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***THE IMPACT OF US DOLLAR DEPOSITS
ON CARICOM ECONOMIES***

by

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Abstract

This study evaluated the impact of the growth in US dollar deposits on the supply of loanable funds and the ability of the central banks to exercise effective control over the availability of credit. The investigation centred on Jamaica, the Eastern Caribbean Currency Area and Trinidad and Tobago. Interviews were conducted with representatives of the commercial banks in the three areas to derive insights into the approach adopted in management of these deposits. It was found that while the banks in Jamaica and Trinidad and Tobago viewed these deposits as an additional source of lending, this was not the case in the Eastern Caribbean. The existence of these deposits did not appear to undermine the ability of the central banks manage credit. Finally, the growth in the size of these deposits was not indicative of a dollarization of the respective economies.

Introduction

Since 1990, governments in both Jamaica and Trinidad and Tobago have taken steps to liberalize their foreign exchange markets. As a result of these initiatives, residents of both countries have been allowed to maintain US dollar accounts. In some of the countries of the Eastern Caribbean Currency Area, it has also been relatively easy for residents to open and operate foreign currency accounts. In the case of Jamaica and Trinidad and Tobago, given the uncertainties associated with a floating exchange rate regime with respect to the exchange rate, opening and maintaining a foreign currency account could be one way in which residents could secure the value of their financial savings from the potential losses arising from a depreciation of the currency. The issue of security of savings would appear to be of relatively minor significance for residents of the Eastern Caribbean Currency Area. The currency board arrangement under which the area operates ensures that the system functions with a very high ratio of foreign currency reserves relative to the money supply. The risk of a currency devaluation would then be slight. There would be an advantage to maintaining US dollar

deposits for transaction purposes to avoid the costs associated with currency conversion.

Residents of the region, in particular the trading companies and firms engaged in tourism, have, traditionally, maintained accounts in banks outside the region. In Table 1, information is provided on the amounts held in such accounts by residents of Jamaica and Trinidad and Tobago during the eighties.

Table 1
External Bank Deposits Held by Residents of Jamaica and Trinidad and Tobago
Millions of US dollars

	Jamaica	Trinidad and Tobago
1981	50	60
1982	140	290
1983	140	300
1984	140	320
1985	190	380
1986	360	620
1987	270	450
1988	400	520
1989	340	480
1990	580	580

Source: International Monetary Fund, International Financial Statistics Annual Edition, 1995.

The willingness of residents to hold US dollar deposits in the domestic banking system, as opposed to foreign centres, carries potential important implications for the availability of credit in the economy. In addition, the existence of US dollar deposits in the system could undermine the ability of the central bank to exercise effective control over the money supply and the availability of credit. However, it has also been argued that the ability of residents to substitute US dollar deposits for domestic currency deposits, may limit the ability of governments to rely on money creation by the central bank to support expenditure. To that

extent, allowing residents to hold such deposits helped to speed up the return to monetary stability in some Latin American countries which had experienced periods of high inflation (see for example, Melvin, 1988).

In this study an effort will be made to ascertain what are the implications for those CARICOM economies which have recently experienced a significant growth in the holding of US dollar deposits by residents. The study will be organised as follows. In the first section, attention will be directed toward an assessment of the size and characteristics of US dollar deposits held by residents in the banking system in Jamaica, Trinidad and Tobago and the Eastern Caribbean Currency Area. In the second section, there will be an assessment of the potential impact of these deposits on the availability and cost of credit. The final section will be devoted to an exploration of the extent to which there is evidence that these deposits worked to limit the ability of central banks to exercise meaningful control over the level of lending in the respective countries. In addition, there will be some attention directed to the issue as to whether in these economies there is the emergence of the 'dollarization' phenomenon.

US Dollar Deposits in the Banking System

The operation of exchange controls by governments in the region meant that residents could not be assured of having automatic access to foreign currency on demand. In the case of Jamaica and Trinidad and Tobago, the deterioration in the external payments position, starting in the seventies and eighties, respectively, gave rise to situations in which most residents had no legal access to foreign currency. Although there were exchange controls in the Eastern Caribbean Currency Area, the absence of a foreign currency shortage in the banking system, meant that residents experienced little difficulty in gaining access to foreign currency. As a result, not only

did these conditions encourage businesses in Jamaica and Trinidad and Tobago to maintain foreign currency balances in banks outside of the region, but it also encouraged individuals, for example those who received remittances, to engage in hoarding of foreign currency. The devaluations of the currencies during the decade of the eighties, especially in Jamaica, gave rise to a situation where residents experienced a constant decline in the value of their financial savings denominated in local currency. The abolition of exchange controls was accompanied by a decision to adopt a flexible exchange rate regime in both countries. In light of these factors, one would expect that residents would view the ability to establish US dollar accounts as enabling them to more easily make optimal consumption, savings and investment decisions. In other words, there would be both a transaction and asset motive for establishing US dollar accounts.

In both Trinidad and Tobago and Jamaica, the removal of restrictions on holdings of US dollar deposits was quickly followed by a sharp growth in the value of such deposits. In the case of Trinidad and Tobago, where the restrictions were removed at the end of the second quarter of 1993, by the end of the fourth quarter of that year the value of these deposits stood at US \$152.5 million. As indicated in Table 2, there was a continued rapid build up in the value of these deposits over the next three years. By the end of the fourth quarter of 1996, the value of US dollar deposits was, approximately, 24 percent of domestic currency deposits.

The change in the regulatory environment clearly encouraged the large institutions which would, traditionally, have maintained foreign currency balances in banks outside the country to maintain such accounts at home. The number of deposit accounts with a value in excess of US\$500,000 more than doubled and there was a more than three fold increase in the value of

these accounts between the end of 1993 and 1996. These large deposits accounted for in excess of 40 percent of the overall value of US dollar deposits in the banking system. The removal of restrictions seemed to have had the greatest impact on the decisions of individual depositors.

Table 2
Trinidad and Tobago: Commercial Banks. US dollar deposits

	Deposits US\$ Millions	Percent Domestic Currency Deposits
1993 (iv)	152.5	9.1
1994 (i)	180.0	10.1
(ii)	204.1	11.7
(iii)	222.6	13.0
(iv)	312.9	16.2
1995 (i)	390.2	21.1
(ii)	427.6	20.9
(iii)	409.1	19.3
(iv)	414.9	18.6
1996 (i)	463.4	21.3
(ii)	494.8	22.2
(iii)	584.2	24.7
(iv)	496.2	23.9

Source: Central Bank of Trinidad and Tobago, Quarterly Statistical Digest.

Deposits with a value of less than US \$5,000 accounted for, approximately, 75 percent of the number of US dollar deposits, although representing, on average, less than 10 percent of the value of deposits. The response of the non institutional saver led to the total number of US dollar accounts in the banking system standing at just under forty thousand at the end of 1996. The next largest number of deposits was in the \$5,000 to \$50,000 range. On the other hand, as indicated in Table 3, the institutional deposits amounted to less than one percent of the total number of deposits.

It was argued earlier that residents of the country would hold foreign currency balances

Table 3
Trinidad and Tobago
Number and Size Distribution of US dollar deposits

End of Period	No.	Percent	Value US\$Mn	Percent
1993				
Under \$5,000	8,114	72.3	14.4	9.4
\$5,000 - \$50,000	2,375	24.4	33.2	21.8
Over \$500,000	42	0.3	65.7	43.1
Total	11,218			152.5
1994				
Under \$5,000	17,331	75.5	24.3	7.8
\$5,000 - \$50,000	5,024	21.9	65.0	20.8
Over \$500,000	73	0.3	154.0	49.2
Total	22,936		312.9	
1995				
Under \$5,000	24,215	76.3	31.7	7.6
\$5,000 - \$50,000	6,673	21.0	89.2	20.8
Over \$500,000	86	0.3	202.0	48.6
Total	31,730		414.9	
1996				
Under \$5,000	30,216	76.0	41.0	8.3
\$5,000 - \$50,000	8,456	21.3	116.3	23.4
Over \$500,000	98	0.2	216.3	43.6
Total	39,738		496.2	

Source: Central Bank of Trinidad and Tobago, Quarterly Economic Bulletin. Various issues.

to facilitate expenditure on foreign goods and services, as well as to secure the value of their savings. One might expect that balances held in demand deposits would be used to facilitate expenditure, while balances held in time and savings deposits would be for the purpose of securing the value of financial assets. In the period immediately following the removal of restrictions on the holding of US dollar deposits by residents, over 50 percent of deposits with a value exceeding US \$500,000, were held in demand deposits. Moreover, as shown in Table 4, even small deposits holders held a relatively large share of their deposits in demand deposits.

However, by the end of 1994, there was a sharp decline in holdings of demand deposits, especially among large deposit holders. In the case of the large deposit holders, which would be, primarily, the institutional depositors, the largest share was held in time deposits. This would not necessarily be a reflection of a reduction in the level of transaction demand.

Rather, the higher earnings on time deposits, coupled with the ability to coordinate the deposit time period with payment requirements reduced the necessity for holding demand deposits to facilitate foreign currency settlements. By the same token, the fact that most small deposits, those with a value of less than US\$5,000, were held in savings accounts might also be a

Table 4
Trinidad and Tobago: Distribution of Deposits By Type and Value
Percent

End of Period	Demand		Time		Savings	
	No.	Value	No.	Value	No.	Value
1993						
Under \$5,000	10.4	15.7	11.7	14.0	78.0	70.3
\$5,000 - \$50,000	16.6	18.0	19.6	24.6	63.8	57.4
Over \$500,000	52.4	48.2	38.0	46.0	9.5	5.8
1994						
Under \$5,000	1.6	1.8	11.4	18.1	86.9	80.1
\$5,000 - \$50,000	6.4	7.6	26.8	30.9	66.7	61.6
Over \$500,000	23.3	10.4	65.8	84.3	11.0	5.3
1995						
Under \$5,000	2.0	2.6	11.5	20.0	86.6	77.4
\$5,000 - \$50,000	4.2	5.8	32.5	35.6	63.3	58.6
Over \$500,000	12.8	7.0	79.1	88.9	8.1	4.1
1996						
Under \$5,000	1.4	7.0	11.2	19.2	87.4	73.8
\$5,000 - \$50,000	3.1	5.1	33.4	35.4	63.5	59.5
Over \$500,000	14.3	16.0	75.6	75.1	10.2	8.9

Source: Central Bank of Trinidad and Tobago, Quarterly Economic Bulletin, various issues.

reflection of the fact that there was now an alternative to hoarding for those who wished to hold foreign currency to support future expenditure.

If the primary motive for holding US dollar deposits was to hedge against exchange risk, the question arises as to the costs deposits holders were prepared to carry in order to secure this insurance. The costs could be measured in terms of the interest earnings foregone should interest rates on foreign currency time and savings deposits be lower than that for similar deposits in domestic currency. The higher the expected rate of depreciation of the exchange rate the lower the interest rate banks would be able to offer on US dollar deposits leading to a widening in the differential in interest rates paid on comparable foreign and domestic currency deposits.

A major determinant of the expected rate of depreciation would be current and immediate past movements in the exchange rate. The more stable the exchange in these time periods, the lower would be the expected rate of depreciation. In addition, expectations are likely to be influenced by announced or anticipated changes in the direction of government policy, as well as external economic shocks, such as a loss of a major export market. Political instability is also certain to undermine confidence in the economy and currency.

The exchange rate for the Trinidad and Tobago dollar has been relatively stable since the removal of exchange controls and the move to a floating exchange rate regime. The largest movements occurred in the early period following the changes. However, the quarterly average rates of depreciation were between 1 and 1.5 percent over the last quarter of 1993 and the first two quarters of 1994. Over the subsequent nine quarters the rate of depreciation exceeded a half of one percent on only one occasion. The highest rate of depreciation occurred in the last quarter of 1996, where as indicated in Table 5, it was 2.69 percent. In spite of this relative

stability in the exchange rate, which ought to have dampened expectations of a major depreciation, residents were willing to accept significantly lower rates on interest on foreign currency, as opposed to domestic currency savings and time deposits. The differential in favour of domestic currency deposits were widest in 1993 and 1994. It is interesting to note, however, that the starting in 1995, the differential in interest rates paid on time deposits narrowed

Table 5
Trinidad and Tobago: Interest Rate Differentials and Exchange Rate Changes

Period Average	Savings ¹	Time ²	Ex. Rate ³
1993			
(iv)	6.50	8.75	1.57
1994			
(i)	5.50	5.50	1.16
(ii)	6.25	6.50	1.54
(iii)	6.13	6.50	-0.33
(iv)	5.75	4.75	0.04
1995			
(i)	3.25	1.13	0.19
(ii)	3.75	0.87	-0.08
(iii)	0.00	1.57	-0.30
(iv)	1.00	1.90	0.75
1996			
(i)	4.25	6.50	0.50
(ii)	3.50	5.50	-0.40
(iii)	2.90	1.50	0.44
(iv)	4.00	3.25	2.69

¹ Percentage point differential in highest interest paid on special savings accounts.

² Percentage point differential in highest interest paid on 6 - 12 month time deposits.

³ Average percentage change from previous quarter (- = an appreciation).

considerably. This, in part, might be attributable to the fact that the largest share of time deposits were held by the large institutional savers who would be in a much stronger position to bargain for higher interest rates from the banks. Residents of the country then seem prepared to bear a

Table 6
Jamaica: US dollar accounts
US \$Millions

End of Period	Commercial Banks	Building Societies	Merchant Banks	Total	% Domestic Commercial Banks	Currency Deposits Merchant Banks
1991						
(iv)	59.9	23.5	0.04	83.5	7.3	..
1992						
(i)	223.5	21.1	0.05	244.6	29.9	..
(ii)	218.4	29.9	0.05	248.4	20.5	..
(iii)	264.2	32.7	1.5	296.7	21.6	..
(iv)	279.4	37.1	1.7	316.6	19.8	..
1993						
(i)	336.1	51.5	2.5	388.8	23.1	..
(ii)	396.6	59.9	4.0	459.3	26.2	1.5
(iii)	409.4	63.0	3.2	474.3	29.9	1.2
(iv)	428.4	65.6	4.6	497.3	32.3	2.1
1994						
(i)	517.7	63.2	3.7	584.7	35.1	1.8
(ii)	552.6	68.8	3.1	624.4	35.6	1.4
(iii)	562.4	75.0	5.4	642.8	32.6	2.4
(iv)	598.0	79.6	13.7	691.4	32.2	7.0
1995						
(i)	570.0	84.4	14.3	668.7	29.2	6.6
(ii)	596.0	90.4	16.7	703.0	29.6	7.8
(iii)	590.9	97.0	23.6	711.5	28.1	12.2
(iv)	666.3	102.6	14.7	783.6	32.3	8.5
1996						
(i)	631.3	104.6	12.9	748.8	30.7	7.2
(ii)	615.0	120.2	14.5	749.7	27.3	7.5
(iii)	634.9	129.7	13.1	777.6	26.6	6.7
(iv)	623.3	134.8	12.7	770.9	25.0	6.6

Source: Bank of Jamaica, Statistical Digest, various issues.

high cost to hedge against, what over the period appeared to be, a minimal exchange risk. There was, however, a significant decline in the value of US dollar deposits in the last quarter of 1996.

Whether this might be indicative of a change in attitude by residents with respect to acceptable costs to insure against exchange risk remains to be seen.

In Jamaica, the removal of restrictions on US dollar accounts was followed by a rapid increase in the value of holdings by residents of such accounts in institutions in the financial sector. The total value of deposits as indicated in Table 6, increased from US \$84 million at the end of 1991, to US \$770.9 million at the end of 1996. By far the largest share of deposits were held in the commercial banks. However, there was also a significant increase in the value of deposits held by the building societies. The value of US dollar accounts in the commercial banks peaked during the last quarter of 1995, reaching a value of US \$663.3 million. The growth in US dollar deposits exceeded, by a significant margin, the growth in domestic currency deposits for most of the period. These deposits which represented, approximately, 7 percent of the value of domestic currency deposits at the end of 1991, rose quickly to more than 30 percent in 1994. Although, there was a modest decline in the value of US dollar deposits in the commercial banking system in 1996, these deposits still accounted for 25 percent of the value of domestic currency deposit at the end of that year. The decline in US dollar deposits in the commercial banking system was offset by increases in deposits in the building societies, where the value of such deposits increased by more than 30 percent in 1996. The other institutions in the sector to attract these deposits, the merchant banks, accounted for a minor share of total deposits. They experienced a rapid increase in deposits, up to the end of third quarter of 1995. However, the value of deposits at the end of 1996 was approximately 50 percent of the peak 1995 value. This could be linked to the collapse of two major merchant banking institutions in that period.

Initially, the largest share of US dollar deposits held in commercial banks, in terms of value, was in demand deposits. This might be indicative of the fact that in the early period these deposits were held for the purpose of facilitating foreign expenditure. However, as was the case in Trinidad and Tobago, the share of demand deposits declined very rapidly. By the end of 1996, as shown in Table 7, demand deposits accounted for only 16 percent of total US dollar deposits. The rapid rate of turnover of these deposits over the period suggests that they were held in large measure to support expenditure on foreign goods and services. The switch to higher income earnings deposits might, as suggested in the case of Trinidad and Tobago, reflect a greater appreciation on the part of residents of the possibility of dovetailing time and savings deposits with external payments schedules. Information on the size distribution of deposits was not available for Jamaica. However, the fact that the largest share of deposits were held in savings accounts might be indicative of the fact that non institutional savers were responsible for a larger proportion of US dollar accounts.

Table 7
Jamaica: Size Distribution of Deposits

End of Period	Commercial Banks			Merchant Banks		Turnover Ratio ¹
	Demand	Time	Savings	Time	Savings	
1992	40.3	21.4	37.8	..	..	..
1993	26.7	28.1	45.2	..	..	91.3
1994	24.6	30.2	45.3	81.5	18.5	96.0
1995	27.2	26.5	46.3	87.5	12.5	99.1
1996	16.2	38.0	45.8	93.3	6.7	100.1

¹ Ratio of withdrawals to deposits.

It was indicated earlier that deposit holders in Trinidad and Tobago paid a high price in

terms of earnings foregone to hedge against exchange risk in light of the relative stability of the exchange rate over the period. There was much greater variability in the exchange rate for Jamaica. There were substantial depreciations over the third and fourth quarters of 1993, the first quarter of 1994 and the third and fourth quarters of 1995. Moreover, even in those periods of relative stability in the exchange rate concerns about relative stagnant growth in exports led to considerable debate concerning potential overvaluation of the currency and the need for a depreciation to enhance the competitive position of exporters. This concern about the competitiveness of the country's exporters tended to dominate other considerations such as the changes in currency flows on the foreign exchange market. On the occasions on which there were major depreciations, the depreciation, as shown in Table 8, was almost equal to the interest differential in favour of domestic currency deposits. The upsurge in currency inflows and the revaluation of the currency during the second and third quarters of 1996, appeared to have temporarily dampened expectations of currency depreciation. During this period there was actually a slight decline in the value of US dollar deposits in the commercial banking system.

In the Eastern Caribbean Currency Area, US dollar deposits in the banking system approximately doubled in value between January of 1992 and December of 1996. Unlike Jamaica and Trinidad and Tobago, the increase in the value of these deposits was very much in line with the overall expansion in deposits in the banking system in the area. There was only a very modest increase in the ratio of US dollar deposits to total deposits during this time period, rising from 7 percent to 9 percent. There was relative stability in the amounts allocated to demand time and savings deposits, with the share allocated to demand deposits being substantially larger than that for Jamaica and Trinidad and Tobago.

Table 8
 Jamaica: Interest Rate Differential on Savings Deposits, Changes in Exchange Rate and Exports

	Int. Differential ¹	Exchange Rate ²	Exports
1992			
(iii)	17.80	- 5.0	- 2.9
(iv)	15.34	0.0	- 8.0
1993			
(i)	15.76	0.0	10.1
(ii)	14.89	2.3	10.9
(iii)	14.72	19.5	- 14.9
(iv)	14.98	13.1	0.8
1994			
(i)	15.31	7.8	15.1
(ii)	16.14	1.0	5.7
(iii)	15.69	0.0	- 1.8
(iv)	15.05	- 0.3	1.3
1995			
(i)	14.64	- 0.1	14.6
(ii)	13.61	1.5	10.8
(iii)	13.38	5.2	- 8.0
(iv)	13.70	11.1	- 9.5
1996			
(i)	13.95	1.1	9.7
(ii)	13.95	- 4.9	1.8
(iii)	14.22	- 7.2	- 2.6
(iv)	14.34	- 0.5	- 16.0

¹ Average monthly percentage point differential between interest rates on foreign and domestic currency savings deposits.

² Based on average monthly exchange rate in current and preceding quarter(- = an appreciation).

Indeed, as indicated in Table 9, more funds were held in demand deposits than in savings deposits. This suggests that a primary motive for holding such deposits was to facilitate payments in foreign currency.

Table 9
Eastern Caribbean Currency Area: Commercial Banks US dollar deposits

	Total Deposits US\$ M.	Deposit Shares Demand %	Time %	Savings %	US Dollar Deposits % Total Deposits
1992					
(i)	94.0	34.5	18.2	47.2	7.1
(ii)	98.0	29.9	18.4	51.7	7.2
(iii)	99.7	31.9	18.2	49.9	7.1
(iv)	99.4	32.2	18.4	49.4	7.0
1993					
(ii)	114.3	34.1	19.8	46.1	7.6
(iii)	114.9	31.7	20.7	47.7	7.6
(iv)	119.5	32.7	22.1	45.2	7.7
(i)	110.1	35.0	18.6	46.4	7.5
1994					
(i)	126.6	34.5	24.9	40.5	7.9
(ii)	127.5	34.4	26.4	39.2	7.8
(iii)	134.8	38.7	25.0	36.3	8.2
(iv)	136.6	38.2	23.5	38.3	8.1
1995					
(i)	142.4	37.5	24.3	38.1	8.1
(ii)	153.1	39.3	24.1	38.0	8.4
(iii)	160.4	41.5	22.3	36.2	8.6
(iv)	173.7	39.0	22.1	39.0	9.0
1996					
(i)	180.6	36.8	22.2	41.0	9.2
(ii)	183.6	36.3	22.1	41.6	9.2
(iii)	176.2	35.7	22.4	41.8	8.8
(iv)	186.9	36.7	22.1	41.2	9.2

Source: Eastern Caribbean Central Bank, Statistical Digest. Annual.

The pattern of deposit holdings might be a reflection on the fact that throughout this period, approximately 50 percent of the US dollar deposits held by the commercial banks in the area was held by banks in Anguilla. In fact, three countries, Anguilla, Antigua and Barbuda and St. Kitts and Nevis, accounted for around 85 percent of the total US dollar deposits and just

under 90 percent of the increase in the value of those deposits. The domestic currency played a relatively minor role in the economy of Anguilla. US dollar deposits increased from 66 percent of total deposits in 1992, to more than 70 percent in 1996. This indicates that most of the traditional monetary functions, medium of exchange, unit of account and store of value was carried out in foreign currency, US dollars. The unique situation in Anguilla is indicative of the fact that a significant share of income is earned from work in the nearby US Virgin Islands. In the other two countries, Antigua and St. Kitts and Nevis, as indicated in Table 10, US dollar deposits accounted for an increasing but much smaller share of total deposits. These were two of the countries in the region where there was a strong tourist industry. The increase in deposits can be directly linked to those businesses associated with the tourist industry. In summary, the growth in US dollar deposits in the Eastern Caribbean Currency Area can in large measure be attributed to the unique situation of Anguilla. This is hardly surprising in that concerns with respect to access to foreign currency on demand and exchange risk have not been issues of pressing concern to residents of the area.

The Management of US dollar deposits

The introduction of foreign currency to the financial system raised a new set of issues for managers of the financial institutions. First of all, in deciding on the way in which deposits could be managed to generate income, their risk assessment procedures had to be broadened to explicitly incorporate the matter of exchange risk. In addition, since depositors were free to switch between domestic and foreign locations, the institutions, in assessing the amount of free reserves available for loans and investments, would have to be conscious of the possibility of sudden transfers and develop an appropriate strategy for minimizing the possibility of such

occurrences. In summary, the principal management issues are how to attract and retain deposits and how to pursue an income earning strategy without undue exposure to exchange risk.

Table 10
Eastern Caribbean Currency Area: Countries With Largest F.C. Deposits

	1992	1993	1994	1995	1996
Anguilla					
F.C. Deposits.					
Value. US\$M	52.4	64.3	71.4	88.3	94.5
% ECCA Total	52.7	53.8	52.3	50.0	51.5
% Total Deposits	66.0	68.8	68.3	71.0	71.0
Antigua & Barbuda					
F.C. Deposits					
Value. US\$M	13.4	11.8	15.9	21.1	28.8
% ECCA Total	13.5	9.9	11.7	12.2	15.7
% Total Deposits	4.5	3.7	4.4	5.1	7.0
St. Kitts & Nevis					
F.C. Deposits					
Value. US\$M	19.4	24.8	27.5	40.3	37.1
% ECCA Total	19.5	20.7	20.1	23.2	20.2
% Total Deposits	10.8	12.5	12.4	15.8	14.0

Interviews were conducted with representatives of the commercial banks in Jamaica, St. Kitts and Trinidad, to determine how they coped with the unique management problems associated with US dollar deposits. The issues discussed in the interviews are set out in the Appendix. In addition, discussions were held with the Managing Director of the largest building society in Jamaica. The building societies, as indicated earlier, had been very successful in mobilizing US dollar deposits.

There was a broad consensus that the principal reason why residents would open US dollar accounts was to secure a hedge against exchange risk and the convenience in having access

to foreign exchange on demand. Depositors fell within two broad categories, institutional and individual. Although earnings was not a matter of primary concern, the large institutional depositors who had the option of holding their funds offshore would be more sensitive to the earning possibilities in those centres when deciding on where to place their deposits. All the bank representatives argued that in order to attract and retain deposits they had to offer a rate which was at a premium over the rates in competing offshore centres and which was competitive with the rate offered by other domestic institutions. Since a significant share of deposits were held in short term time deposits, such a strategy was essential to ensure renewal of deposits on maturity.

The commercial banks in Jamaica and Trinidad approached the issues of the use of free reserves somewhat differently than those in the Eastern Caribbean. Those in the Eastern Caribbean, by and large, did not consider US dollar deposits as providing additional resources to support domestic lending. In most instances US dollar deposits were offset by offshore holdings. In assessing the credit worthiness of a loan applicant, the commercial banks in Jamaica and Trinidad placed primary emphasis on foreign exchange earning potential. This was deemed prudent as they wished to minimize their exposure to exchange risk. They all admitted that in the early post liberalization period, they adopted a very cautious approach to lending, given that their staff had little or no experience in managing foreign currency loans. Nevertheless, with the one notable exception, the Bank of Nova Scotia Jamaica Ltd, they claimed to have experienced little difficulty in finding an adequate number of creditworthy loan applicants.

It was reported that the vast majority of applicants for foreign currency loans were

attempting to raise funds to defray foreign payment obligations. Since the proceeds from these loans were quickly transferred into the accounts of non residents in offshore banks, there was limited scope for secondary deposit creation.

There were occasions when the attempt to secure a foreign currency loan was not linked to directly to payment obligation in foreign currency. This occurred when there was an increase in the interest premium on domestic currency loans. In those instances the proceeds would be quickly into domestic currency. This arose from the fact that although some businesses might resort to the use of foreign currency in invoicing, this was their way of insuring against exchange risk and inflation. Settlement could always be made in the domestic currency equivalent of the time. In such instances the exchange risk would be borne entirely by the borrower.

The legal cash reserve requirement imposed on deposits in Jamaica was deemed to have imposed a useful constraint on the lending activity of the institutions in light of their inexperience in operating in this area. Furthermore, the cost of the cash reserves was much less onerous than that associated with the reserve imposed on domestic currency deposits, since interest was paid on these reserve deposits by the Bank of Jamaica.

The building societies in Jamaica adopted an approach to the management of these deposits which was somewhat similar to that of the commercial banks in St.Kitts. These deposit liabilities were offset by balances held with banks off shore and to a lesser extent by balances with domestic banks and Jamaican US dollar bonds and not by foreign currency loans to residents. This approach was followed because these institutions felt they did not have the necessary expertise to engage in foreign currency lending. The societies were able to compete aggressively for such deposits in light of the fact that they were subject to much lower reserve

requirements. Furthermore, since a prime motive for opening an account with a building society was to secure a building loan in the future, they could attract deposits by offering lower rates of interest than the commercial banks. A large part of the inflow arose from remittances from overseas nationals.

The management strategy which the institutions in Jamaica and Trinidad claimed to have adopted would suggest that introduction of US dollar deposits to the system would not have had a major impact on the overall availability of credit.

The Impact on Lending

The impact of US dollar deposits on overall lending will be determined by the legal reserve requirements and the criteria used by the institutions in assessing the credit worthiness of loan applicants.

In Jamaica, commercial banks were initially required to maintain a cash reserve of 20 percent. This was increased to 25 percent in 1992, reduced to 22 percent in 1994 and returned to the 20 percent level in 1995. In addition, there was a liquid asset requirement of 20 percent, which may be held in the form of foreign currency bonds and bank balances. The reserve requirements for non bank financial intermediaries, as well as building societies were lower. The rate for non bank financial intermediaries was in the form of a 17 percent cash reserve ratio and a 3 percent liquid asset requirement. In the case of building societies there was a 1 percent cash reserve requirement and a 5 percent liquid asset requirement. There were no legal cash reserve requirements imposed on US dollar deposits in the commercial banking system in Trinidad and Tobago. The banks were, however, required to hold liquid assets, normally consisting of high

grade government securities denominated in US dollars, equivalent to 25 percent of the value of their deposit liabilities.

Table 11
Foreign Currency Loans / US dollar deposits
Percent

	Jamaica ¹	Trinidad and Tobago ²
1991		
(iv)	21.1	..
1992		
(i)	18.8	..
(ii)	25.3	..
(iii)	25.3	..
(iv)	32.6	..
1993		
(i)	39.7	..
(ii)	36.2	..
(iii)	39.4	41.3
(iv)	33.9	40.2
1994		
(i)	31.1	44.5
(ii)	38.0	48.9
(iii)	46.2	50.0
(iv)	50.6	39.1
1995		
(i)	59.6	27.9
(ii)	56.3	37.1
(iii)	59.0	38.5
(iv)	55.6	38.3
1996		
(i)	63.2	38.9
(ii)	61.5	34.8
(iii)	64.4	35.5
(iv)	68.3	38.9

¹ Commercial banks and merchant banks

² Commercial banks.

Source: Bank of Jamaica, Statistical Digest, Monthly. Central Bank of Trinidad and Tobago, Quarterly Statistical Digest.

The credit worthiness of an applicant for a foreign currency loan will be assessed more highly if the extension of the loan is seen to leave the lending institution exposed to minimum risk. This would be the case where the borrower is engaged in an activity associated with the earning of foreign exchange. As indicated in the previous section, firms engaged in the export of goods and services would normally receive the highest ranking, although broader criteria in the assessment of credit worthiness would be applied in an effort to maintain business with their most faithful clients. The ratio of foreign currency loans to deposits in any time period, could then be used as an indicator of the extent to which the financial institutions were able to find borrowers who satisfied their eligibility criteria. Such information for Jamaica and Trinidad and Tobago is set out in Table 11.

The relatively low ratio of foreign currency loans to deposits in Jamaican institutions in the period immediately following the removal of exchange controls was indicative of the learning experience which the institutions explained they had to go through in managing what for them was a new form of asset. However, the period of caution was short lived. By the end of 1995, foreign currency loans amounted to 60 percent of US dollar deposits and remained above the 60 percent level throughout 1996. This suggests that institutions were operating very close to the limits permitted by the legal cash reserve and liquid asset requirements. The behaviour of the institutions in Trinidad and Tobago was somewhat different than that of those in Jamaica. The ratio of foreign currency loans to deposits was on the whole higher in the periods immediately following the removal of exchange controls. Whereas, in that period, loans as a percentage of deposits ranged between 40 and 50 percent, during 1995 and 1996, it was between

30 and 40 percent. Furthermore, given that there were no legal cash reserve requirements and only a 25 percent liquid asset requirement, it is apparent that the amount of lending did not reflect the legal regulatory framework within which the institutions functioned.

The individual institutions in each of the countries used the legal reserve requirement as a reference point on which to establish their own guidelines as to what would be a prudent level of lending. The more aggressive institutions would operate close to the legal limits, while others would operate with reserves well in excess of that required by law. It is apparent, that during this period, the institutions in Jamaica adopted a more aggressive approach to foreign currency lending, than those in Trinidad and Tobago. This difference in behaviour might be attributed to the fact that there are a larger number of banks and non bank financial intermediaries in Jamaica, leading to more competition in the sector. Furthermore, in Jamaica, most of the new firms entering the sector were domestic firms. The subsidiaries of foreign financial institutions operated within lending guidelines laid down by their head offices. Interviews conducted with officials representing these institutions confirmed that these guidelines restricted them to much lower levels of lending than that which would have been permitted in the context of the legal reserve requirements or, indeed below levels which they thought would have been prudent. The difference in lending strategy adopted by foreign and domestic banks in Jamaica is reflected in their respective loan deposit ratios. At the end of 1996, in two of the foreign affiliated banks, Citibank and Bank of Nova Scotia, foreign currency loans amounted to 19 and 36 percent, respectively, of US dollar deposits. In the case of the third bank, CIBC Jamaica Ltd., loans amounted to 62 percent of deposits. On the other hand, as shown in Table 12, the National Commercial Bank, the largest of the domestic banks, had foreign currency loans outstanding

amounting to 76 percent of deposits. The loan deposit ratio for the Island Victoria Bank appeared to be close to that implied by the cash reserve and liquid asset requirements, while excessive lending relative to deposits in the case of the Workers Savings and Loan Bank raises serious questions with respect to the judgement exercised in managing the loan portfolio.

To this point attention has been directed solely to the underlying determinants of the supply of loans. The actual volume of loans will also reflect demand considerations. A borrower who has to meet a foreign currency payment obligation, instead of negotiating a loan in foreign currency, could secure a domestic currency loan and purchase the required foreign currency on the foreign exchange market. The borrower could be expected to select the option which minimizes cost. The cost of a foreign currency loan will consist of the interest rate on the

Table 12
Jamaica: Commercial Banks : Foreign Currency loans & Deposits
December 1996

	Loans J\$M	Deposits J\$M	loans / Deposits Percent
Bank of Nova Scotia	1,945.3	5,400.9	36.0
Citizens Bank	1,753.7	2,519.4	69.6
Citibank	235.2	1,242.4	18.9
CIBC Jamaica Ltd	1,078.6	1,744.4	61.8
Eagle Commercial Bank	145.1	329.2	44.1
Island Victoria Bank	421.2	718.9	58.6
National Commercial Bank	7,376.3	9,722.2	75.9
Trafalgar Commercial Bank	84.3	115.9	72.7
Workers Savings & Loan Bank	515.4	315.3	163.5
Total	13,555.1	22,108.6	61.3

Source: Bank of Jamaica, "Quarterly Assets and Liabilities of Commercial Banks" in the Daily Observer Thursday, May 8, 1997 Page 11.

loan, plus the additional cost arising from a potential depreciation in the exchange rate at the time

of repayment. The exchange risk would be avoided in the case of a borrower, for example, an exporter who expects to receive foreign currency payments and hence would not have to enter the foreign exchange market in order to repay the debt. A similar attempt to minimize cost could make it attractive for a borrower to secure a foreign currency loan even when not faced with a foreign currency payment obligation. In this case, the decision would be based on whether the cost savings associated with the lower interest rate charged on foreign currency loans more than compensated for the expected depreciation in the exchange rate. In open economies, such as those of Jamaica and Trinidad and Tobago, the demand for foreign currency will be stable, hence it will be variations in supply which are likely to result in the imbalances leading to a depreciation in the exchange rate.

Throughout the period there was a substantial interest rate premium on domestic currency loans. In Jamaica, as indicated in Table 13, the average quarterly premium remained in excess of 100 percent over the period from 1994 to 1996. In the case of Trinidad and Tobago, the premiums were significantly lower ranging from 32 to 69 percent. The exchange rate for Trinidad and Tobago was on the whole very stable with quarterly movements substantially less than 1 percent, except for the last quarter of 1996, when the currency depreciated by a relatively modest 2.7 percent. The overall relative stability of exchange rates in that country over this period is indicative of an absence of significant imbalances between demand and supply on the foreign exchange market. Since expectations of future movements in exchange rates are heavily influenced by past movements, there would appear to have been a strong incentive for borrowers in Trinidad and Tobago to secure loans in foreign currency.

There was greater exchange rate volatility in Jamaica. Nevertheless, even in the periods

Table 1
Foreign Currency Loans Interest Rate Premiums and Exchange Rate Variations
1994 Q1 to 1996 Q4

Period Av.	Jamaica			Trinidad & Tobago		
	F.C. Loans	Int. Prem. D.C.Loans ²	Ex. Rate Changes ¹	F.C. Loans	Int.Prem. D.C.Loans ³	Ex.Rate Changes ¹
1994						
(i)	152.7	212.9	7.8	73.1	69.3	1.2
(ii)	194.9	208.7	1.0	93.8	65.7	1.5
(iii)	237.1	194.6	- 0.0	108.5	58.3	- 0.3
(iv)	305.0	172.3	- 0.2	116.7	50.7	0.04
1995						
(i)	331.8	147.1	- 0.1	119.5	40.9	0.2
(ii)	343.9	121.3	1.5	154.6	44.5	- 0.08
(iii)	347.5	150.2	5.2	159.9	39.9	- 0.3
(iv)	351.9	171.5	11.1	152.3	37.9	0.8
1996						
(i)	357.7	178.4	1.1	165.5	34.0	0.5
(ii)	367.5	145.6	- 4.9	173.2	31.5	- 0.4
(iii)	378.6	149.1	- 7.2	192.7	45.9	0.4
(iv)	401.2	123.1	- 0.5	200.1	45.4	2.7

¹ - = appreciation.

² Interest rate for commercial loans in domestic currency - highest interest rate on foreign currency loan during the quarter.

³ Weighted average interest rate on domestic currency loans - weighted average interest rate on foreign currency loans.

Source: Bank of Jamaica, Statistical Digest, Monthly, Economic Statistics, Monthly. Central Bank of Trinidad and Tobago, Quarterly Statistical Digest.

with the greatest depreciation, the first quarter of 1994 and the third and fourth quarters of 1995, the interest premium on domestic currency loans vastly exceeded the depreciation in the rate.

The overall value of foreign currency lending by the financial institutions, as shown in Table 14, increased steadily over the period. In spite of this development, there was very little change in ratio of total loans to Gross Domestic Product in either of the countries. This would

suggest that there was some substitution by borrowers of foreign currency for domestic currency loans. In the case of Jamaica, by the end of 1994, foreign currency loans amounted to 30 percent of the value of domestic currency loans. The increase in the significance of this form of lending is also revealed in the fact that by the end of 1995 it amounted to 9 percent of Gross Domestic Product. The impact on the overall volume of lending was, however, less than one would expect from observing the growth in value of foreign currency loans. There was a relatively modest increase in the ratio of total loans, foreign and domestic currency, to Gross Domestic Product.

In Trinidad and Tobago, domestic currency loans increased from 5 to 16.5 percent of domestic currency loans. Nevertheless, total domestic and foreign currency loans as a percentage of Gross Domestic Product remained virtually unchanged over the period from 1994 to 1996.

As indicated earlier, there were three countries in the Eastern Caribbean Area, Anguilla, Antigua and Barbuda and St. Kitts and Nevis, where holdings of US dollar deposits by residents was significant. However, as indicated earlier, there is in effect a dual currency system in operation in Anguilla, with the US dollar being the dominant currency. As a result, there was a consistent high ratio of foreign currency loans in the overall loan portfolio of the commercial banks. Foreign currency loans accounted for 73 percent of the value of the loan portfolio of commercial banks in Anguilla in 1996, a reflection on that country's unique situation. In the case of Antigua, the value of foreign currency loans outstanding in June of 1996, EC\$ 39.1 million, was less than that at the end of December 1990, EC\$ 49.6 million. In St. Kitts and Nevis, there was significant growth in the foreign loan portfolio of the commercial banks.

Table 14
The Contribution of Foreign Currency Loans to Domestic Credit

	Jamaica			Trinidad and Tobago		
	F.C Loans Percent D.C Loans	F.C Loans Percent GDP	Total Loans Percent GDP	F.C Loans Percent D.C. Loans	F.C.Loans Percent GDP	Total Loans Percent GDP
1991	1.8	0.6	34.2	..	..	..
1992	11.3	2.8	27.5	..	..	..
1993	17.3	5.0	33.9	5.0	1.5	31.7
1994	30.0	7.9	34.5	11.2	2.6	25.7
1995	31.1	9.2	38.8	13.6	3.1	26.5
1996	26.8	8.0	38.5	16.5	3.7	26.5

Source: Bank of Jamaica, Statistical Digest, Monthly. Central Bank of Trinidad and Tobago, Quarterly Statistical Digest.

Whereas, at the end of 1990, foreign currency loans amounted to less than 1 percent of total loans, by the end of the second quarter of 1996, they represented 12 percent (Liburd, 1996). Discussion with representatives of the commercial banks revealed that the increase in foreign currency lending was in large measure independent of their holdings of US dollar deposits. In the case of the foreign banking subsidiaries, most of the lending was supported by funds from their head offices, as most of their free reserves were held in offshore accounts.

The Implications for Central Bank Operations

In this section there will be an assessment of the extent to which the existence of US dollar deposits undermined the ability of the central banks in Jamaica and Trinidad and Tobago to manage lending activity by the financial institutions. The central banks in both of these countries employ such traditional central bank tools as variations in legal cash reserve requirements, open market operations and liquid asset requirements to control the amount of free reserves available for lending. The effectiveness of these measures would be weakened if, for

example, there were lower cash reserve and liquid asset requirements imposed on US dollar deposits. Even in the absence of differential reserve requirements, the effectiveness of these instruments of control could be undermined in light of the fact that the central banks in the liberalized financial environment in existence in both countries, exercises no control on the flow of funds into such deposits. As a result, the institutions could be able to maintain lending activity in the face of central bank action designed to restrict lending if they could maintain or increase inflows to US dollar accounts.

The central bank uses its ability to influence interest rates to control the cost and hence the demand for loans. In light of the fact that financial institutions are able to mobilize US dollar deposits at substantially lower cost than domestic currency deposits, the interest rates charged on foreign currency loans were substantially lower than that charged on domestic currency loans. To the extent that borrowers can substitute foreign currency for domestic currency loans, this would offset the potential impact of interest rate increases on the cost and demand for loans.

In Jamaica, uniform cash reserves of 25 percent were imposed on domestic and US dollar deposits held by commercial banks in 1992. However, in 1994 and 1995 the reserve requirements on US dollar deposits was reduced to 22 and 20 percent, respectively, while that for domestic currency deposits remained unchanged. The overall liquid asset requirement, including the cash reserve requirement was at all times higher for domestic currency deposits. The liquid asset requirement for commercial banks remained at 50 percent from July of 1992 to June of 1995, when it was reduced to 47 percent. There was, on the other hand a suggested prudential liquid asset requirement of 40 percent for US dollar deposits.

Using the Treasury Bill rate as an indicator, there were two occasions in the period from

July of 1992 to December of 1996, when the monetary authority in Jamaica would appear to have attempted to tighten credit conditions by engineering an increase in interest rates. The first occurred from April of 1993 to May of 1994. As indicated in Table 15, the Treasury Bill rate increased at an average monthly rate of 5.7 and 8.7 percent during the respective periods. Interest rates charged on domestic currency loans also increased during these periods, although at a much lower rate. The increase in interest rates and the maintenance of high reserve requirements had a minimal impact on lending activity by the commercial banks. The banks operated with substantial excess reserves for the greater part of the period and hence were not constrained in their lending activity. The two periods during which lending rates were increasing were also associated with increasing rates of inflation. On both occasions, the monthly rate of inflation exceeded or was equal to the average monthly increase in interest rates. This might explain why the increase in interest rates failed to dampen the demand for loans.

The existence of US dollar deposits in the banking system also helped to undermine the effort of the central bank to control lending activity. Foreign currency loans helped to increase the overall loan portfolios of the commercial banks by 15 percent, between April of 1993 and May of 1994. In fact, the largest increase in lending occurred during that period when the banks increased their domestic and foreign currency loan portfolios by 67 percent.

It is evident, however, that it was the existence of substantial levels of excess liquidity in the system, rather than US dollar deposits which worked to undermine the ability of the central bank to exercise effective control over the lending activity of the commercial banks. The maintenance of high level of lending in periods when the central bank was clearly trying to exercise control over lending led to substantial increases in outlays on imports. Since this

usually occurred after periods when the exchanged rate was maintained at an unchanged level, or allowed to appreciate, the pressure on the trade balance inevitably led to the central bank allowing a substantial depreciation in the exchange rate in an attempt to provide a stimulus to exports. However, between September of 1995 and February of 1996, when the central bank engineered a sharp increase in interest rates, on that occasion the increase in lending by the commercial banks was much less than in the earlier period, and foreign currency loans made a minimal contribution to their overall level of lending.

The Central Bank of Trinidad and Tobago raised the legal reserve requirements for the commercial banks from 16 to 18 percent at the end of the first quarter of 1994 and raised it again to 20 percent at the beginning of July. They remained at that level until October of 1996, when it was raised to 23 percent. At the same time, the bank did not attempt to exercise an influence over the demand for loans through interest rate adjustments. The bank rate remained unchanged at 13 percent for the entire period.

The increases in reserve requirements in 1994 did not lead to an immediate reduction in domestic currency lending. Over the period from May through to the end of July, as shown in Table 16, there was an average monthly increase in domestic lending of 0.8 percent. However, starting with the month of August, there was a steady decline in lending. The value of loans outstanding at the end of December of that year were 2 percent below the value for the end of July. There was an increase in lending during the first half of 1995 followed by a contraction in the second half of the year. There was very little change in the total value of the loan portfolio of the commercial banks during the first eight months of 1996. Following monthly

Table 15
Jamaica: Selected Financial and Economic Indicators

	July '92	April '93	June ' 94	Sept. '95
	to March 93	to May '94	to April '95	to Feb. '96
Average Monthly Changes				
Inflation rate	1.1	2.6	1.5	3.1
T. Bill rate	- 9.3	5.7	- 7.4	8.7
Commercial Bank domestic lending rates	- 2.0	1.8	- 1.9	3.2
Increase in domestic loans	3.7	3.4	2.7	2.3
Increase in total loans	4.6	3.8	3.4	2.4
Av. Monthly Excess liquidity	9.7	4.4	8.9	- 0.5
Other Economic Indicators				
Change in Exchange Rate	0.0	50.8	0.0	13.1
Change in Imports ¹	..	18.0	6.4	21.8
Change in Trade Deficit ² (- = lower deficit)	..	39.3	- 4.4	43.0

¹ Average change based on a comparison of quarterly outlays in the current year with outlays for the corresponding quarter in the previous year.

² Based on a comparison of quarterly deficits in the current year with those in corresponding quarters in the previous year.

Source: Bank of Jamaica, Statistical Digest, Monthly.

increases of 1.9 and 1.6 percent in August and September, respectively, the increase in reserve requirements in October led to a modest decline in lending in November and December. The increases in cash reserve requirements imposed on the commercial banks by the Central Bank of Trinidad and Tobago thus appeared to have been effective in controlling lending by the banks. This could be related to fact that the banks in Trinidad and Tobago did not operate with the high level of excess reserves. For example, during 1994, they operated with the legal minimum cash

reserve requirements, except for the period from April through July, when they operated with less than the minimum requirements. These shortages, however, never exceeded 1 percent. For the remainder of the period under review they operated close to the legal minimum, with excess reserves never exceeding 1.7 percent.

The commercial banks would have been able to circumvent the impact of the cash reserve constraint on lending by converting a part of their liquid assets holdings into loans. In Trinidad and Tobago, unlike Jamaica, the commercial banks were not required to hold liquid assets, apart from their cash reserves. The average monthly holding of liquid assets held by the commercial banks, Treasury Bills and vault cash, was 6.9 percent of deposit liabilities in 1994, 6.8 percent in 1995 and 8.2 percent in 1996. These ratios appear to be within the range of what might be considered normal prudential holdings. The relatively small size and stability of these holdings suggest that they would not provide an avenue for the commercial banks to circumvent the constraint of the legal cash reserve requirements.

When the commercial banks were reducing lending in domestic currency, between August and December of 1994, the impact of these reductions on the overall availability of loans was substantially offset by foreign currency loans. As a result, there was virtually no change in the value of total loans outstanding, including US dollar loans. In this instance, the evidence of a measure of substitution of foreign currency for domestic currency loans could not be viewed as undermining the ability of the central bank to pursue its monetary management objectives. The period from 1994 to 1996 witnessed a reversal of the negative rates of GDP growth of the previous two years. One would expect that a return to positive growth would have been associated with an increase in demand for loans. The fact that average lending rates of the

commercial banks for domestic currency loans remained relatively stable, ranging between 13.1 and 14.9 percent, suggest that a relative balance was maintained between demand and supply for such loans. Foreign currency lending may have worked to maintain overall balance between demand and supply for loans.

In summary, given that this was a period of positive growth, declining inflation rates and a relatively stable exchange rate, it is clear that the existence of US dollar deposits in the system did not undermine the ability of the central bank in meeting its responsibilities. The growth in lending was in line with what was required to support real economic growth.

The Dollarization Issue.

The question arises as to whether the growth in US dollar deposits in these economies might be indicative of a trend towards dollarization which has characterized a number of Latin American economies over the past two decades. In those instances the US dollar replaced local currencies in performing the medium of exchange and store of value functions of money. This process of currency substitution, in which the local currency is replaced by the foreign currency, a reverse Gresham's law, would be reflective of a basic loss of confidence in the domestic currency.

In view of the fact that direct evidence on the quantity of US dollars in circulation in a country is not available, it is customary to use variations in the ratio of US dollar to domestic currency deposits as an index of dollarization. The use of such an indicator in the case of these economies might be inappropriate for the following reasons. The growth in the size of US dollar deposits in the banking system might be more related to the fact that the removal of exchange

Table 16
Trinidad and Tobago: Selected Financial and Economic Indicators

	1994		1995		1996
Inflation rate	8.8		5.3		3.3
Commercial banks					
Average monthly lending rates					
Min.	13.6		13.1		13.5
Max.	14.2		13.8		14.9
Liquid asset ratios	6.9		6.8		8.2
	1994		1995		1996
	April/ July	Aug./ Dec.	Jan./ July	Aug./ Dec.	Jan./ Dec.
Av. monthly change					
D. C.loans %	0.8	- 0.4	1.7	- 0.9	0.9
Total loans	1.4	- 0.1	1.9	- 0.9	0.6

Source: Central Bank of Trinidad and Tobago, Quarterly Statistical Digest.

controls encouraged residents to hold such balances at home rather than in an offshore centre. As a result, the increase in US dollar deposits in the banking system after controls were lifted might not be indicative of currency substitution on the part of residents. On the other hand, to the extent that the US dollar was replacing the domestic currency as the preferred instrument for settling payments and in performing the store of value function, one might expect to observe a decline in the ratio of domestic currency demand deposits and savings and time deposits to GDP.

In both Jamaica and Trinidad and Tobago, there was no evidence of a trend toward a decline in the ratio of domestic currency demand deposits to GDP. In Jamaica, as indicated in Table 17, the ratio varied between 9.5 and 11.2 percent and in Trinidad and Tobago between 6.3 and 7 percent. These findings are in keeping with the views expressed by the commercial banks representatives interviewed, namely, that although the US dollar might be employed for

indexation purposes, the domestic currency was the principal mode of settlement. There was a significant increase in the ratio of time and savings deposits to GDP in Jamaica, while there was a slight decrease in the ratio in Trinidad and Tobago. This suggests there was no significant diminution in the store of value function of domestic currency. Neither of these countries had experienced the type of hyper inflation which would cause residents to lose confidence in the ability of the domestic currency to perform the medium of exchange and store of value functions. As a result, the US dollar may more appropriately be seen as performing the role of a complement rather than a substitute for the domestic currency.

Table 17
Domestic Currency Deposits¹ as a Percent of GDP

	Jamaica		Trinidad & Tobago	
	Demand Deposits	Time & Savings Deposits	Demand Deposits	Time & Savings Deposits
1992	9.5	24.3	..	..
1993	11.2	27.5	..	..
1994	10.6	30.5	6.3	24.7
1995	10.2	32.9	7.0	23.8
1996	9.6	34.7	6.7	21.8

¹ Annual averages.

Source: Bank of Jamaica, *Statistical Digest*, Monthly. Central Bank of Trinidad and Tobago, *Quarterly Statistical Digest*, *Annual Economic Survey 1996*.

Conclusions

The removal of exchange controls in Jamaica and Trinidad and Tobago had the desired effect of encouraging residents to hold foreign currency balances at home rather than in offshore centres. The benefit of such a development is that it could provide an additional source of foreign currency financing in support of investment activity as long as the financial institutions followed a management strategy which did not lead to lending in support of consumption.

Given the concerns of both the lending institutions and borrowers of the importance of minimizing exposure to exchange risk, this led to a situation in which the eligibility criteria adopted by the institutions tended to bias lending towards foreign exchange earning activity.

Since the holders of US dollar deposits seemed to be more concerned with exchange risk aversion and convenience than nominal earnings, the financial institutions were able to mobilize these deposits at relatively low cost. This was reinforced by the fact that during this period deposit rates in the principal offshore centres were at the lowest levels in decades. As a result, US dollar loans were extended to eligible borrowers at a substantial discount as compared with domestic currency loans. Given the bias on the part of the institutions to support activity geared to foreign exchange earnings, this can be seen as providing a subsidy to those engaged in export activity.

The existence of US dollar deposits and the opportunity it provided for financial institutions to extend loans in that currency in addition to domestic currency did not appear to undermine the ability of the central banks in the respective countries to control overall lending activity. There was no evidence of a major expansion in US dollar lending on those occasions when the central bank was trying to tighten lending by the commercial banks. In those periods, US dollar lending had a relatively modest impact on the overall level of lending.

On balance, it would appear that US dollar deposits and the opportunity they provided for the financial institutions to extend loans in that currency, had a positive impact on the economies of the respective countries. Such benefits are related to the fact that to this point these deposits have played a role in complementing rather than substituting for domestic currency. This will continue as long as residents see continuing value in using the domestic currency as a medium

of exchange and as a store of value. Bearing this in mind another potential positive effect of these deposits will be the additional pressure it will impose on the monetary authorities to exercise prudence in the conduct of monetary policy.

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Appendix

Question Raised in Interviews With Representatives of Commercial Banks Concerning their Approach to the Management of US Dollar Deposits.

1. What are some of the unique management problems associated with US dollar deposits?
2. Is there a special effort made to direct foreign currency loans to borrowers likely to use the proceeds in activities geared towards earning foreign exchange?
3. What portion of free reserves is invested in foreign currency financial assets?
4. Are there difficulties in finding borrowers on the domestic market with acceptable credit risk?
5. Are surplus funds invested in foreign financial assets as a last resort or are such foreign investments evaluated on the same basis as domestic placements?
6. Are legal reserve requirements set at an appropriate level? Are legal reserve requirements necessary?
7. What impact does changes in interest rates paid on domestic currency deposits appear to have on deposits and withdrawals from US dollar accounts?
8. Are interest rates paid on foreign currency deposits set with reference to interest rates paid in foreign centres?
9. Is there evidence of borrowers substituting US dollar loans for domestic currency loans in response to an increase in domestic interest rates?
10. To what extent does the spread between buying and selling rates appear to have a bearing on the reluctance of businesses to convert foreign currency earnings into domestic currency?
11. How does the rate of turnover of US dollar deposits compare with that of domestic currency deposits?

12. Do holders of time deposits tend to favour shorter maturities?
13. Are time deposits usually renewed on maturity?
14. What forms of expenditure are most frequently supported by US dollar loans?
15. Has there been a significant growth in inter bank deposits with cheque clearance?