As those funds were lent locally, a fraction came back to the banks as new deposits and, thanks to the fractional reserve system, were lent again, giving rise to the "argendollars" or "perudollars".

The transaction described above, in the first impact, only has the effect of a change in the physical location of the resident's money stock: from deposits in Miami to deposits in Buenos Aires or Lima, always in dollars and for the same amount. There is therefore no first order impact on the money supply or money demand globally defined to include both local currency and dollars. Those dollars that were previously lent in the US are now being lent locally. They give rise to a secondary money and credit-creation process that is bound to have macroeconomic implications, particularly for the current account and the real exchange rate.

From a local money supply perspective, a dollar deposited in Miami and lent to a foreigner is the same as a dollar held in a local deposit, subject to a 100 percent reserve requirement (with the Central Bank reinvesting the reserves abroad). However, by shifting the location of the deposit, the credit to the foreigner is converted in a credit to a resident. Unless the fraction, not subject to reserve requirements is immediately spent abroad, the local supply of dollar deposits is bound to increase due to the standard bank's money multiplier process: the dollars lent locally are bound to come back to local banks as new deposits, these will be lent again, and so on, until all of the original inflow of high powered dollars is spent either as reserves, cash holdings or as a current account deficit. Since there is no reason for the money demand to have increased, it is clear that monetary

equilibrium will be restored only when the excess money supply allowed by the multiplier is lost via accumulated current account deficits or, alternatively, if the banks were to get the deposit and immediately redeposit it abroad in what would be a de facto off-shore market.

In economies emerging from hyperinflation, such as Argentina or Peru, there is a practically unlimited demand for credit as it is likely to have all but disappeared in the previous stage. In addition, severe credit constraints applied to vast segments of the market, such as consumer or mortgage credit which had no access to international or local borrowing, mainly because of the high degree of macroeconomic uncertainty that has prevailed. After the stabilization, and because of the initial scarcity, consumer credit or mortgages can be granted at extremely high rates. In consequence, banks have no problems in lending locally the proceedings from the new dollar deposits; it is also clear that they have no incentive to reinvest those funds overseas, even if allowed to do so. Parallel to the credit boom, those countries also experienced significant appreciation in the real exchange rate as well as a deterioration in the current account. We advance the hypothesis that at least part of this currency appreciation and current account deterioration may have been induced by the creation of local dollars, made possible by the repatriation of foreign deposits under a fractional reserve system.

Other factors have also been mentioned as contributing to the existence of a boom after stabilization: Rodríguez (1982) focuses on the reduction in the real interest rate due to the existence of price rigidities and adaptive expectations; Calvo (1986) points to the lack of credibility in the plan, while Helpman and Razin (1987) concentrate on the wealth effects due to the reduction in the inflation tax. An empirical analysis of the different hypotheses for several Latin American countries' stabilization has been conducted in Reinhart and Vegh (1992), while a general presentation of the issues is in Kiegel and Liviatan (1991). We shall concentrate in this paper on the analysis of the money supply and credit effects derived from portfolio shifts under currency substitution.

The macroeconomic disturbances generated during the decade of the 80's by capital inflows in response to a higher money demand were described by Calvo (1991a). In an economy subject to currency substitution, one might face capital inflows due, not only to a situation of global excess demand for money, but also resulting from portfolio shifts between currency denomination or from changes in the desired location of foreign currency deposits. We are not considering here the factors that give rise to the existence of currency substitution, but rather in describing one possible event that could happen under such a system: money supply and credit effects derived from a change in the location of the foreign deposits. Credibility in the ongoing stabilization efforts and relaxation of capital controls may be among the factors explaining the reversal in the public's locational preference for their currency holdings, see Kenen (1992). A theoretical framework for understanding the existence of currency substitution is

Table 1. Monetary and Credit Data for Argentina
(In millions of U.S. Dollars at the free market rate and as % of GDP)

	June 1989	March 1991	March 1992
CENTRAL BANK ACCOUNTS			
Peso Monetary Base	708	4,580	8,576
Dollar Deposits	571	207	977
Other Liabilities Net	373	-787	-991
International Reserves	1,652(2.4%)	4,000 (2.7%)	8,562 (5.0%)
COMMERCIAL BANKS ACCOUNTS			
Peso Deposits	2,900	5,156	9,000
Dollar Deposits	571	3,291	7,890
Credit in Pesos	909	2,632	5,400
Credit in Dollars	0	3,180	6,900
MONETARY AGGREGATES			
Currency	166 (0.2%)	2,345(1.58%)	4,950 (2.9%)
M2: Currency plus peso dep.	3,066(4.5%)	7,501 (5.1%)	13,950 (8.2%)
M2 + Dollar Deposits	3,637(5.4%)	10,792 (7.3%)	21,840(12.8%)
Total Credit	909 (1.3%)	5,812 (3.9%)	12,300 (7.2%)
Memo: GDP in U.S. Dollars	6,800	147,000	170,000

Table 2. Monetary and Credit Data for Peru
(In millions of U.S. dollars at the free market rate and as % of GDP)

	September 1990	March 1992
CENTRAL BANK ACCOUNTS		
Sol Monetary Base	663	936
Dollar Deposits of Banks	157	839
Other Liabilities Net	-393	-360
International Reserves	427	1,415
COMMERCIAL BANKS ACCOUNTS		
Sol Deposits	584	1,197
Dollar Deposits	698	2,694
Credit in Soles	650	822
Credit in Dollars	597	1,745
MONETARY AGGREGATES		
Currency	278 (0.7%)	678 (1.3%)
M2: Currency plus sol deposits	865 (2.3%)	1,876 (3.6%)
M2 + Dollar Deposits	1,567 (4.2%)	4,570 (8.7%)
Total Credit	1,247 (3.4%)	2,567 (4.9%)
MEMO: GDP in U.S. Dollars	36,691	52,324

presented in Guidotti and Rodriguez (1992) while the demand side implications of a shift between local and foreign money can be seen in Calvo and Rodriguez (1977); a general survey on currency substitution issues is presented in Calvo and Vegh (1992). Section II analyzes the money supply implications of changes in the location of foreign currency deposits. Section III explores some policy implications. The paper ends with a section of Conclusions.

II. The Money Supply Process Under Currency Substitution

We consider a situation where domestic residents hold local and foreign money both as cash and as deposits at home or abroad. The exchange rate is assumed fixed by the Central Bank and equal to unity.
Define:

C = Cash holdings of pesos
C* = Cash holdings of dollars
D = Local deposits of pesos
D* = Local deposits of dollars
F* = Dollar deposits held abroad

Total liquidity is the sum of all of the above assets:

$$L = C + C^* + D + D^* + F^* \tag{1}$$

The desired share of each asset in total liquidity is assumed constant and equal to c, c*,d,d* and f* respectively. The sum of all these shares adds up to unity. We are interested in analyzing the effects of a shift from F* (deposits in Miami) to either D* (dollar deposits in Buenos Aires) or D (peso deposits in Buenos Aires).

The Central Bank imposes reserve requirements at the rate r on peso deposits and r* on local dollar deposits.

The Central Bank balance sheet implies:

$$\text{Reserves} = \text{Base} + r^*.D^*., \text{ where} \tag{2}$$

$$\text{Base} = \text{Peso monetary base} = C + r.D \tag{3}$$

The total demand for money is proportional to nominal GDP:
$L = k.p.Q$, and we assume it remains fixed at the level of long run nominal GDP (when p=E=1). Therefore L = Lo. (4)

From (2) and (3) we have:

$$R = C + r.D + r^*.D^* \tag{5}$$

Substituting the desired asset ratios into (5) we obtain the expression determining reserves as a function of behavioral parameters, reserve ratios and nominal money demand:

$$R = (c + r.d + r^*.d^*).Lo \tag{6}$$

The total stock of assets held against foreigners is the sum of reserves, cash holdings of dollars and the dollars deposited abroad:

$$F = C^* + R + F^* \text{ or,} \tag{7}$$

$$F = (c^* + c + r.d + r^*.d^* + f^*).Lo \tag{8}$$

Similarly, the total stock of banks' credit is the sum of the peso and local dollar deposits that are not subject to reserve requirements:

$$Cr = (1-r).D + (1-r^*).D^* = [(1-r).d + (1-r^*).d^*].Lo \tag{9}$$

We can now analyze the effects of a once and for all portfolio shift of the form:

$-\Delta f^* = \Delta(d+d^*)$, that is, a shift from dollar deposits abroad to either dollar deposits at home or peso deposits at home. In the first case the resident cashes his dollar deposit abroad and deposits it in a dollar account at a domestic bank, where it will be subject to a reserve requirement r^*. In the second case he cashes his dollar deposit abroad, sells the dollar to the Central Bank for pesos and deposits the pesos at a domestic bank where it will be subject to a reserve requirement of r.

The final effects of the portfolio shift on reserves, net foreign asset holdings and credit are:

$$\begin{aligned} \Delta R &= [r.\Delta d + r^* \Delta d^*].Lo \\ \Delta F &= [(r-1).\Delta d + (r^*-1).\Delta d^*].Lo \\ \Delta Cr &= [(1-r).\Delta d + (1-r^*).\Delta d^*].Lo \end{aligned} \tag{10}$$

Consider the simple case in which the reserve requirement is the same for peso or for dollar deposits, so $r=r^*$:

$\Delta R = -r\Delta f^*.Lo = r.KI > 0$, where $KI=-\Delta f^*.Lo$ is the initial capital inflow.
$\Delta F = (r-1).KI < 0$
$\Delta Cr = (1-r).KI > 0$

In the case of Argentina, the reserve requirement against time deposits in pesos or dollars is 7 percent; therefore, a 1 million dollar portfolio shift away from foreign deposits into the local financial system would result in an increase in reserves of 0.07 million, an increase in credit of 0.93 million and an identical, but opposite in sign, change in the net foreign assets position. In Peru, marginal reserve requirements are higher,

close to 50 percent, therefore reducing the secondary expansion effects of the capital inflow.

The change in the net foreign asset position allowed by the money supply multiplier must be equal to the accumulated surpluses in the current account during the adjustment process. In the case of a portfolio shift in favor of local deposits we find that the effect must therefore be an accumulated deficit in the current account. To validate such a transitional, current account deficit, an appreciated real exchange rate will be necessary. This temporary real appreciation will have to be reversed as soon as the capital inflow is absorbed totally through the financial intermediation process. This reversal is bound to produce some adjustment costs to the extent that there is some degree of price inflexibility. This is the main argument usually posed in favor of controlling capital flows.

The increase in local credit allowed by the capital inflow is equal to the extra spending that can now take place in the economy. Under full employment, this extra spending is bound to be supplied from abroad through an accumulated current account deficit.

Basically, what is happening is that the instrumentation of the "argendollar" market allows for the creation of dollars that are as good for local holders as a real dollar, but at a fraction of the cost. A dollar held in Miami costs one dollar, whereas a dollar held in Buenos Aires costs only the 7 cents of reserve requirements. The difference therefore can be spent without affecting what money holders consider to be their total liquidity. The net foreign assets position of the country is, however, affected as local dollar deposits do not account for this concept.

For the country as a whole, this operation reduces the net foreign asset position, something to be worried about if there is the possibility of a reversal in the portfolio composition. In that case a current account surplus would be necessary in order to obtain the real dollars to deposit in Miami. We can see the mechanics of the money multiplier operating clearly in Argentina and Peru. In Argentina, as of February 1992, there were dollar denominated deposits in the local system of $7.9 billion, against which the banks hold reserve requirements at the Central Bank for $0.92 billion and cash in vault for $0.45 billion; the rest, $6.5 billion has been invested in loans to local residents. The stock of dollar credit one year before in February 1991, was a mere $2.8 billion, meaning that it increased by $3.7 billion in the 12-month period. While many other factors affected the macroeconomic balance during 1991 (such as an incipient remonetization in pesos and a significant trade liberalization), it may be revealing to compare the fact that the current account showed a deterioration of $4400 million, relative to the previous year, similar in magnitude to the increase in dollar credit ($3700 million) during February 1991-February 1992. In Peru, the increase in credit during the six quarters after the stabilization (September 1990) was $1320 million, out of which

$1088 million came out as new credit in the "perudollar" system, while the deterioration in the current account relative to the previous six quarters was $1680 million, again both being of a similar order of magnitude.

The capital inflows we have analyzed here due to a portfolio shift have the effect of inducing a deterioration of the current account by as much as would occur in the case of a foreigner opening a deposit in the local market. In that case, out of a one dollar deposit, only r* will eventually remain as reserves, the rest is lost through a current account deficit. On the other hand, one may consider a capital inflow generated by an ex-ante situation of excess demand for money. In this case one might expect a simultaneous improvement in both the current and capital account as the public reduces expenditure in response to the excess demand for money. In this case the increase in money demand will result in increased reserves in the proportion c+rd+r*d* and in addition the public will accumulate c*+f* in foreign currency. The role of external factors in determining the recent experience of real exchange rate appreciation in Latin America is examined in detail in Calvo, Leiderman and Reinhart (1992).

It is therefore important in determining any association between capital inflows and the current account to ascertain whether the capital inflows are supply or demand determined. Capital inflows that are induced by lower foreign interest rates or portfolio reallocation are supply determined and are associated with current account deficits, whereas capital inflows due to excess demand for money are demand determined and are expected to be associated with current account surpluses.

III. Policy Implications

The base for evaluating the policy implications is that there is an asymmetry in the process of adjusting the level of the real exchange rate: while it is relatively easy to let it appreciate, it is socially costly to adjust it upwards (devaluation). Real appreciation is obtained during a period of capital inflows that expand credit and economic activity: this allows for higher prices relative to the exchange rate and the current account deficit. For the real exchange rate to depreciate, it is necessary for prices to fall back to their initial level or for the nominal exchange rate to be devalued. For a fixed exchange rate economy such as Argentina, a nominal devaluation would be seen as an abandonment of the ongoing stabilization strategy and may induce a new portfolio shift away from the local currency that may seriously destabilize the economy.

In the absence of complete information about the adjustment process, economic agents may be misguided by the lower real exchange rate and take decisions under the assumption that it will remain there forever. The new dollar loans made by banks may have as collateral, assets valued at inflated prices in dollars (thanks to real appreciation) and loan recipients with inflated dollar incomes; those high dollar values are likely to fall as the

real exchange rate depreciates. These, of course, are normal risks in a well functioning capital market. What may be a worry in the case of Argentina or Peru is the speed with which local credit is expanding in response to the very fast capital inflows.

Argentines held most of their financial wealth abroad, where it was safely invested. Locally, during the unstable 1980's, banks all but abandoned credit to the private sector and concentrated in acquiring government paper. After the Law of Convertibility (basically establishing a Currency Board) was implemented in April 1991, Argentines started bringing back their foreign deposits. Notice that this is not an increase in the demand for money but just a change in its locational composition. This process occurred at a time when there had been virtually no consumer credit in the country for a decade. The potential for expansion in credit was therefore enormous. The total stock of bank credit at the bottom of the hyperinflation was $900 million. Since then it has increased to about $13 billion. In Peru, since the stabilization started, the dollar value of the stock of credit has doubled, from $1247 million in September 1990 to $2567 million in March 1992. Notice, however, that out the total increase of $1320 million, $1148 million came as credit in dollars under the new "perudollar" system.

The boom in credit-increased assets, prices and prices of non-tradables, allowing for dollar wages in Argentina to increase by 127 percent in the two year period of March 1990-92. In Peru, the dollar value of the CPI increased by 81 percent during the post stabilization period (Sep.1990-March 1992). As the value of collateral and household income increased in dollar terms, it become apparently safer for banks to grant consumer credit in dollars. One possible source of the problem is that the dollar value of loans, collateral and wages may well be above their long run sustainable values. Banks, therefore, may have a serious collection problem if the real exchange rate goes back to its long run equilibrium level after the portfolio shift is finally absorbed. Furthermore, Argentinean and Peruvian labor laws do not allow for downward flexibility of nominal wages. This implies that the real devaluation will have to be obtained through nominal devaluation or a very severe recession, facts that may generate a reverse capital outflow cycle as expectations of currency stability may be disturbed.

Recently the problem of the portfolio shift may have been compounded by an additional supply shock when foreign investment funds, in response to the fall in U.S. interest rates, started purchasing high yield assets in several Latin American markets. There is no data, however, on the significance of the capital inflow on this account. Additionally, governments embarked on privatization programs may have contributed to the overvaluation by selling assets to foreigners and using the foreign exchange proceeds to finance domestic spending.

There is nothing intrinsically wrong in expanding the supply of credit in economies that are severely credit constrained such as Argentina or Peru. The problem is that the new credit is not coming from domestic savings but from accumulated stocks of foreign savings. In the absence of a parallel increase in money demand, the extra credit must have a counterpart of foreign goods coming in, and this generates the real overvaluation.

A common misconception in Argentina is that many of the country's problems would be solved if Argentines were to bring home their accumulated foreign savings. In a credit thirsty economy such as Argentina, if all the stock of foreign savings were to come back in an instant, it would be immediately lent locally, meaning that the entire stock of foreign savings would have to be immediately spent in foreign goods if macroeconomic balance is to be achieved! All foreign savings would be immediately spent and the country would run a current account deficit equal to all of the financial foreign savings of the past decade. Clearly, this would not be an ideal situation. Banks receiving dollar deposits should graduate their local lending, particularly taking into consideration the long run relative price structure. The rest should be reinvested abroad, as it would be in an off-shore market. The only initial impact of the capital inflow should be that Argentines will now handle their dollar accounts from Buenos Aires, instead of having to travel to Miami or Uruguay for this purpose.

Authorities in Argentina do not seem to have paid attention to this problem. Recently a general pardon was issued for those who wanted to bring back their previously undeclared foreign funds. To do so the funds would be deposited in a local bank with, basically, a zero interest rate for 180 days. The banks, by the same decree, had to lend those funds for investment purposes at an interest in dollars of no more than 10 percent. Imagine if the pardon were to be successful and banks had lent about $20 billion over a period of 180 days. Obviously, even for a credit thirsty economy, it is not wise to suddenly lend 15 percent of the GDP, especially during a 180 day period. However, the pardon was a failure and apparently only half a billion dollars were presented.

An additional potential problem relevant in the Argentine situation is that banks cannot, by regulation, invest abroad the funds they receive as dollar deposits: they are forced to lend them locally. Currently local dollar rates for prime customers are on the order of 20-25 percent and consumer credit rates range up to 40-60 percent, therefore, this regulation is not binding.

A slower rate of absorption of the credit potential derived from the locational shift in portfolios could be obtained by imposing higher marginal reserve requirements (non-remunerated) on the part of those dollar deposits that are locally lent, while allowing banks, if they so wish, to reinvest the unused part of the deposit overseas. This will drastically reduce the deposit rates paid on dollars and also the amount of new credit being granted. Marginal reserve requirements should be gradually reduced as the

ability of the economy to absorb the new credit without sharp relative price changes is improved. For this to happen, the economy should be open to international trade. In spite of the recent reforms, imports in Argentina are still at 8 percent of GDP, and there remain some quantitative restrictions and very high tariffs for international standards; a similar situation takes place in Peru where imports are at the rate of 7.4 percent of GDP. Measures allowing for downward wage flexibility should be implemented.

It may be convenient for reserve requirements on deposits denominated in the local currency to be kept at the same level as those on deposits denominated in dollars (only on the fraction not reinvested overseas). Otherwise, discrimination in reserve requirements could prevent integration in the international capital market. Also, discrimination against dollar deposits could be avoided by the public since depositors may still choose to place the dollars in peso deposits, the result being that the net effect on all macro variables would be the same as if the initial deposit had been opened in dollars. In fact, if $r<r^*$, a capital inflow that is placed in peso deposits will reduce further the net foreign asset position (and therefore the current account balance) than if it is placed in dollars, as follows from (10).

It may be argued that in an open economy with a fully convertible currency, credit cannot be controlled: any individual is free to borrow directly from abroad, bring the dollars into the country and spend them. The fact is that much of the recent credit boom may be going to creditors who did not have access to the international market. Large corporations have always had access to the international market, and it is hard to believe that they are now borrowing locally at the prevailing high interest rates. The temporary reserve requirements should be seen as a measure aimed at slowing down the fast rate of expansion in consumer credit that may still be seen as segmented from the international market.

Of course there are other alternatives that could produce the same effect of slowing down credit growth. One would be to generate fiscal surpluses equal to capital inflows, the proceeds of which would be used to purchase dollars that would not be locally spent. Another alternative is to fully sterilize the monetary impact of the capital inflows through central bank intervention. In this case the central bank could follow a domestic credit target for the local financial system. However, this would imply issuing bonds, or remunerated reserve requirements at the prevailing local dollar interest rates that are likely to be inconsistent with the growth rate of fiscal revenues (on the perils of sterilization see Calvo, 1991b).

IV. Conclusions

In an economy operating under currency substitution one might expect macroeconomic effects derived both from shifts between denomination of currency holdings and from shifts in the locational composition of foreign currency holdings. A shift from dollar deposits abroad to deposits in the local system, in pesos or in dollars, increases the credit supply of the financial system with no corresponding increase in money demand. Given an initial situation of credit constraint, the extra credit results in an equivalent accumulated current account deficit that is also associated with a temporary period of real currency appreciation which is expected to be hard to reverse. This situation differs as it is due to an excess demand for money where one would expect a general reduction in expenditures leading to both capital inflows and current account surpluses.

Data from Argentina and Peru following the stabilization after hyperinflation shows that the capital inflows have been associated with significant worsening in the current account and therefore support the hypothesis that they were supply induced by portfolio relocations or foreign investors responding to the lower interest rates in the United States.

Higher temporary marginal reserve requirements (non-remunerated) seem to be an available alternative for slowing down the fast rate of domestic credit expansion caused by the repatriation of foreign assets. In the case of dollar deposits in the local financial system, the higher reserve requirements should apply only to that part that is locally lent. For overseas operations, reserve requirements should be at rates compatible with international competition. It is also suggested that local taxes on financial intermediation not be imposed on dollar deposits that are reinvested overseas by local banks. Otherwise, deposit rates for local dollar deposits will not be able to compete internationally and in consequence the repatriation of assets could be hampered. The marginal reserve requirements should be lowered as monetization advances or as the ability of the economy to withstand trade deficits without substantial relative price swings is improved.

It also sounds reasonable that, before imposing any restriction on private sector behavior, the governments should consider ceasing their role as a generating factor for the problem being faced. This applies specifically to the foreign funds derived from the privatization processes on which several Latin American governments embarked. For example, in 1991 the Argentine government spent locally foreign funds derived from privatization in an amount of around $2 billion. It is expected to spend an additional $3 to $4 billion in 1992 from the same sources. This $4 billion capital inflow due to the government easily compares with the $3.8 billion increase in the "argendollar deposits" experienced during 1991.

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