PN-ABP-695

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1. Project/Subproject Number:

2. Contract/Grant Number:

3. Publication Date: Jan. 1989

4. Document Title/Translated Title: El Salvador's Foreign Exchange Rate System: Problems, Alternatives & Recommendations

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6. Contributing Organization(s): IMCC, The Inter-American Management Consulting Corporation

7. Pagination: 81

8. Report Number:

9. Sponsoring A.I.D. Office: USAID / El Salvador

10. Abstract (optional - 250 word limit)

11. Subject Keywords (optional)
1.
2.
3.
4.
5.
6.

12. Supplementary Notes

13. Submitting Official: Angela Wilcox, Librarian

14. Telephone Number: (703) 93-Helio x 1306

15. Today's Date: 12 July 93

DO NOT write below this line

16. DOCID:

17. Document Disposition: DOCRD [ ] INV [ ] DUPLICATE [ ]

AID 590-7 (10/88)

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El Salvador's Foreign Exchange Rate System: Problems, Alternatives and Recommendations

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January 1989

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SECTION 1: THE REAL EXCHANGE RATE IN EL SALVADOR

1.A Historical Evolution of the Real Exchange Rate

Over the past fifteen years El Salvador's colon has appreciated sharply in real purchasing power. Table 1.1 shows the result of real effective exchange rate (REER) calculations.[1] A REER is a way to represent the "average" "real" exchange rate for a country. The REER is "real" since it adjusts for differences in inflation between the country being studied and its trade partners. It is an "average" since it aggregates the bilateral exchange rates for important trade partners. In Table 1.1 the REER is presented as an index with a 1980 base year. The index is constructed so that a decline in the index represents a real appreciation of the colon. A decline in the index represents the fact that, with real appreciation, foreign goods become increasingly cheap compared to domestically produced goods when measured in domestic currency. REER calculations require that the patterns of transactions between the country for which the calculation is being made (i.e., El Salvador) and that country's major trade partners be taken into account. Alternative weighing systems are available for this purpose. Most common is to weight bilateral trade relationships in proportion to the relative proportions of trade with each trade partner. The figures in Table 1.1 reflect three alternative weighing schemes, where bilateral exchange rates are weighted in proportion to exports, imports or to total trade. This choice makes little difference since the same pattern emerges in any case.

The data in Table 1.1 indicate that the colon appreciated in real terms by about 40 percent over the 1974-87 period. The trade weighted REER dropped from a value of 1.28 in 1974 to .77 in 1987. Trends already under way in 1988 imply continued real appreciation of about 16 percent by year end. This indicates that in terms of Salvadoran goods, foreign goods have become increasingly cheap over the period. Indeed, compared to what foreign goods cost in terms of Salvadoran goods in 1974, foreign goods cost only about 50 percent as much in 1988.[2] Although one cannot rely heavily on small variations of a point or two in the index, it is fairly clear that the colon appreciated in real terms in almost every year. Appreciation began in the mid-1970s with the advent of the "energy crisis". The pace of appreciation, which was slow during the 1975-78 period, increased rapidly between 1979 and 1981. Only in 1986 was there any significant upward movement in the index. At first

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[1] See Loehr (1988) for the procedures and data supporting REER calculations.

[2] In index number terms, foreign goods cost 1.28 in 1974 and .64 in 1988. Thus, the relative cost of 1974 goods compared to 1988 goods is .64/1.28 = .50.

glance the upward movement in the index is surprisingly small given that the colon was devalued from 2.5 per dollar to 5.0 per dollar, a devaluation of 50 percent.[3] More is said about this below.

It is worth noting that the largest real appreciation occurred in 1987 and 1988 when the colon appreciated by about 13 percent in each year, compared to its 1980 level. Through August 1988, inflation in El Salvador was running at an annual rate of about 23 percent according to internal AID estimates. If this rate prevails for all of 1988, the REER index will reach a value of .643 by the end of 1988.[4]

Data on REERs indicate that there was a real appreciation of the colon in almost every year except in 1986. In that year the index rose from a 1985 value of about .85 to about .90, reflecting a real depreciation of about 6 percent. In January 1986, the official exchange rate for the colon was devalued from 2.5 colones to the dollar to 5.0 colones, representing a nominal depreciation of 50 percent. Several important factors were at work causing the nominal depreciation (50 percent) to have only minimal impact on the real depreciation (6 percent). Most important to recognize are the following:

1. The devaluation of the colon did not only occur in January 1986. Rather, it had been occurring since 1982 when a parallel exchange market was legalized. Over the intervening period, increasing numbers of transactions were allowed to occur in parallel markets where exchange rates were determined by market forces. First to be shifted were transactions associated with non-traditional exports and non-essential imports. By late 1985 almost all transactions were occurring in the parallel market, where the exchange rate was about 5 colones per dollar. Thus, for everyone already dealing in the parallel market the devaluation had already occurred prior to 1986. The last transactions to be shifted to the new exchange rate were those associated with traditional exports and "essential" imports. In the data in Table 1.1, one can see the effect of increasing numbers of transactions shifting into the

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[3] The price of the colon, measured in foreign exchange (i.e., in dollars), was cut in half -- a devaluation of 50 percent.

[4] The assumptions about major trade partners were that inflation in the U.S. would be 5 percent in 1988, 0 in Japan and Germany, 10 percent in Guatemala and 14 percent in Costa Rica. Exchange rates were assumed to be Y124 per dollar, DM1.6 per dollar, Q2.75 per dollar and 78 Costa Rican colones per dollar. Slight variations in these assumptions have little effect on the general point being made, i.e., that sharp real appreciation continues in EL Salvador.

parallel market. The REER index shows a rate of real appreciation for the colon of about 5-6 percent per year from 1977 through 1981. As transactions began to occur in the parallel market, the pace of real appreciation slowed. Therefore, the final shift of all transactions to the new fixed official rate of 5.0 colones to the dollar had a much smaller effect in terms of real devaluation than would otherwise have been the case.

2. Monetary expansion occurred at a very rapid pace during the shift to the parallel market and after the 1986 devaluation. The resulting inflation caused REER appreciation in both periods. However, as transactions were being shifted to the parallel market, appreciation due to inflation was being offset by depreciation of the exchange rate. In effect, the implicit devaluation that was occurring as transactions were shifted to the parallel rate did little to improve the country's competitive position given the rate at which inflation occurred. Once the exchange rate was fixed in January 1986, the full force of inflation was felt on real appreciation, with no offsetting change in the exchange rate. The competitiveness of the Salvadoran external sector thereafter deteriorated.

3. Devaluation of the official exchange rate occurred in January 1986, and the figures in Table 1.1 are year-end figures. Thus, the figure for 1986 includes the effect of inflation occurring during the year. During 1986, the Salvadoran CPI rose by about 32 percent. Inflation in El Salvador's major trade partner countries was very low, and in some cases, notably Guatemala and Costa Rica, devaluations against the dollar were also occurring.

For these reasons the devaluation of 1986 was a rather minor event. By the beginning of 1986 most (but not all) of the exchange rate adjustment that was going to take place had already occurred in the parallel market. Unfortunately, the monetary expansion and inflation that was primarily responsible for the real appreciation was not corrected. More will be said on this in Section 3.A.

SECTION 2: EL SALVADOR'S EXTERNAL SECTOR

2.A The Balance of Payments

El Salvador's external balance has deteriorated sharply since the beginning of this decade. Prior to 1980, conservative fiscal and monetary policies combined with political stability promoted a set of reasonably sustainable relationships in the balance of payments. Also, the country was aided by particularly favorable coffee prices during the latter part of the 1970s. Indeed, coffee prices reached historically high levels in 1977 and remained very high during the 1977-80 period. Since 1980, political violence and instability, as well as a set of basic economic difficulties, have largely reversed the favorable picture of the last decade.

Table 2.1 lays out some basic data on El Salvador's balance of payments for the years 1970, 1975 and 1980 to the present. Figures for 1988, as in other tables, are AID estimates as of October 1988. The figures for 1970 and 1975, and to a lesser extent, 1980, typify other years in that period. Except for the "oil crisis" years (1974-5), small trade and current account surpluses tended to occur. Reserves grew throughout the period.

Changes began in 1979. While the trade and current account balances were still positive in those years, supported by very high coffee prices, the political crisis that the country entered provoked a pronounced private capital outflow. Private capital flows had generally been positive through 1978. In 1979 and 1980, the combined capital outflow was about $650 million. For the first time since the mid-1960s, international reserves fell precipitously in 1979 and again in 1980 when they became negative.

Since 1980 the nature of El Salvador's external balance has changed dramatically. Whereas before 1980 external balance was achieved by steadily increasing exports and fairly regular private capital inflows, after 1981 net transfers and inflows of official capital accompanied capital flight and declining exports. By the end of 1981, exports had fallen significantly (i.e., by about 25 percent) from their 1980 peak, while imports continued to grow. Already negative reserves continued to fall, and it was clear that the situation in 1981 was not sustainable. Two major events set in motion in 1982 changed the nature of El Salvador's external balance for the rest of the 1980s. First, trends in trade and reserve loss made it apparent that some devaluation of the colon was called for. Reserves were negative at the end of 1981, and the colon had appreciated in real terms since the beginning of the political crisis in 1979. The external balance existing in 1981 and 1982 was clearly not sustainable. Thus, in 1982, a process was begun to allow a devaluation of the colon -- a process that lasted until 1986. Secondly, large inflows of balance of payments support and foreign aid began, particularly from the U.S. Large and

TABLE 2.1
EL SALVADOR: EXTERNAL SECTOR
IN MILLIONS OF U.S. DOLLARS

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
EXPORTS	236.2	531.4	1075.3	798.0	699.6	757.9	725.8	695.1	754.9	590.9	618.5
IMPORTS	194.1	598.2	962.1	984.6	856.8	892.8	977.5	961.4	934.9	994.1	1053.3
TRADE BALANCE	42.1	-66.8	113.2	-186.6	-157.2	-134.9	-251.7	-266.3	-180.0	-403.2	-434.8
NET SERVICES	-47.5	-45.8	-131.6	-108.9	-170.0	-168.9	-122.4	-114.2	-74.1	-5.7	-63.0
NET TRANSFERS	14.3	24.8	48.9	80.8	207.4	271.6	307.5	343.6	393.1	546.0	481.4
CURRENT ACCOUNT	8.9	-87.8	30.5	-214.7	-119.8	-32.2	-66.6	-36.9	139.0	136.4	-16.4
CAPITAL ACCOUNT	-1.3	136.0	-226.8	135.5	190.0	232.6	74.0	83.6	-154.3	-86.2	-13.0
PRIVATE CAPITAL	-6.6	60.1	-417.6	-127.1	-98.1	-83.4	-2.1	13.0	-144.3	-47.6	-29.0
OFFICIAL CAPITAL	1.8	72.1	90.2	178.5	163.1	179.0	92.2	106.2	64.0	57.6	71.0
BANK CAPITAL	3.6	3.8	100.6	84.1	125.0	137.0	-16.1	-35.6	-74.0	-96.2	-55.0
VARIATION IN RESERVES	-7.6	-48.1	196.3	79.2	-70.2	-200.4	-7.4	-46.7	-75.4	50.9	29.4
LEVEL OF RESERVES	52.6	130.2	-69.8	-149.0	-78.8	121.6	129.0	175.0	251.1	301.8	272.4
MEMO ITEMS											
Current account minus net transfers			-18.4	-295.5	-327.2	-304.0	-374.0	-381.0	-254.0	-409.0	-479.0
net transfer items:											
AID						162.0	175.0	201.0	210.0	323.0	263.0
Family remittances						93.0	114.0	126.0	146.0	170.0	180.0
Other						17.0	18.0	17.0	37.0	53.0	38.0

4a

increasing transfers in the 1982-7 period were sufficient to turn an increasingly negative trade balance into a generally increasing and positive current account balance.

The effect of transfers can best be seen by referring to the memo items in Table 2.1 which illustrate changes occurring since 1983. There it can be seen that the current account minus net transfers is large, negative and declining steadily. Only in 1986 did the current account improve, but this was due to particularly good coffee prices which have since fallen. In addition, transfers are composed mainly of flows from AID and family remittances. During the 1983-87 period, net transfers rose steadily from $272 million to $545 million. Meanwhile, transfers from the U.S. rose from about $162 million to $323 million. It has been estimated[5] that family remittances have also risen sharply, to about $170 million in 1987 and $188 million in 1988. Because of the transfers, particularly from the U.S., El Salvador accumulated reserves in spite of deterioration almost everywhere else in its balance of payments. Clearly this situation is not sustainable if either U.S. balance of payments support is cut or family remittances fall. Indeed, U.S. aid is scheduled for reductions this year. AID estimates that net transfers for 1988 will be about $481 million, down about $63 million from 1987. Most of this is due simply to an expected cut in U.S. balance of payments support of about $60 million.[6]

It is also estimated that the current account minus transfers will continue to fall -- to -$497 million in 1988, which is down about $88 million from 1987. This is due in large part to continued deterioration in El Salvador's trade balance.

2.B Export Performance

El Salvador's export sector has been performing poorly for about a decade. Exports are composed mostly of coffee, which generally averages 60 to 70 percent of the total. To discuss exports without separating coffee from other exports can be misleading. Because of the preponderance of coffee in the total, trends in total exports may be determined primarily by that single item. Indeed, total exports may appear to rise (or fall) just because coffee exports have risen (or fallen) even when trends in non-coffee exports move in the opposite direction. Thus, in the

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[5] Figures for family remittances for 1983-86 are from the IMF (1987). The 1987 figure is from AID, and the 1988 figure from the BCR.

[6] Estimates for family remittances of $188 million for 1988 imply that transfers from other sources will fall. Indeed, given AID's estimate for total net transfers and AID flows, transfers from other sources are expected to fall even if family remittances do not increase in 1988.

case of El Salvador it is advisable to separate coffee exports from other exports, to distinguish between the main export item and all others.

Table 2.2 shows exports of coffee and other items in both nominal and real terms (dollars of 1980). Export revenues from coffee fluctuate greatly due in large part to price swings. Coffee prices peaked in 1977 and were very high during the 1977-80 period and again in 1986. During 1984 and 1985, while international coffee prices remained much lower than several years earlier, El Salvador was able to sell increasing amounts in quota markets under the International Coffee Agreement, thereby protecting coffee revenues. Unfortunately, throughout most of the 1980s the volume of coffee exports has been declining. Volume in 1986 was about 25 percent below that of 1983; volume rose 15 percent in 1987 but remained below 1983 levels. El Salvador is not currently supplying the full quantity of coffee that it is allowed in quota markets. Many rumors exist about disincentives for coffee production under current pricing and marketing institutions. While it was not part of this research to examine coffee pricing policy, the decline in coffee production, despite the existence of unfilled quotas, lends credence to the presence of some production disincentives.

In real terms, non-coffee exports have been in decline since the mid-1970s. From 1970 to 1975, real, non-coffee exports grew at an average annual rate of about 16 percent, experiencing strong growth each year. However, in terms of dollars of 1980, non-coffee exports peaked in 1975 at $527 million, stagnated at about $500 million during 1976-79, and have fallen precipitously since. The pattern of real non-coffee export performance closely follows that of real effective exchange rates. Real currency appreciation began in 1975, but only slowly in the 1975-78 period, the same period in which non-coffee exports were stagnating.

Only in 1982-3 was the slide in real, non-coffee exports interrupted slightly. At that time the devaluation of the colon had begun, as increasing numbers of transactions were allowed to occur at the market exchange rate (i.e., the "parallel rate") which would have given increased incentives to those exporters who were allowed to sell their foreign exchange earnings at the market rate. In general, however, despite the devaluation that ran its course during the 1982-86 period, real non-coffee exports declined. In 1987 an increase in real, non-coffee exports was recorded, and AID expects another increase in 1988. Much of this seems to be attributable to an easing of payments restrictions within Central America, particularly with Guatemala. More will be said on this below.

El Salvador considers three commodities in addition to coffee to be "traditional exports". These are cotton, sugar and shrimp. During the mid-1980s these together averaged only about 6 to 8 percent of total exports. Sugar exports have depended largely on

access to the preferential market in the U.S. El Salvador enjoyed a temporary increase in its U.S. sugar quota in 1983, but since that time the quota has returned to more normal levels. Shrimp exports have been erratic, averaging about 2.5 to 3 percent of total exports. Shrimp exports almost doubled between 1983 and 1984, as exporters were allowed to change their foreign exchange earnings at the parallel market rate. Since then, the industry has suffered from labor problems and some price fluctuations. No growth has been seen in shrimp exports and, even with particularly high shrimp prices in 1987, exports were about the same as they were in 1984. Cotton was once El Salvador's second export. During the late 1970s cotton frequently constituted 10 to 12 percent of total exports. Currently cotton exports are almost nil, and El Salvador is a net importer of cotton. The decline in cotton can be attributed to a drop in the area cultivated due to the agrarian reform program, and perhaps to guerilla activity. Cotton export prices during 1985-7 have also been particularly low.

El Salvador's non-traditional exports have been directed primarily toward the Central American Common Market (CACM). During the late 1960s and early 1970s, the CACM was growing, and El Salvador's regional trade prospered. However, beginning in about 1979, economic conditions in the CACM deteriorated sharply, along with the Nicaraguan civil war, increased political instability and violence in El Salvador and Guatemala and extreme payments restrictions in Costa Rica. By about 1984, much CACM trade had stopped due to a breakdown in the system of payments settlement, large uncollectible debts owed by Nicaragua and payments restrictions everywhere. Table 2.3 shows non-traditional exports to the CACM and non-CACM destinations. One can easily see the drop in non-traditional exports to the CACM from 1980 to 1986 in both nominal and real terms. It is likely that shifts to the parallel market during 1982-86 slowed the fall in exports to the CACM, but conditions in that market predominated to curtail that trade.

It is interesting to note that non-traditional exports to the CACM rose in 1987 by about $20 million, an increase exceeding 25 percent over 1986 levels. Indeed, most of El Salvador's increase in non-coffee exports in 1987 (i.e., $31 million) is attributable to increased exports to the CACM, particularly to Guatemala. An important difference between 1987 and 1986 is that during 1987 exporters to Guatemala were allowed to strike contracts and accept payment in whatever currency was convenient to both buyer and seller. In 1986, exporters were required to strike contracts in dollars and to surrender export proceeds at the official rate of exchange. In effect, the rule change has permitted a free exchange rate market to exist for exporters to Guatemala. In that market the colon exchanges at an implicit discount vis-a-vis the dollar. Similar arrangements have been made for exporters dealing with Honduras too, but trade with Honduras is very small by comparison. These special exchange arrangements are discussed further in Section 3. Surely, the free exchange rate in CACM trade has

TABLE 1.1

REAL EFFECTIVE EXCHANGE RATE INDICES FOR EL SALVADOR

	CPI REER INDEX X WEIGHT	CPI REER INDEX M WEIGHT	CPI REER INDEX TRADE WEIGHT
1974	1.304	1.254	1.280
1975	1.189	1.168	1.180
1976	1.202	1.178	1.191
1977	1.172	1.146	1.160
1978	1.127	1.092	1.110
1979	1.083	1.053	1.068
1980	1.000	1.000	1.000
1981	0.934	0.961	0.947
1982	0.939	0.974	0.956
1983	0.868	0.918	0.892
1984	0.833	0.876	0.854
1985	0.854	0.843	0.848
1986	0.911	0.886	0.897
1987	0.785	0.752	0.768
1988	0.655	0.633	0.643

TABLE 2.2
EL SALVADOR EXPORT PERFORMANCE

	EXPORTS	COFFEE EXPORTS	NON-COFFEE EXPORTS	REAL EXPORTS	REAL NON-COFFEE EXPORTS
1970	236.2	119.1	117.1	501.3	248.5
1975	531.4	187.0	344.4	813.5	527.3
1980	1075.3	615.2	460.1	1075.3	460.1
1981	798.0	452.6	345.4	723.2	313.0
1982	699.6	402.6	297.0	597.2	253.5
1983	757.9	442.8	315.1	626.0	260.6
1984	725.8	449.8	276.0	575.7	218.9
1985	695.1	463.7	231.4	532.4	177.3
1986	754.9	546.8	208.1	567.3	156.4
1987	590.9	351.3	239.6	428.2	173.6
1988	618.5	332.1	286.4	426.6	197.5

TABLE 2.3

TRADITIONAL AND NON-TRADITIONAL EXPORTS: NOMINAL

	TRADITIONAL EXPORTS	NON-TRADITIONAL EXPORTS	NON-TRAD X TO CACM	NON-TRAD X OUTSIDE CACM	IMPORTS
1970	151.0	77.0	73.8	3.2	213.6
1975	359.6	152.6	141.8	10.8	598.0
1980	725.7	349.6	295.8	53.8	962.1
1981	537.1	260.9	206.5	54.4	984.6
1982	481.9	217.7	174.2	43.5	856.8
1983	550.0	207.9	164.9	43.0	892.8
1984	499.0	226.8	157.2	69.6	977.5
1985	519.9	175.2	95.7	79.5	961.4
1986	585.9	169.0	91.0	78.0	934.9
1987	382.2	208.7	119.6	89.1	994.1
1988	378.5	240.0	137.5	102.5	1053.3

TRADITIONAL AND NON-TRADITIONAL EXPORTS: REAL

1970	320.5	163.4	156.6	6.8	453.3
1975	550.5	233.6	217.1	16.5	915.5
1980	725.7	349.6	295.8	53.8	962.1
1981	486.7	236.4	187.1	49.3	892.3
1982	411.4	185.8	148.7	37.1	731.4
1983	454.9	171.9	136.4	35.6	738.4
1984	395.8	179.9	124.7	55.2	775.4
1985	398.2	134.2	73.3	60.9	736.4
1986	440.3	127.0	68.4	58.6	702.6
1987	277.0	151.2	86.7	64.6	720.4
1988	261.0	165.5	94.8	70.7	726.4

allowed increased incentives for El Salvadoran exporters.[7]

Non-traditional exports to areas outside the CACM have been faring somewhat better than other categories, but unfortunately remain small. In real terms, non-traditional exports to outside the CACM dropped in the early 1980s, but were revived to about their 1980 levels when exporters of these goods were allowed to sell their export proceeds in parallel markets during 1984-5. A small increase in these exports was recorded in 1987, and AID anticipates further increases in 1988.

Some of the increases in non-traditional exports to areas outside the CACM are probably associated with a great number of special programs, many funded by AID, to help promote non-traditional exports. Non-traditional exports as a percentage of total exports have been rising, but promoters of non-traditional exports should not take too much comfort in these percentages because they are due in large part to a decline in total exports rather than to any great gain in non-traditional exports.

One may even question the emphasis of export promotion programs on non-traditional exports. During periods of instability and potential balance of payments problems, one may be best able to fend off a balance of payments "crisis" by stressing increases in traditional exports rather than non-traditional ones. Non-traditional export growth may be desirable for long-run structural reasons, but may be a weak tool to rely on in the short run. Exports of traditional items, especially of coffee, are so much larger in absolute terms that a small increase in traditional exports has a much larger effect on exchange earnings than even optimistic expectations about growth in non-traditional exports. A 5 percent increase in coffee exports, which may be easily achieved given the apparent unused capacity in coffee production, is equivalent to about a 30 percent increase in non-traditional exports outside the CACM, an increase that may be too ambitious for any promotion policy. Reviving cotton exports to 1980 levels would be equivalent to more than doubling non-traditional exports to areas outside the CACM.

In Table 2.3, El Salvador's imports are listed. In real

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[7] Critics may argue that between 1985 and 1987 economic conditions have improved so much in Guatemala that trade would naturally have increased there. While this is true, it is also the case that over that period, taking into account the devaluation of the colon and the quetzal, there has been a real depreciation of the quetzal relative to the colon. This would have a tendency to decrease Guatemalan imports from El Salvador. The fact that El Salvador's exports to Guatemala increased lends support to the idea that the free border market in foreign exchange has depreciated the colon adequately to allow increased trade.

terms, imports bottomed out in 1982 as the balance of payments crisis of the early 1980s hit its worst period. However, imports have not declined much since then and are at about the same level as in 1982. Imports appear to have been dampened slightly during 1984-86, as importers were forced into the parallel market, but progress seems to be slipping away since 1986.

2.C Terms of Trade

International Terms of Trade. In El Salvador one often hears mention of adverse shifts in the international terms of trade as reasons for the country's poor trade balance performance. Allegations are made that the prices of El Salvador's exports have declined relative to import prices and, therefore, export revenues have tended to decline relative to imports. While in a very general sense this argument is true, it does not serve well as an explanation as to why the country's trade performance has been so poor.

Data on El Salvador's international terms of trade are extremely poor. The Central Bank (BCR) publishes a series on the terms of trade, but these appear with a great time lag. Furthermore, AID reports that the data offered by the BCR are not always consistent with what is known about the price information going into the creation of the index. Also, examination of price information listed in the BCR's annual "Revista" occasionally shows inconsistencies between price indices and unit values reported for the same commodity. Nevertheless, these are the only data reporting directly on El Salvador's international terms of trade, and they are the only source that one could allude to for any overall statement about the international terms of trade.

The BCR series on the international terms of trade, which is available only through 1984, reveals that the international commodity terms of trade have indeed declined between 1980 and 1984. However, examination of the price indices for the commodities making up the export and import price indices reveals that almost all change in the export price index is due to swings in coffee prices and most change in import prices is due to petroleum prices. Indeed, the export price index is made up of price indices for coffee, cotton, shrimp, sugar and "other". Between 1980 and 1984, coffee prices fell considerably, but prices of cotton and sugar rose, and prices of shrimp and "other" were about constant. The export price index mirrored the drop in coffee prices.[8] Similarly, the overall import price index rose, reflecting the rising cost of petroleum imports. There are eight other prices in the import price index, but they exhibit no

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[8] During this research there was no access to people at the BCR who could explain the weighing system used to aggregate export or import prices.

particular pattern. Some rose, others fell, but none showed great change in either direction. Finally, regressions of the export and import price indices on the individual price indices, using data for the 1970-84 period, reveal that only coffee and petroleum prices are of any significance in determining movements in the overall export and import price indices, respectively.[9]

From 1984 through 1986, coffee unit values rose by about 50 percent, but then lost all gains in 1987. Since there were no obvious offsetting trends in other export prices, data on overall export prices would (if available) probably show a sharp rise through 1986, and then a decline in 1987 to about 1984 values. Import prices would probably have fallen from 1984 levels since petroleum prices have fallen since then. Thus, data on the international terms of trade (if available) would probably show considerable improvement between 1984 and 1986, then a drop in 1987, but to a level above that of 1984.

Internal Terms of Trade. Some of the deterioration in El Salvador's trade balance may be due to relative price shifts favoring production of non-traded goods compared to traded goods. If there is a shift in relative prices favoring non-traded goods, traded goods production (i.e., production of exports and import substitutes) will have increasing difficulty in attracting resources. Exports and import substitution will decline, and the trade balance will worsen.

One of the objectives of devaluation, such as the one occurring between 1982 and 1986, is normally to shift the internal terms of trade in favor of the production of tradable goods. Unless offset by internal inflation, devaluation raises the prices of both exports and imports relative to non-traded goods, thus increasing the attractiveness of producing exports and import substitutes relative to the production of non-traded goods.

Unfortunately, data on internal terms of trade are difficult

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[9] Regressing the log of the export price index on all individual indices yields only one significant variable -- the coffee price index. Using only the latter as an independent variable yields:

$$\ln(Px) = 1.25 + .76 \ln(P\ \text{coffee}), \qquad R^2 = .89$$
$$(s = .07)$$

Similarly, none of the individual import price indices is useful in explaining the overall import price index except the petroleum price index. The equation is:

$$\ln(Pm) = 2.43 + .49 \ln(P\ \text{petro}), \qquad R^2 = .98$$
$$(s = .02)$$

to come by. However, some of these data were estimated by the IMF (1987) and are shown in Table 2.4. The data in the table are ratios of price indices of either exports or all traded items to non-traded goods. The ratios are shown for trade including and excluding coffee price effects. The base year for all price indices is 1978, so that numbers below 1.0, as these are, indicate a relative competitive change favoring production of non-tradable items. A figure such as .50 for the ratio of export prices to non-traded goods for 1983 can be interpreted to mean that a given basket of export commodities sold for only 50 percent of what they would have sold for in 1978 in terms of non-traded goods.

The price indices for exports and tradables are strongly affected by coffee prices. On line 1 it can be noted that there had been a great shift favoring non-traded goods production compared to exports between 1978 and 1983-84. The ratio rose sharply in 1986 indicating increased competitiveness for export production -- but coffee prices were particularly high in 1986 and their inclusion in the calculations make it appear that "export" production had become relatively more profitable. What had actually occurred was that coffee production for export had become more profitable while production of other items for export had not. Since coffee export proceeds were some of the last transactions to be allowed at the devalued exchange rate, export production appears to have become more attractive in 1986. The effect of coffee prices, as already shown, determines the movement for the entire index, whether or not other items in the index have changed at all.

The figures on line 3 remove the effect of coffee prices.[10] The shift in the terms of trade against export activities since 1978 still appears, but it is not as great as appeared when coffee was included. This is due to the very good coffee prices in the base year, 1978. What is most important to note, however, is that the ratio peaked in 1984 and then fell through 1986. This is important since many non-coffee export activities were being shifted to parallel exchange markets. For those activities, the devaluation occurred long before the official devaluation in January 1986. By 1986, the relative competitive position of non-coffee exporters and other tradable goods producers was slipping.[11]

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[10] The table and methodology appear originally in Loehr (February 1988), "Real Exchange Rates in El Salvador".

[11] The recent study by Lievano and Norton (1988) reaches similar conclusions for agricultural goods versus all other goods. Agricultural goods are tradable. Since the late 1970s, the relative prices of agricultural goods have declined, with only a slight interruption in 1986. Agricultural imports have become relatively cheap compared to goods and services produced in El Salvador, and imported foods have become more attractive to consumers. The main reason identified by Lievano and Norton is that exchange rate changes have not kept up with the relatively

TABLE 2.4
INTERNAL TERMS OF TRADE, 1978 = 1.00

PRICE INDEX RATIOS	1983	1984	1985	1986
1 EXPORT / NON-TRADED	0.50	0.46	0.61	0.62
2 TRADABLES / NON-TRADED	0.86	0.71	0.85	0.82
EXCLUDING COFFEE				
3 EXPORT / NON-TRADED	0.59	0.90	0.63	0.45
4 TRADABLES / NON-TRADED	0.86	0.94	0.93	0.90

SOURCE: IMF, DECEMBER, 1987

It is apparent from these data that there has probably been an internal price shift that would create incentives for the production of non-tradable goods rather than tradable goods. These data are consistent with the observations made on trade patterns. Declining exports, while imports decline less or do not decline at all, are consistent with the incentives implied by the data on the internal terms of trade.

2.D Comparisons with Other Countries

El Salvador may be loosing competitive advantage to other countries producing similar items for export. An earlier study (Loehr, 1988) made comparisons between El Salvador and Guatemala, Costa Rica and the Dominican Republic. Each of these countries is similar to El Salvador in that each is at about the same level of development and has similar export patterns. In each case these countries have similar export aspirations in that all are attempting to promote similar non-traditional exports to markets located mostly in the U.S.

One major difference between these countries and El Salvador is that all have taken steps to devalue their national currencies in ways that imply real depreciations compared to values existing in 1980. In each case shifts to parallel markets were used to make the transition from fixed exchange rates to new, devalued exchange rates. In all cases the transition to devalued exchange rates was much more rapid than in El Salvador. Unlike in El Salvador, however, none of the others has returned to a rigidly fixed exchange rate. In each case adjustments in the exchange rate have been made to offset internal inflation, thereby retaining the effect of real depreciation.

Table 2.5 shows REER indices for El Salvador and the other three countries. The approximate dates at which shifts from originally fixed exchange rates occurred are indicated with an asterisk (*). Compared to 1980, real depreciations have been on the order of about 70 to 80 percent for each of the three, compared to an appreciation of 23 percent for El Salvador. Furthermore, since leaving a fixed rate regime, each of the other three countries has managed to retain a fairly stable level of real depreciation. For each, the index rises to a level of about 1.7 to 1.8 after leaving the fixed rate, and then stays more or less at that level. In El Salvador, departure from the fixed official rate in 1986 never restored the real purchasing power of 1980, and whatever gains were made were quickly eroded. It is not surprising that in each of the three competitor countries shown, non-traditional export performance has been vary favorable.

2.E Summary

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high domestic inflation compared to external inflation (see pp. 2: 16-19 and 3: 5-17).

TABLE 2.5
REER INDICES, TRADE AND CPI WEIGHTED, 1980 = 1

	EL SALVADOR	COSTA RICA	GUATEMALA	DOM. REP.
1974	1.28	1.02	1.08	1.11
1975	1.18	0.95	1.06	1.26
1976	1.19	0.99	1.02	1.04
1977	1.16	1.03	0.98	0.98
1978	1.11	1.06	0.99	1.02
1979	1.07	1.07	0.99	1.04
1980	1.00	1.00	1.00	1.00
1981	0.95	* 3.33	0.98	1.02
1982	0.96	2.65	1.07	1.00
1983	0.89	1.71	1.07	0.99
1984	0.85	1.69	* 1.25	0.81
1985	0.85	1.67	1.79	* 1.79
1986	* .90	1.72	1.81	1.74
1987	0.77	1.87	1.75	1.73

El Salvador seems to have lost international competitiveness in her export sector:

-- The value of coffee exports have fluctuated from year to year. Part of this is due to price swings. However, quota markets to which El Salvador has access go unserved.

-- Traditional exports other than coffee have either languished (shrimp, sugar) or almost disappeared (cotton).

-- Non-traditional exports to CACM countries have fallen sharply. Much of this is attributable to a decline of the CACM. However, exports to the CACM, particularly to Guatemala, seem to respond favorably to implicit devaluations in the border exchange market.

-- Non-coffee exports began their decline in about 1975, several years before the beginning of regional political violence and the decline of the CACM. Real appreciation of the colon began at about the same time.

-- Non-traditional exports to destinations outside the CACM are small. They dropped sharply in the 1980-83 period, recovered somewhat in 1984 and have improved slightly since.

-- International terms of trade movements largely reflect movements in coffee and petroleum prices. While they may explain part of El Salvador's overall balance of trade they cannot explain poor performance in trade subsectors. In recent years, export volumes in coffee, cotton, and shrimp do not appear to be very responsive to the international prices of these commodities.

-- El Salvador's internal terms of trade have shifted in favor of non-tradable goods production relative to tradable goods.

-- Compared to other countries which compete with El Salvador in non-traditional export markets, El Salvador has maintained a very uncompetitive real exchange rate.

SECTION 3: CURRENT EXCHANGE MARKETS

3.A The 1986 Devaluation

The devaluation of the official exchange rate in January 1986 was something of a non-event. Devaluation actually occurred over the period 1982-86, as increasingly greater numbers of transactions were shifted to the parallel market. Early on, in 1982 and 1983, devaluation began by allowing exporters of some non-traditional exports, and some low-priority imports, to deal in foreign exchange at exchange rates determined in parallel markets. Before 1982 all foreign exchange markets other than the official market, where the exchange rate had been set at C2.5 = $1 for many years, were illegal. In 1982, the then illegal "black market" began to be used as a legal parallel market for certain kinds of transactions.

For most of the devaluation period, the parallel market was not a free market.[12] When it first became legal to transact in the parallel market in 1982, the parallel market and the black market were essentially the same. The original parallel market was set up to reflect what was happening in the black market. During 1983, rules were established permitting only commercial banks and the Banco Hipotecario to buy and sell foreign exchange. While the BCR did not set the exchange rate in the parallel market, it was not left to fluctuate freely either. Exchange rates were set by coordinating the exchange rate policies of the publicly-owned commercial banking system and the BCR. As a result, by the end of 1983 an illegal black market had again developed. Over the devaluation period, a premium on dollars opened up in the black market over and above the premium on dollars in the parallel market. For example, by the end of 1984 dollars were selling at about C4.0 in the parallel market and at about C4.2 in the black market. By the end of 1985 the rates were about C4.85 and C6.65

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[12] In El Salvador there is considerable confusion over the use of the term "parallel market". It is almost always taken by Salvadorans to refer only to the kind of parallel market that existed in El Salvador during the years 1982 and 1986. They see it as a market which is laden with arbitrary rules about who may transact in the market, and when and for what purpose. In common usage outside El Salvador the term "parallel market" is meant to refer to a free foreign exchange market functioning side by side with an official market. It is not the same as what the average Salvadoran thinks of when the term is used. In this study, when the term parallel market is used, it is with the definition commonly used outside El Salvador, unless otherwise indicated.

respectively.[13] While the rates offered in the parallel market may have been adequate to clear the market for the transactions that were permitted there, many transactions were not permitted. Demand in the parallel market was therefore somewhat less than it would have been in the absence of trade restrictions and foreign exchange allocation. Thus, by aiming the official devaluation in January 1986 at approximately the rate existing in the controlled parallel market (C5.0 = $1) officials were ignoring the fact that signs in the black market indicated that the true rate should have been greater than five colones per dollar, and perhaps as high as seven colones per dollar.

Management of the parallel market in El Salvador appears to have been very inefficient. As imports were shifted into the parallel market, decisions had to be made administratively as to which importers would retain access to foreign exchange at the official rate and which would be forced to pay the higher parallel rate. Since the official rate was always the most favorable for importers, they would always prefer to retain access to the official market. As official foreign exchange became increasingly scarce, increasing numbers of importers were forced into the parallel market. Many decisions were made arbitrarily, and in many cases importers were required to obtain part of their foreign exchange in the parallel market and part at official rates. Rules changed day to day, and there was great uncertainty as to what rate would prevail when import bills came due. Particular complications occurred for people who were both importers and exporters. For example, exporters of traditional products may have had to import inputs at the parallel rate, yet sell their output at the official rate, thereby squeezing their margins. Conversely, importers who could retain access to official foreign exchange, while others were forced into the parallel market, earned windfall profits. The inefficiency and resource misallocation implied by the way El Salvador used parallel markets in the 1982-86 period should be taken as a guide of what not to do should such measures be contemplated again.

The official devaluation of January 1986 did little to restore export competitiveness, nor did it repair in any significant way other long term imbalances in the external sector. Reasons for this include:

1. Most transactions were already occurring at parallel exchange rates by the end of 1985. For these transactions the devaluation had already occurred.

2. Parallel rates existing in 1985 probably underestimated

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[13] For details see the annual issues of the IMF's yearbook on trade and exchange restrictions, particularly for the years 1982 through 1986.

the rate to which the new official rate should be changed. Parallel rates as used in El Salvador were not free market rates during most of the adjustment period.

3. Parallel rates were the only means of adjustment. Other policies did not adjust. Fiscal deficits continued to grow, and monetary expansion spilled over into inflation, thus offsetting any gains in relative purchasing power in traded goods production.

4. New trade restrictions were imposed along with the devaluation. Trade restrictions are equivalent to exchange controls. Exchange controls can be used to match the demand for foreign exchange with the supply by simply restricting the available supply to certain uses. Trade restrictions are equivalent because they restrict the demand for foreign exchange until it matches the supply. Neither are necessary if the exchange rate is set at an equilibrium level. Thus, the imposition of increased trade restrictions in January 1986 was an implicit recognition that the devaluation by itself was not considered to be sufficient to equate demand and supply of foreign exchange.[14] Many of the restrictions are in the form of prior deposits. A typical prior deposit for a "non-essential" import has been 120 percent. The implicit exchange rate faced by an importer will be determined by the length of time the deposit is held and the interest rate that the importer would normally face. For example, if the transaction takes 90 days and the deposit is held for that period, and if the importer could normally borrow colones at 20 percent per

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[14] In January 1986, a list of prohibited imports was published, containing about 200 categories of items. Other goods were determined to be importable, but "non-essential". Non-essential items were made subject to three prior deposit requirements. First, all non-essential goods imported from outside the CACM were subject to a 100 percent prior deposit in colones. Second, a 20 percent prior deposit was required on letters of credit. Third, a 25 percent "monetary deposit" was required on the foreign exchange to be obtained.

Since 1986 these restrictions have been loosened. The "monetary" deposit was eliminated early on. The 100 percent prior deposit on non-essential imports began to be reduced in February 1988 and will be gone altogether in December 1988. The list of prohibited imports has been reduced to 28 categories. Items formerly on the original prohibited list have been shifted to the non-essential imports list.

Restrictions imposed in 1986 also limited payments for invisibles. Prior to 1986, there were no restrictions on bona fide expenses for foreign travel, educational expenses, medical treatment, etc. After the devaluation, a schedule of restrictions on these payments was published and remains in force.

year, for each dollar's worth of imports (equivalent to 5 colones at the official rate) the importer bears .30 colones in opportunity cost on the prior deposit. Thus, the implicit cost of foreign exchange for this importer is C 5.30 per dollar.

5. Administrative rules raise the implicit cost of foreign exchange. Imports of under $10,000 require no special financing arrangements. Imports exceeding that amount must be financed with 90-day letters of credit. Furthermore, foreign suppliers must agree to give suppliers interest-free credits for an additional 90 days. Thus, importers bear two kinds of costs. First, they must pay the fees associated with 90-day letters of credit whether or not they want that kind of financing. Second, suppliers are forced to provide 90-day supplier credits, interest-free, whether or not they wish to. Importers report that their suppliers simply raise the cost of the goods shipped to El Salvador by an amount sufficient to allow the supplier to discount his note drawn on the importer's bank. Some importers report that this requirement causes some foreign suppliers to have no interest in dealing with El Salvador at all. To the extent that this requirement causes Salvadoran importers to pay more for their goods, there is an implicit depreciation of the colon for these transactions. A large part of El Salvador's imports are affected by this rule.[15]

6. Foreign exchange flows from AID permit El Salvador to retain a more appreciated currency than would otherwise be the case. Anything that increases the supply of foreign exchange relative to the demand for it tends to reduce the price of foreign exchange. Inflows from AID increase the supply of foreign exchange and therefore reduce its price. The exchange rate is simply the price of foreign exchange, and AID flows cause a lower price for dollars than would otherwise be the case. When the official devaluation occurred in January 1986, a devaluation sufficient to restore real exchange rates equivalent to those existing in 1980 was not required. Before 1980, external balance was brought about primarily by a favorable trade balance. Given the size of the AID flows existing and anticipated for the next few years, external balance did not require a favorable trade balance. Devaluation could be (and was) less than that required to restore external balance on the basis of trade.

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[15] All imports qualifying for the Trade Credit Insurance Program (TCIP), funded by AID and administered by the Eximbank, must employ 90-day letters of credit and 90-day suppliers "credit". This applies to almost all imports from the U.S. See Robert R. Nathan, "Evaluation of the Trade Credit Insurance Program", for AID Washington, May 1988.

It is for these reasons that the 1986 devaluation is referred to as a non-event. Any adjustment via the exchange rate had already occurred before 1986. Any advantages related to devaluation acquired prior to 1986 were already being eroded by the inflation occurring at the time. Monetary policy in 1986 did nothing to stop this erosion. Steps were taken (via trade restrictions) to avoid the need for real devaluation. Finally, correctly anticipated flows from AID obviated the need for a devaluation that would have restored a self-contained external balance.

3.B Exchange Markets in 1988

Currently there are four different kinds of foreign exchange markets in El Salvador. These are the official market, a dollar accounts market, a black market and a market for transactions within the CACM. All are interrelated. The nature of each of these and the interrelations among them require explanation.

The official market requires little explanation since it is the most visible and the most well understood. The BCR stands ready to sell foreign exchange to approved importers and requires that all traditional exporters sell their foreign exchange proceeds to the BCR at the official exchange rate of C5.00 = $1.

The dollar accounts market was created in 1987 as an incentive for non-traditional exporters. The market has three participants. First, exporters of non-traditional items can sell dollars and maintain accounts in dollars in the domestic banking system. Second, importers can also buy dollars and maintain accounts in dollars. When the dollar accounts system was first established, activities were limited to importers of non-essential goods, but this has recently been expanded to apply to any importer. Importers acquire dollars by buying them from non-traditional exporters at whatever price they agree on. These prices need not be revealed to the BCR. Third, commercial banks with offices in the U.S.[16] can receive family remittances from Salvadorans residing in the U.S., to be delivered to family members residing in El Salvador. Dollars captured by commercial banks in this way can be sold to importers in El Salvador. Again, the exchange rate is whatever rate is agreed on by the bank and the importer. As of October 1988, the exchange rate in the dollar accounts market was about C5.15 to C5.20 per dollar.

Several comments are in order to understand the dollar accounts market. First, while all importers can buy dollars in the

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[16] There are three Salvadoran banks with offices in the U.S., Banco de Comercio e Inversion (San Francisco and L.A.) Cuscatlan (N.Y.) and Banco Salvadoreno (Houston).

dollar accounts market, the BCR is currently satisfying almost all importers' needs at the official rate. As long as there is a shortage of liquidity in El Salvador, importers will have difficulty tying up balances in dollars. Thus, there is little demand for dollars in the dollar accounts market. Second, commercial banks are not allowed to act as true intermediaries in the dollar accounts market. Dollar purchases and sales must be arranged by the importer and exporter. The banks cannot buy dollars from exporters for later sale to importers. This creates a very clumsy market, much like a barter market. Third, the amount of dollars captured by Salvadoran banks in the U.S. is very small and has little impact on the dollar accounts market. A problem is that the families receiving such remittances are paid at the official exchange rate of C5.00 per dollar. They receive no benefit from receiving their remittances in this way.[17]

The dollar accounts market does not offer much advantage in the Salvadoran exchange regime at the moment, but has potential for expansion. The dollar accounts market would be greatly enhanced by allowing commercial banks to buy and sell dollars freely within the dollar accounts framework, maintaining their own dollar balances. Commercial banks operating abroad could be allowed to exchange family remittances at the exchange rate prevailing in the dollar accounts market. Finally, the fact that there has recently been little demand in the dollar accounts market, and therefore little premium for dollars there, should not be taken as a sign that the market is of little use. If it becomes increasingly difficult for the BCR to satisfy import demand at the official rate, importers will demand more dollars in the dollar accounts market, and a premium on dollars will appear. The dollar accounts market would therefore act as an alternative to a black market when foreign exchange becomes scarce.

The black market appears to be thriving in El Salvador. Since there are no data on the black market, it is more difficult to assess than other markets. However, anecdotal information abounds about the black market. During our visit to El Salvador we routinely asked whether we could purchase dollars in the black market. Also, in our interviews with businessmen we always asked

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[17] One could argue that the families receiving remittances could avoid the cost and risk of a "coyote" to deliver the money. However, it is not clear that the use of "coyotes" carries much risk, since people in that trade are quickly out of business if they are not dependable. Furthermore, people may see some risk in dealing with the banking system where rules are subject to change. Finally, the cost of transferring funds through a "coyote" is partly compensated for by the higher exchange rate that the recipient could receive in the black market and the greater flexibility one would have to maintain dollar balances in a non-regulated institution.

them a set of questions about their knowledge of the black market and their ability to use it. For example, to the question, "Could you arrange today to buy $10,000?", everyone responded affirmatively. When asked how long a transaction like that would take all responded, "five minutes", or "one phone call". When asked "What would be a large enough transaction to make the purchase difficult?", some responses were $250,000 to $500,000.

Apparently, in San Salvador if one needs dollars, there are well organized dealers capable of performing fairly large transactions. Only a small part of the black market appears in the street (near the main post office). Larger, more sophisticated dealers were described as using sophisticated networks to buy and sell dollars, acting much like legal "casas de cambio" in other countries. An order to buy dollars is followed by payment in colones and a deposit to an account in the U.S. All is normally confirmed, by FAX, within a few hours (depending on the size of the transaction).

The black market is fed by dollars from several sources. Family remittances recorded in the balance of payments were $170 million in 1987. Estimates of total family remittances range from about $500 million up.[18] Thus, $320 million or more is probably flowing into the black market from family remittances. Import over-invoicing and export under-invoicing are probably common. The BCR has made an effort (supported by AID) to minimize under- and over-invoicing, but as long as exchange controls are in effect and expectations of devaluation exist, there will be an incentive to maintain dual accounts for international transactions. Many Salvadoran business people who are engaged in importing or exporting admit to having foreign accounts which are used in the normal course of their business. Finally, while there is a flow of dollars that feeds the black market, there is also a stock of dollars abroad that can support that market.

Premia on dollars have not recently been great in the black market, around C5.25 to C5.35 per dollar in October 1988. The same ability of the BCR to satisfy import needs and the general lack of liquidity that affects the dollar accounts market also affects the black market in the same way. Whenever the BCR has difficulty meeting import demands for dollars or when liquidity is loosened, the premium on dollars in the black market will grow.

<u>The CACM market</u> has come about through a series of bilateral agreements with CACM countries. These agreements allow Salvadoran importers and exporters, in their dealings with CACM countries, to strike bargains in any currency they wish and at whatever exchange rate can be agreed. Thus, it is equivalent to a free market for

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[18] See AID internal memos by Francisco Molina dated January 12, 1988, and April 4, 1988.

transaction for these people. For all practical purposes the CACM market is dominated by trade with Guatemala. Trade with Honduras is very small, and an agreement with Costa Rica is still pending.

The implicit exchange rate in this market is about the same as the black market rate. This is not surprising since the two markets are so similar. In both, exchange rates are free. In both, people are free to do as they please with their cash balances, though technically Salvadoran importers must still seek import permits from the BCR.

Official and other exchange markets are closely related. In El Salvador, discussions of different exchange markets are carried out as if they were separable from each other and as if there were few linkages among them. On the contrary, activities in one market normally have effects on the others. Some of the important linkages include:

1. Central Bank management of liquidity affects all markets. Liquidity has been very tight. One result of this is that the demand for foreign exchange is less than under normal circumstances. The BCR is thus able to supply foreign exchange to almost all importers at the official exchange rate. Few importers need to go to other markets (i.e., to the dollar accounts market or the black market) to fill their foreign exchange needs. Low demand in those other markets keeps premia on dollars there small. If, however, liquidity is expanded, the demand for dollars will grow. The BCR will still be able to satisfy some demand at the official exchange rate, but any excess demand will spill over into alternative markets, thereby raising premia on dollars. It is important to keep in mind that, as long as the exchange rate is fixed in official markets, when demand expands, the increased excess demand will spill over into markets where the price of dollars is not fixed so that premia on dollars will rise. The same result occurs if, for some reason, the supply of dollars to the BCR falls relative to demand.

2. Non-traditional exporters have an incentive to sell their foreign exchange earnings in the dollar accounts market. The premium on dollars there has recently been small, but it is a premium nevertheless. Also, the dollar accounts market offers some flexibility. Since most exporters are also importers (of inputs) they may choose to maintain dollar balances to cover future import needs, rather than sell dollars immediately to other importers. When exporters deposit dollars with commercial banks, the banks can deposit excess dollars (above 20 percent of the legal reserve) abroad. The amounts of deposit abroad can be, and are, used by the commercial banks to support letters of credit for imports, over and above the amounts that the BCR has established as

their "topes"[19] at foreign correspondent banks.

Commercial banks use the lines of credit at foreign correspondent banks, which are allocated to them by the BCR, to finance imports. Imports must be approved by the BCR and are normally paid for at the official exchange rate. Lines of credit at foreign correspondent banks are used to cover the letters of credit maturing on any given day. Commercial banks must manage the maturity of their letters of credit outstanding so that they do not exceed the amounts covered by the line of credit. If the letters of credit maturing on any given day do exceed the limits covered by the line of credit, the commercial bank must pay a penalty. The penalty payment is borne entirely by the commercial bank.

Because commercial banks can use dollar accounts to back letters of credit, the supply of dollars in the dollar accounts market allows a greater supply of dollars in the official market <u>at the official rate</u>. Since dollars on deposit in the dollar accounts market can be used to cover letters of credit outstanding, the amount of letters of credit outstanding can be greater than they would be if the commercial banks were limited only to the lines of credit allocated by the BCR. Exporters' deposits in the dollar accounts market serve to increase the lines of credit that commercial banks have with foreign correspondents. For example, if a bank's "tope" is $1 million, then the <u>maximum</u> amount of letters of credit maturing can be $1 million. However, if the commercial bank has $100,000 on deposit abroad related to exporters' deposits, then that bank can support $1,100,000 in letters of credit. Importers can therefore import an extra $100,000 of goods at the official exchange rate.

3. Trade policy affects all markets. There has been a requirement to use 90-day letters of credit for import financing when the official market supplies dollars, but not when the dollar accounts market is used. Importers who do not need 90-day letters of credit will compare the cost of a letter of credit with the higher cost of foreign exchange in the dollar accounts market. They may then choose to pay more for dollars in the dollar accounts market and thereby avoid the costs associated with a letter of credit.

Many items are still prohibited from importation. This

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[19] Commercial banks are not allowed to own dollar deposits beyond what they need for working capital. Lines of credit with foreign banks are allocated by the BCR to each Salvadoran commercial bank. Each bank is given a maximum amount that it may draw on at each foreign correspondent bank.

creates an incentive for smuggling.[20] Obviously, smugglers bypass all BCR controls. They obtain their dollars in the black market and arrange their own financing. The more restrictive the rules on imports become, the greater the incentive for smuggling. Restricting imports will therefore have a tendency to relieve the demand for dollars at the BCR, but increase the demand for dollars in the black market. 4. The black market can be affected by many kinds of trade regulations. For example, exporters are frequently paid by letters of credit that are contingent on the inspection and acceptance of the goods by the buyer abroad. This is particularly prevalent where the quality of goods is important, as it would be with many agricultural exports. Ultimately, exporters are paid for the goods deemed acceptable by the buyer. In El Salvador, some export permits require that the exporter deliver foreign exchange for the goods shipped, rather than for the goods accepted by the buyer. Reports were received of exporters who had to buy dollars in the black market to cover the difference. In other instances, the BCR has required exporters to receive payment in advance. To do this, the exporters may have to buy dollars in the black market and sell them immediately as if the goods had been paid for in advance, thereby loosing the premium paid in the black market.[21] In general, a rigid application of arbitrary rules and regulations can create links between official and black markets as businessmen attempt to circumvent the rules.

3.C Currency Appreciation and Overvaluation

The colon has experienced real appreciation over a relatively prolonged period of time. Also, the deterioration in El Salvador's trade balance and apparent loss of competitiveness has been noted. Those observations may lead one to say that the colon is "overvalued" and should be devalued. Other observations are that the BCR has accumulated international reserves and that the premium on dollars in the black market is small. Taken alone, the latter are signs that the currency is not overvalued.

Statements about real exchange rates (REER) carry with them no judgments about what exchange rates ought to be. To say that exchange rates are "overvalued" is to make a judgement that in order to meet some objective, the value of the local currency in international transactions is too high and that it should be

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[20] Many goods on the import prohibition list are commonly seen for sale throughout San Salvador.

[21] It is not clear how general these problems are, but examples of such problems were mentioned by bankers and exporters. However, it was not possible to discuss these instances with BCR personnel to assess the extent of these problems.

reduced (i.e., devalued). The objective that is normally sought is balance of payments equilibrium. For practical purposes a balance of payments equilibrium is defined here as a balance of payments condition that is sustainable over the long run without a persistent loss or gain of international reserves. A balance of payments containing a negative trade balance may be in equilibrium if there are positive, offsetting flows in the capital or transfers accounts, and where the positive flows can be sustained. The balance of payments is not intended to balance account by account, but to balance overall, with changes in reserves as a residual balancing item. Thus, in spite of a negative trade balance, sustainable changes in other accounts may ensure that reserves are not lost. When this occurs, no disequilibrium exists and the exchange rate is not "overvalued".

Much of the foregoing discussion hinges on the word "sustainable". Surely, borrowing to maintain reserves when trade deficits exist cannot be considered sustainable, if by sustainable is meant permanent. However, a situation can be considered sustainable if, during the period that loans are available, steps are taken to correct the trade imbalance and provide loan service. Alternative sources can be used to cover reserve losses during an adjustment period as long as the result of adjustment is a change in relationships within the balance of payments that ensure long run sustainability.

Appreciation of the real exchange rate makes any disequilibrium more difficult to correct and any equilibrium harder to sustain. Real appreciation causes the demand for foreign exchange (demand for imports) to be higher than it would otherwise be since it makes imports appear to be relatively cheap when compared to domestic goods. Similarly, appreciation reduces the supply of foreign exchange since exports appear relatively expensive to foreigners. If an appreciated real exchange rate is added to other problems that imply reserve loss (e.g., capital flight, reduced foreign investment, etc.) the overall problem is aggravated. Greater amounts of compensatory foreign exchange are required for any given problem in the presence of real appreciation than in its absence.

Whether or not the current exchange rate is overvalued depends on the sustainability of the current balance of payments situation in El Salvador. The evidence suggests that the colon is overvalued at the current official exchange rate of C5.0 = $1. Reasons for this are:

1. The real effective exchange rate has appreciated over the past decade. This alone would not be sufficient to determine currency overvaluation, but creates a much more difficult situation in which to manage the balance of payments.

2. The trade balance has continued to deteriorate.

3. Severe reserve loss is being prevented by transfers from the U.S. Without these transfers the current balance of payments condition is not sustainable. Without the transfers reserves would be quickly lost. Since AID may curtail its balance of payments support program, and is doing so now, reliance on this source of reserves is only temporary.

4. The demand for foreign exchange in El Salvador has been kept in check by extreme tightness in liquidity. Any loosening of credit would increase the demand for foreign exchange. Liquidity probably cannot be kept so tight without reducing the prospects for economic growth.

5. Monetary management is limited by a general lack of effective monetary instruments. Given the level and projections for fiscal deficits, it is likely that the country will continue to experience fairly high inflation and further real appreciation of the colon.

6. Institutional barriers appear to be hindering a resurgence of traditional exports.

7. The prospects for rapid growth in non-traditional exports are not good -- well below the level needed to repair the trade imbalance.

8. Private capital flows remain mostly negative and are unlikely to grow given political uncertainty.

9. Any impact from the 1986 devaluation is already long past. That impact was weak in any event and has been largely dissipated by inflation since 1986.

10. Growth in the past few years has been almost nil. Any increase in economic growth will imply an increase in the demand for imports and further deterioration in the trade balance.

SECTION 4: TRADE PROSPECTS

Prospects for improving the trade balance in El Salvador are not good. Several reasons for this have been dealt with above. First, there has been a shift in the internal terms of trade that favors the production of non-tradable goods and against the production of traded goods. This has occurred in spite of the devaluation that occurred over the 1982-86 period. Second, compared to real devaluations in countries that El Salvador competes with, El Salvador appears increasingly less competitive. While comparisons were made only with Guatemala, Costa Rica and the Dominican Republic, the exchange rate policies of those countries are not atypical of many Latin American and Caribbean countries with which El Salvador is likely to be in competition. Third, institutional problems seem to be hindering the production and export of El Salvador's traditional products.

Two additional problems appear to be damaging El Salvador's ability to achieve favorable changes in its trade balance. Real exchange rate appreciation appears to be acting as a major deterrent to the expansion of exports and restraint of imports. Also, it is likely that effective protection of trade in El Salvador is at very high levels and that this is likely to be particularly detrimental to export production. Each of these is dealt with in turn.

4.A Trade and Real Appreciation

As pointed out in Section 1, the colon has appreciated in real terms since the mid-1970s. Moreover, when one removes the effects of coffee exports, which are normally preponderant, a decline in real non-coffee exports over the same period can be seen. The casual observation that real, non-coffee exports are declining at the same time as the real exchange rate is appreciating is consistent with the theoretical notion that real appreciation causes exports to decline. Rather than leave this observation in its casual form, real non-coffee exports have been related statistically with other variables that could have affected exports. Regressions were run for 1974 through 1987 using the natural log of real non-coffee exports against several independent variables:

1. Real Effective Exchange Rates as shown in Table 1.1. Since the REER index is constructed so that a decline represents appreciation, one would expect a positive relationship between real exports and the REER.

2. Real growth in the U.S. Since the U.S. is the main market for Salvadoran exports, one would expect that growth in the U.S. would be related positively with El Salvador's real exports.

3. El Salvador's political problems broke into violence in 1979. Since then, much productive capacity has been damaged or lost and uncertainty has increased. This could have caused a general downward shift in the level of El Salvador's exports. Thus, a dummy variable was created with a value of one for the years after 1979 and zero otherwise. A negative sign was expected.

Regression results show overwhelmingly that the only variable of statistical significance is the REER. Whenever the other two variables are included, with the REER or alone, no statistical relationship between them and real exports is revealed at a statistically significant level. The coefficient of the REER variable carries a standard error indicating at least a .05 level of significance in all specifications. Furthermore, the coefficient of the REER variable varies little with the specification. The specification containing only the REER is:

$$\ln(X) = 5.76 + \underset{(s=.42)}{2.75} \ln(REER) \qquad R^2 = .76$$

A similar exercise was conducted with real non-oil imports as the dependent variable. The variable representing growth in the U.S. was replaced by real growth in El Salvador's GDP. A negative sign was expected on the REER variable, a positive one on the growth variable and an indeterminant one on the dummy. In no specification was the growth variable significant. Both the dummy and the REER were significant at better than an .05 level. Again, the coefficient of the REER variable and of the dummy were stable from one specification to another. The relationship was:

$$\ln(M) = 6.86 - \underset{(s=.16)}{.69} \text{ dummy } 79 - \underset{(s=.53)}{1.46} \ln(REER) \qquad R^2 = .62$$

It is clear from these regressions that the REER has the expected statistical relationship with both exports and imports. Appreciation of the REER has been associated with declining exports and increasing imports. Furthermore, the relationship is a strong one. The elasticity of real exports with respect to the real exchange rate is about 2.75, that is, a one percent real appreciation of the exchange rate is associated with a 2.75 percent reduction in exports. Real non-oil imports have an elasticity with respect to the REER of -1.46. It is interesting to note that in an independent study, Lievano and Norton (1988) found that the elasticity of food imports with respect to the real exchange rate is about -1.56 and has high statistical significance in explaining food imports. The results here for all non-oil imports are highly consistent with the Lievano and Norton findings.

Continued real appreciation of the colon will make it very difficult, if not impossible, that El Salvador can improve on its

trade balance. Both theory and the statistical findings support the thesis that real exchange rate appreciation has damaged the trade balance. Increased coffee exports could improve the situation, but El Salvador has been unable to produce enough coffee to fill the quota markets that are open to it. Prospects for additional real appreciation of the colon spell further difficulties for the trade balance.

4.B Effective Protection

The effects of levels of protection on trade are difficult to assess. El Salvador's nominal tariff structure is the common external tariff imposed by members of the CACM. The common external tariff is generally designed to support import substitution by taxing final goods more heavily than imported inputs. In practice, however, the actual tariff and the protective structure differ from the common external tariff in several important ways.

1. Since January 1986 a lengthy list of imports considered to be "luxury" goods have been prohibited from importation. Originally the list was composed of about 200 product categories, but has since been reduced to only 28 categories. Nevertheless, a large number of items still face import prohibition.

2. Imports considered to be "non-essential" face high prior deposit requirements. The extent to which these requirements raise the cost of importation is not known.

3. Imports of many non-essential imports are subject to a selective consumption tax at rates ranging between 10 and 125 percent. The tariff equivalent of these taxes is unknown.

4. Exports of coffee, sugar and shrimp are subject to an export tax. An export tax is a form of "negative protection". The quantitative effect of these taxes is unknown.

5. Many exceptions to import duties are possible. Imported inputs for industrial and agricultural production are generally given exemption from duties. Goods imported under "franquicias" enter El Salvador duty free. Franquicia privileges are offered to many members of the military service, diplomatic service, international organizations, charities and churches. All public sector imports enter duty-free. This includes all petroleum and items associated with the telephone and electric companies and many other entities. About 30 percent of all imports enter El Salvador duty-free by virtue of their use by the public sector. Another 10 to 20 percent of imports probably enter duty-free under other

franquicias.[22]

A major study of protection as actually practiced in El Salvador would be required to make any definitive statements about the effect of protection on the country's trade prospects. Such a study was not included as part of the terms of reference for this project. Nevertheless, one element that is fairly clear is that the level of effective protection in El Salvador is considerably above the level of nominal protection.

Effective protection differs from nominal protection in that it deals with the extent to which production is protected rather than the extent to which goods are taxed. Since production requires imported inputs, a duty on a final product protects only the portion of production carried out domestically, even though the duty applies to the value of the entire final product including the inputs. In most import substitution industries, duties on imported inputs are usually lower than duties on final products. In many cases, duties on imported inputs are removed altogether. Thus, the effective protection of the portion of production carried out domestically is greater than the nominal protection implied by the tariff rate.

The effective rate of protection is defined as the percentage by which domestic value added differs from what value added would be in a free market as a result of protection. For those unfamiliar with the concept, Appendix A discusses the concept in some detail and provides examples of the calculation of effective rates of protection. Calculations of effective rates of protection for El Salvador must await an in-depth study of protection as actually practiced.[23] However, a general examination of the protective structure in El Salvador permits several statements about the likely level of effective protection in the country.

First, the rate of effective protection in import substitution activities is likely to be much greater than nominal protection. Effective protection tends to increase relative to nominal protection the lower the protection for imported inputs, the higher the protection for final products and the smaller the proportion of domestic value added. In El Salvador the proportion of value added in import substitution activities tends to be small. Furthermore, duty exemptions are usually given for imported inputs. In any event, duties on imported inputs are lower than duties on final products.

Second, effective protection is probably negative on some

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[22] These estimates were made informally by BCR personnel.

[23] Also, calculations of effective protection would require some knowledge of the country's input-output structure.

export activities such as coffee production. Negative protection results when duties on inputs are higher than duties on final goods. With export goods, there are no duties on final goods, and any duties on inputs will create negative rates of effective protection.[24] When the effect of export taxes are included, effective protection becomes more negative yet.

Third, the protective structure in El Salvador has probably contributed to an overvaluation of the exchange rate. This has a tendency not only to reduce the level of effective protection for import substitution production but also to make any negative effective protection on exports more negative still. This is attributable mainly to the fact that, if the currency were not overvalued, exporters would be able to receive greater amounts of domestic currency for their goods. (See Appendix A for a numerical example.)

Given these general observations on El Salvador's tariff structure and the way it has been put in practice, it is likely that levels of effective protection are discriminating against exports. Furthermore, high levels of effective protection are also likely to be promoting very high-cost, low-efficiency import substitution activities. Neither condition bodes well for improvements in the balance of trade.

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[24] It has been estimated that effective protection in El Salvador ranges from about 200 percent on some import substitution activities to -28 percent on coffee. Estimates are attributed to Genberg, Rodriguez and Sjaastad (1985) "Politica Comercial en El Salvador", MIPLAN, as reviewed in FUSADES, Boletin Economico y Social, Numero 19, Enero de 1987, pp. 3-5.

SECTION 5: REASONS FOR COMPETITIVE LOSS AND HOW TO STOP IT

The objective of this section is to discuss those factors that condition the recommendations for changes in El Salvador's foreign exchange regime. The discussion is a general one, designed to lay the basis for the major recommendations that appear in Section 6.

5.A Reasons for Competitive Loss

Salvador's competitive loss has been related to both external conditions and domestic policies. As indicated in Section 2, Central American countries in general were affected after 1979 by adverse external conditions, especially by sharp reductions in export prices, mainly agricultural. El Salvador also lost competitiveness against its neighbors -- although all of them fixed their parity to the dollar -- as the colon appreciated with respect to their currencies. Higher rates of inflation compared to the other countries, and different exchange rate policies in the case of Costa Rica, were the reasons for this loss of competitiveness.[25] Since external conditions are out of the control of the government, it is convenient for the purpose of this analysis to focus on the failure of domestic policies to achieve export competitiveness and to allow for reasonable and sustained economic growth.

In El Salvador, since the economy is not entirely open and production and consumption of tradable and non-tradable goods coexist, inflation is not only determined by devaluations and international inflation -- as in the case of tradable goods only -- but also depends on changes in the prices of non-tradable goods.[26] Under a fixed exchange rate regime, and assuming constant productivity, export competitiveness is directly related to export prices and inversely related to the prices of non-tradable goods. As export prices are fixed from abroad, increases in the prices of non-tradables are key variables responsible for the loss of competitiveness. As shown in Section 2, there appears to have been a relative increase in the prices of non-tradables over the past decade.

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[25] See W. Loehr, "Current Account Balances in Central America 1974-1984: External and Domestic Influences," Journal of Latin American Studies.

[26] See "El Sector Financiero de El Salvador", document prepared by the Interamerican Management Consulting Corporation, September 1988, Ch.2: Política Monetaria, Balanza de Pagos, Inflación y Crecimiento.

Excess demand for non-tradable goods -- without any change in the exchange rate -- will induce an increase in their prices, an appreciation of the colon and a loss in competitiveness. The excess demand for non-tradable goods in the case of El Salvador, as in many other Latin American countries, was the result of excessive increases in the money supply originating from financial support for the government's fiscal deficit that could not be channelled into tradable goods because of import restrictions.[27] Since 1979, increases in government expenditures have induced further increases in prices and inflation (see Table 5.1). If demand is permanently in excess, inflation in non-tradable goods will produce further appreciation of the colon and further reduction in competitiveness.

In the case of El Salvador, however, the fiscal deficit was not the only cause responsible for the loss of competitiveness. There was another important factor that exacerbated inflation after 1979 -- the steady reduction in the demand for money[28] that systematically diminished the government's capacity to finance its level of expenditures. Interest rate policy was also inadequate, and income velocity grew rapidly after 1982, pushing up inflation, as can be seen in the accompanying chart. Steady reductions in the demand for money forced the BCR to sell its accumulated international reserves from the "coffee boom" of the 1970s and from AID transfers and family remittances during the 1980s in order to compensate for credit expansion to the government and balance of payments deficits. Transfers from abroad allowed the government to sustain artificially the level of the exchange rate at 2.50 colones per dollar until 1986, which was below its equilibrium level without such transfers.

Since the balance of payments equilibrium was not sustainable without AID transfers, the exchange rate was overvalued.[29] An overvalued currency, together with higher inflation and a simultaneous reduction in export prices up to 1986, made the loss of competitiveness unavoidable. In order to keep export competitiveness, the government could have:

1. Kept the real exchange rate constant by reducing the excess demand for non-tradables. This could have been achieved by

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[27] See "El Sistema Financiero de El Salvador", op. cit., Ch.2: El Rol del Sector Público en la Expansión del Crédito del BCR.

[28] See "El Sistema Financiero de El Salvador", op. cit., Ch.3.4: Determinantes de la Demanda de Activos Financieros.

[29] See W. Loehr, "Real Exchange Rates in El Salvador," unpublished.

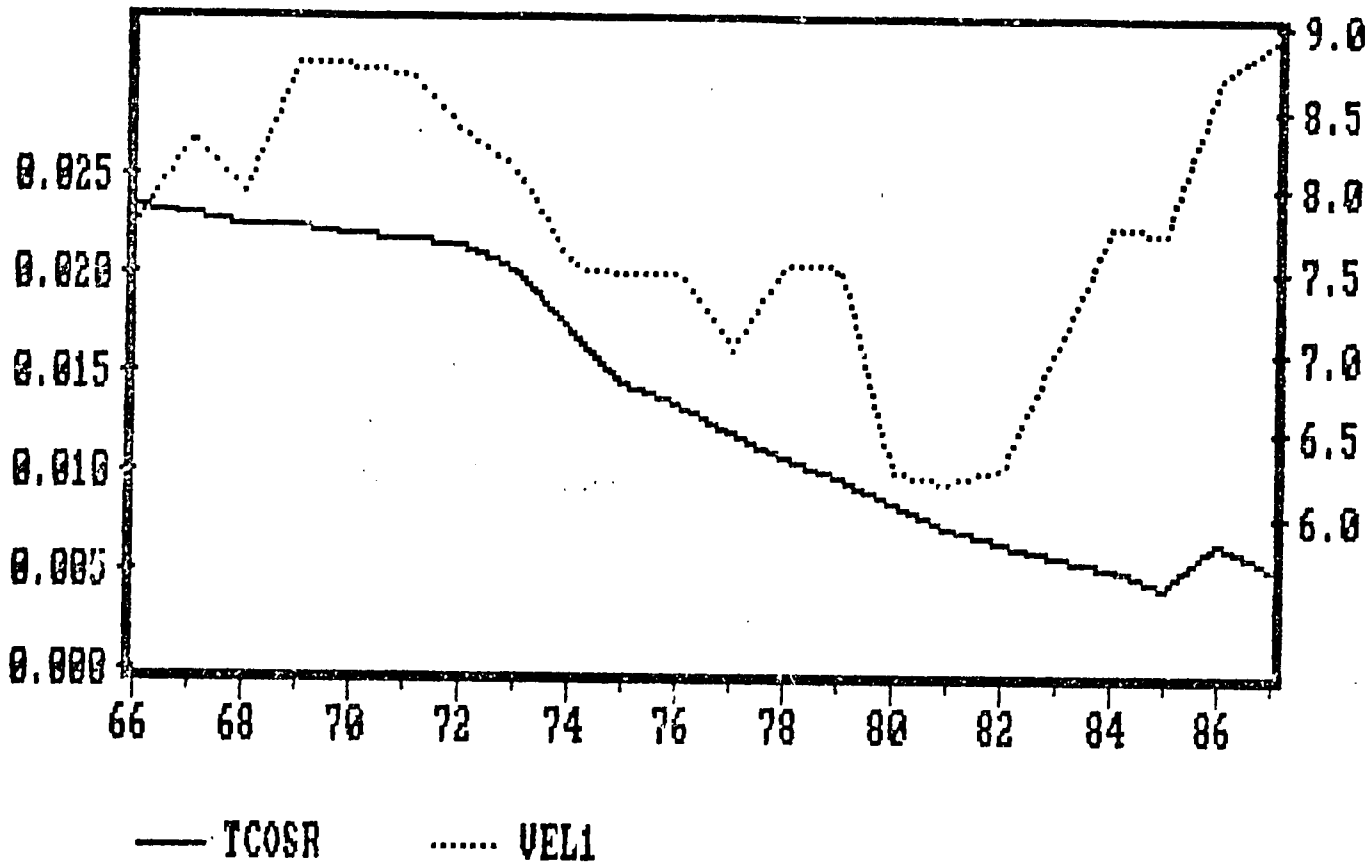
OPERACIONES DEL GOBIERNO CENTRAL

Transacciones / Anos	1987 Estimac Original	1987 Revision	1988 Estimac Original	1988 Revision
I. INGRESOS CORRIENTES (A+B)	2715.9	2753.1	2978.9	2988.3
A. Tributarios	2463.8	2616.8	2749.1	2814.5
B. No tributarios	252.1	136.3	229.8	173.8
II. GASTOS CORRIENTES	2813.5	2761.8	2877.7	2952.1
III. AHORRO CORRIENTE (I-II)	-97.6	-8.7	101.2	36.2
IV. INGRESOS DE CAPITAL (A+B)	577.9	545.7	418.3	418.3
A. Venta de activos	0.0	0.0	0.0	0.0
B. Transferencias	577.9	545.7	418.3	418.3
V. GASTOS DE CAPITAL (A+B+C)	785.8	703.4	853.3	719.1
A. Inversion real	511.8	528.6	751.9	625.1
B. Adquisicion de activos existentes	0.0	3.8	1.3	1.3
C. Transferencias	274.0	171.0	100.1	92.7
VI. CONCESION NETA DE PRESTAMOS Y ADQUISICION NETA DE ACCIONES	51.3	127.6	75.6	130.6
VII. SUPERAVIT/DEFICIT(-) GLOBAL (III+IV-V-VI)	-356.8	-294.0	-409.4	-395.2
VIII. FINANCIAMIENTO NETO (A+B)	356.8	294.0	409.4	395.2
A. Interno (1+2+3)	204.8	14.5	52.9	147.9
1. Banco Central	84.5	67.9	414.4	101.5
a) Prestamos	69.2	69.2	0.0	-73.0
b) Bonos	40.1	23.5	39.4	130.0
c) Intereses en mora	0.0	0.0	295.0	0.0
d) Depositos y otros	-24.8	-24.8	80.0	44.5
2. Bancos Comerciales	55.5	58.2	53.6	-2.8
a) Bonos	59.9	57.4	60.6	-18.0
b) Depositos	-4.4	0.8	-7.0	15.2
3. Otras fuentes	64.8	-111.6	-415.1	49.2
B. Externo (1-2+3)	152.0	279.5	356.5	247.3
1. Desembolso de prestamos	329.2	416.4	494.5	369.3
2. Amortizacion de prestamos	127.2	90.4	138.0	122.0
3. Colocacion neta de bonos	-50.0	-46.5	0.0	0.0
IX. INFORMACION ADICIONAL				
1. Deficit global excluyendo donativos externos	-934.7	-839.7	-827.7	-813.5

3.6.

2.36

EL SALVADOR CHART : REAL EXCHANGE RATE (TCOSR) AND INCOME VELOCITY (VEL1)



reducing the level of aggregate demand through reducing the level of government expenditures.

2. Realized that the exchange rate cannot be held constant if export prices decline unless -- highly improbably -- the prices of non-tradables also decline at the same time.

3. Realized that sustaining the demand for money is a prerequisite for not losing competitiveness and consequently that appropriate interest rate policies would have to be implemented.

Unfortunately, these guidelines were not followed in El Salvador during the last ten years, so that these factors have become the main reasons for the loss of competitiveness.

An important question is, what would be required to stop competitive deterioration under the current exchange rate regime? Alternatively, the question of how to restore balance of payment equilibrium without AID transfers has similar analytical implications. The following discussion addresses these questions.

El Salvador's balance of payments disequilibrium is the result of simultaneous current account and capital account deficits. As can be seen in Table 5.2, projections for 1988 indicate a deficit in the current account of 4.6 percent of GDP along with a deficit in the capital account of 1.9 percent of GDP, equivalent to an overall deficit in the balance of payments of U$S 350 million, compared to an overall deficit in 1987 of U$S 318 million. What are the reasons for the simultaneous current and capital account deficits?

Referring first to the current account deficit, it can be said that it has been a reflection of the macroeconomic imbalance between absorption and income. Excess absorption had its origin in the fiscal deficit of the government. As can be seen in Table 5.1, the central government's deficit in 1987 amounted to 3.6 percent of GDP, almost equivalent to the current account deficit.[30] The private sector probably ran a surplus (i.e., savings exceeded investments) given the present depressed condition of the economy. The desired current account balance is not likely to be zero in an expanding economy that needs to invest more. Foreign residents (including foreign governments and emigrated Salvadorans) might be

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[30] The excess of absorption over income is equal to the sum of the public sector deficit plus the private sector deficit. As the central government accounted for almost all the current deficit, this implies that the rest of the nonfinancial public sector deficit is compensated for by a surplus of the private sector.

BALANZA DE PAGOS
(Millones de Dolares)

	1987 ESTIMADO	1987 REVISADO		1988 PROYECT1	1988 PROYECT2	
EXPORTACIONES DE BIENES (FOB)	572.7	590.9		604.4	641.5	
Cafe	347.3	347.3		351.3	367.7	
Algodon	2.3	2.3		6.6	5.9	
Azucar	12.1	12.1		13.7	15.0	
Camaron	20.5	20.5		23.1	23.1	
No Tradicionales al MCCA	111.1	119.6		122.3	131.7	
No Tradicionales al Resto del Mund	79.4	89.1		87.4	98.1	
IMPORTACIONES DE BIENES (CIF)	975.3	994.1		1075.2	1084.0	
MCCA	178.1	181.4		185.0	192.5	
Resto del Mundo	797.2	812.7		890.2	891.5	
BALANZA COMERCIAL	-402.6	-403.2		-470.8	-442.5	
SEVICIOS NETOS	-5.7	-5.7		-55.6	-64.6	
TRANSFERENCIAS NETAS 1/	222.6	223.3		257.8	258.6	
CUENTA CORRIENTE	-185.7	-185.6	4.1	-268.6	-248.5	4.2
CUENTA CAPITAL	-122.6	-132.0		-97.7	-103.4	
Capital Oficial 1/	-13.9	5.8		49.9	21.1	
Ingresos	38.0	53.5		93.9	61.0	
Egresos	51.9	47.7		45.0	39.9	
Capital Bancario 1/	-90.2	-90.2		-52.2	-70.1	
Ingresos	84.4	84.4		99.4	90.3	
Egresos	174.6	174.6		151.6	160.4	
Capital Privado	-18.5	-47.6		-54.4	-54.4	
SUPERAVIT(+) o DEFICIT(-)	-308.3	-317.6		-326.3	-351.9	
Asistencia Neta AID	359.2	368.5		362.1	341.0	
Prestamos Netos	36.5	45.8		55.3	38.2	
Donaciones	322.7	322.7		306.8	302.8	
Contrapartida por Revalorizacion	0.0	0.0		0.0	0.0	
RESERVAS INTERNACIONALES NETAS						
Variacion	50.9	50.9		35.8	-10.9	
Nivel	302.0	302.0		337.8	291.1	

1/ Excluye asistencia AID

30-Aug 2

willing under some conditions to make financial or real investments, as well as transfers to the country. This would allow excess expenditures to be financed. However, this is currently not the case in El Salvador. Private investment is depressed and the capital account continues in deficit, leaving financial support of the current deficit to AID funds. It could be said that AID transfers contribute to El Salvador's current deficit in a similar way that the post World War I reparations to European countries caused the current account balances of those recipient countries to deteriorate -- under what was commonly known as the "transfer problem".[31] In sum, present AID transfers allow the government to spend in excess of its income, resulting in a permanent deficit in the current account of the balance of payments.

On the other hand, the capital account has been greatly affected by changes in domestic economic conditions and, to a lesser extent, by external changes. Two important aspects of the Salvadoran economy explain the capital account deficit: civil war and financial repression. Capital flight after 1979 was common and was rational behavior by Salvadorans as country risk became steadily higher. Civil war is largely an exogenous factor out of control of the government, but financial repression, exchange controls, nationalization of the banking system, etc. clearly did not contribute to attracting capital. Apparently, after 1985, capital flight was not as intensive as it had been in the past[32] and family remittances became increasingly important. Although these flows were largely not channeled through the formal financial system, they nonetheless constituted an improvement with respect to conditions at the beginning of the 1980s.

At this point it is clear that:

1. The macroeconomic imbalances reflected in current account deficits cannot create a sustainable net capital inflow to support these deficits in the long run.

2. AID transfers contribute to a deterioration in the current account balance. They allow a higher level of absorption than

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[31] AID transfers to El Salvador increase the supply of dollars and therefore the supply of imports to El Salvador. The increased supply of dollars causes the price of dollars, and therefore the price of imports, to be lower than they would otherwise be. Thus, the colon is overvalued compared to the value it would have in the absence of the AID transfers. The current account of El Salvador does not have to balance, indeed cannot balance, to achieve an overall balance in the balance of payments. In short, El Salvador need not transfer real resources (export) to obtain real resources (imports) as long as AID transfers continue.

[32] See "El Sector Financiero de El Salvador", op. cit., Ch.1.

would occur under normal circumstances and allow the government to avoid adjustments in fiscal accounts and in the exchange rate that would normally be needed to achieve balance of payments equilibrium.

Under these conditions an excess of absorption over income not financed entirely by foreign borrowing (foreign capital movements) will lead to a running down of net foreign assets. Excess absorption financed in that manner will have to stop at a certain point if AID transfers are reduced or eliminated since the stock of net foreign assets is limited.

Which then are the most significant changes required to improve the balance of payments? A desired reduction in a current account deficit can be achieved through some combination of increasing output or reducing absorption. For the capital account deficit, the reduction can be achieved through significant reforms in the financial sector. In the case of El Salvador, results of reforms could be greatly affected by civil war developments, so that it is difficult to predict future developments precisely.

5.B Changes Required to Improve the Current Account

It is generally easier to reduce absorption than to increase output to obtain "internal balance". In the case of El Salvador in particular, where private investment is highly dependent on subsidies and where there is a low return on capital, a sustainable increase in output would require a substantial change in relative prices (which will be discussed later).

When aggregate expenditures exceed the productive capacity of an economy at the existing price level, the result is a rise in prices that continues until the excess demand is eliminated. If, instead, the economy is largely open, excess demand will bring about a current account deficit in the balance of payments. In El Salvador at present, although monetary policy is orthodox, it is not producing the expected results in stabilizing the economy because of import restrictions that direct excess demand into non-tradable goods. As the source of excess domestic demand is the public sector, a reordering and reduction of public outlays and a simultaneous increase in revenues (taxes, public sector prices, etc.) is an immediate -- though not easy to implement -- recommendation for adjustment. This kind of demand management policy will help the current tight credit policy in achieving price stability and, as soon as the exchange rate is fixed, will also help to stop the loss of competitiveness. Nevertheless, external and internal balance cannot be achieved simultaneously only by reducing domestic expenditures.

Restrictions on imports impede the increase in the supply of goods necessary to match the excess demand, and this demand is switched to domestic goods, provoking higher inflation and further

appreciation of the colon. Seen from the narrow perspective of a particular import-competing or export industry which has lost competitiveness as the result of a real appreciation caused by macroeconomic developments, protection seems the natural countermeasure. However, protection provoked by real appreciation brings about even more real appreciation. The current tariff system in El Salvador is not within the scope of this study, but the presence of multiple exchange rates between 1982 and 1985, as well as restrictions on imports, are good examples of the degree of protection prevalent. As discussed in Section 4, the level of effective protection in El Salvador is probably very high.

Reduction in domestic demand will bring down inflation, but -- other things equal -- further reductions in absorption will be required to bring down the existing current deficit, probably entailing a substantial recession. For this reason, trade reform, an expenditure-switching policy, should be implemented simultaneously -- in addition to reducing absorption -- in order to stop the cumulative process of current account deficit, higher domestic inflation and competitive loss.

A trade reform, including trade liberalization with simultaneous reduction in the average level and spread of import tariffs, will greatly contribute to reduced inflation and a better allocation of productive resources. Ideally, a trade liberalization should be implemented simultaneously with a change in the relative prices of tradables to non-tradables, i.e., a change in the real exchange rate. This would increase incentives to produce goods for export or to compete with imports and reduce incentives to produce non-tradeable goods. Nonetheless, reforms in protection are not prerequisites for a liberalization of exchange markets. Rather, trade reform and exchange regime reform each improve resource allocation, but together the improvement is greater than their sum.

A question may arise as to the convenience of liberalizing at a time when there is not a sustainable balance of payments equilibrium (without AID transfers). In considering whether or not to liberalize under such conditions, it is a matter of trading off additional short-term problems against longer-run benefits. There may be short-run adjustment costs, and the short-run problems these engender may be harder to bear when, at the same time, the needs of the balance of payments call for a major reduction in aggregate spending. Liberalization may also risk being unjustly blamed for the many problems -- including increases in unemployment -- caused by the need to reduce spending in order to improve the balance of payments. In this respect, the Salvadoran government can take advantage of existing AID funds over the near term to help in implementing trade and exchange market liberalization by reducing the short-term costs of adjustment and neutralizing possible initial exchange rate instability. AID funds should thus be used as a means to cushion the adjustment, not as a substitute

for adjustment.

The sequencing of liberalization and associated exchange rate adjustment is a matter of some complexity. A choice, essentially political, has to be made between gradualism and sudden measures, as well as how much advance announcement there should be. Consequently, there is no inherent reason to prefer sudden measures over gradualism. The longer the period between the announcement of a credible program of liberalization and the actual changes in tariffs and quotas, the easier it is for protected industries to make the necessary adjustments and for export industries to gear up for expansion, but the announcement has to be credible. On the other hand, the longer the lag between the formal commitment to a program and its implementation, the greater the opportunity for interest groups to slow up or even halt liberalization and the more likely it is that expectations about the credibility of the government's intentions will be undermined. In El Salvador a gradual approach is not likely to be very successful. Political forces are split into many factions, and interest groups seem able to intervene effectively. Credibility is a major issue because of the apparent skepticism about the government's ability and interest in pursuing reforms. Thus, a rather abrupt and decisive set of reforms would be more likely to be implemented effectively than a gradual set that attempted to smooth the adjustment. Moreover, as exports cannot be expected to react as rapidly as imports to trade liberalization, a first step toward reform should be an increase in the real exchange rate. Otherwise, keeping current relative prices, without foreign resources to finance an increase in the current account deficit, could generate a balance of payments crisis. In addition, the current relative price structure discourages production of exports and stimulates production of non-tradables, thereby impeding a reasonable rate of economic growth.

Among alternative measures to induce expenditure switching, exchange rate adjustments are preferable. Other means, such as changes in import restrictions or subsidy schemes, tend to be discriminatory in their impact on different types of imports and exports and hence can result in inefficient patterns of resource allocation. Moreover, if a change in relative prices is avoided, substantially more reduction in absorption will be needed to reduce the current deficit to a manageable one, even with existing resource transfers from AID.

5.C Changes Required to Improve the Capital Account

Improvement in capital flows can be achieved through a reduction in inflation and a financial reform to encourage Salvadoran demand for financial assets and attract capital from abroad (mainly of Salvadorans). Financial reforms should include

some fundamental changes for the medium-term such as:[33]

-- maintenance of positive interest rates in real terms (which implies nominal interest rates higher than inflation) and correct arbitrage with international rates (which implies nominal interest rates at least equal to international interest rates plus expected devaluation in the parallel market);[34]

-- development of government securities, denominated in dollars and in colones with a significant spread compared to international rates to compensate for El Salvador's country risk;

-- restructuring of the banking system to enhance confidence of investors and to reduce the implicit risk from presently insolvent institutions;

-- elimination of subsidized credit to avoid the financing of low return investments and capital flight;

-- implementation of monetary policy instruments to help stabilize the money supply and strengthen confidence in the colon.

5.D To Stop Losing Competitiveness, Is Devaluation Avoidable? If Not, Is Devaluation Alone Enough to Improve Competitiveness and the Balance of Payments?

It is not likely that competitiveness can be prevented from deteriorating further without changes in both the exchange rate and the exchange rate regime. Given the magnitude of the reforms and the adjustments required to improve the current and capital accounts, from the expenditure as well as the trade and financial sides, reforms call for exchange rate changes at the least. Avoiding devaluation would imply a slower speed of adjustment of macroeconomic imbalances, as well as higher costs of adjustments in terms of output lost.

Is devaluation alone enough to prevent loss of competitiveness? The answer is decidedly negative, recognizing that the real exchange rate is a relative price that cannot be set arbitrarily by policy decisions -- being rather the result of the application of different kinds of domestic policies (monetary, fiscal, trade, etc.) together with people's expectations, the terms

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[33] Full discussion of these reforms is contained in "El Sector Financiero de El Salvador", op. cit.

[34] This point is discussed below.

of trade, capital movements, etc. The Salvadoran situation now characterized by inflation and a balance of payments deficit requires the adoption of several actions at the same time, i.e., a reduction of expenditures, the elimination of import restrictions and the introduction of other trade reforms, devaluation, stability in the money supply and positive real interest rates. The alternative of increasing public external debt is not a realistic option under the present conditions of macroeconomic imbalances and country risk.

Devaluation, as a depreciation of the currency from its current fixed rate, would create an excess demand for real cash balances, as people attempt to retain their pre-devaluation real balances. In turn, real expenditure declines. If devaluation alone takes place with the absence of other changes, the monetization of international reserves at the higher exchange rate may imply even higher inflation without any significant improvement in the real exchange rate or capital inflows, as happened with the 1986 devaluation. To avoid monetization of reserves, the BCR has to sterilize the monetary expansion by reducing net domestic assets -- through lower credit to the government or to the private sector -- implying, in the absence of debt instruments, an expenditure reduction. For that reason, if devaluation is accompanied by a reduction in expenditures, not only the balance of payments but also the real exchange rate will improve, as inflation declines with lower expenditures. Monetary stability and a higher level of the real exchange rate, together with lower inflation and positive real interest rates, will help to attract capital inflows, unless institutional or political restrictions impede the proper functioning of the financial and exchange markets.

The foregoing discussion relies on the monetary approach to balance of payments for El Salvador, an hypothesis already tested.[35] According to this theory, the balance of payments is essentially a monetary phenomenon and depends on the supply and demand for money. Econometric results for El Salvador show that changes in the international reserves of the BCR -- equal to the balance of payments -- are determined by the difference between domestic credit expansion and changes in the demand for financial assets. Consequently, any credit expansion -- due, for example, to a fiscal deficit -- not fully offset by increased demand for domestic financial assets by the public will cause a deterioration in the balance of payments of the same amount as the credit expansion.

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[35] The monetary approach to the balance of payments was tested with an econometric model for the period from 1966 to 1987 in "El Sector Financiero de El Salvador", op. cit. The results of estimation showed a -1 coefficient for credit expansion, indicating that any change in domestic credit not demand induced will leak out in the form of reserve losses at the BCR.

Alternatively, an increase in the rate of devaluation will induce an increase in the nominal demand for money in the short run to finance the same amount of transactions as before and will thus improve the balance of payments transitorily. However, as a higher rate of devaluation implies a higher rate of inflation in the future, the demand for money will be lower in the long run and offset the effect of devaluation. Finally, econometric estimates of the demand for money[36] show that an interest rate premium with respect to international rates, as well as a realistic exchange rate, will be required to improve the balance of payments permanently -- an important result that supports the previous recommendations.

To this point it is clear that exchange rate policy has to be consistent with the rest of economic policy, especially with fiscal policy, with the way the public deficit is financed and with interest rate policy. In order to achieve consistent exchange rate management that contributes to sustaining a balance of payments equilibrium, the following points should be taken into account. First, in the absence of foreign transfers and with limited capacity to increase external debt, a minimum rate of devaluation is necessary to be compatible with the financing of the fiscal deficit and capital movements in order to avoid international reserves losses by the BCR. According to econometric estimates, devaluation can compensate to some extent for the negative effect of credit expansion on the balance of payments. However, an equal percentage of devaluation and credit expansion will offset at most half the reserve loss. Thus, devaluation alone is not sufficient to offset the macroeconomic imbalances deriving from the fiscal deficit; complementary actions have to be taken such as reductions in the level of expenditures and corrections in the interest rate. Second, the level of domestic interest rates has to be correctly arbitraged with international rates, including a country risk premium, to allow domestic financial assets to compete with foreign assets and thereby to try to discourage capital flight. Starting from international interest rates, domestic rates have to be increased by expected devaluation plus a country risk premium. Moreover, domestic interest rates have to be modified each time the rate of devaluation is changed in order to make domestic financial assets permanently attractive compared with foreign assets.

5.E The Multiple Exchange Market in Practice: Reasons for Adoption, Effects, Size and Structure

Multiple exchange rate systems are usually adopted for balance of payments reasons. At present there are four foreign exchange markets in El Salvador, as described earlier, which in practice corresponds to only three: the official, the dollar accounts market and the black market. The official market covers a wide

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[36] ibid.

range of exchange operations, as shown above, and basically tries to prevent prices of essential commodities from being affected by devaluations through allowing their importation at a relatively favorable exchange rate. Similarly, to tax away the additional profits that exporters would obtain from a uniform exchange rate depreciation, traditional exports are subject to the less favorable (to them) exchange rate in the official market. In addition, public sector transactions are channeled through the official market as a way to reduce public sector expenditures.

Non-traditional exports and worker's remittances, in contrast, may be converted at a higher exchange rate as a way of promoting such inflows of foreign exchange. Official remittances captured by the banking system abroad are transacted in the dollar accounts market, while unofficial remittances are transacted at the black market rate. Short-term capital flows of the private sector are assigned to the dollar accounts or black market, depending on the legality of the transactions, in an attempt to prevent sudden one-way pressures on the capital account from affecting international reserves. Imports that are not transacted in the official market -- because of delays by the BCR in supplying foreign exchange or cost-increasing administrative requirements -- are transacted in the dollar accounts or black market.

The black market contributes to balancing the overall exchange market or balance of payments. Apart from commodities produced close to the border and involving relatively low transport costs, the black market is likely to be fed by the sources of foreign exchange where evasion is easy. Notable among these are sales of foreign exchange from remittances sent back by Salvadorans and over- and under-invoicing of trade documents. To the degree, therefore, that the black market circumvents foreign exchange controls, it fulfills a useful function in that it mitigates the adverse effects of quantitative restrictions on the allocation of resources. In particular, it provides exporters who do not sell foreign currency in the official market with increased prices and allows importers to purchase the goods that they could not otherwise obtain at prices they are willing to pay.

Although in the past there was a large spread between the official and the black markets, affecting resource allocation and inducing over-invoicing of imports and under-invoicing of exports, the situation recently has been somewhat different. The dual exchange system that now exists in El Salvador operates with incomplete market separation and consequently has little practical effect. Incomplete market separation derives from indirect official intervention by the BCR in the black market. According to current practices, the demand for foreign exchange in the black market is the residual from the official market. As long as the BCR supplies more foreign exchange at the official rate, the demand in the dollar accounts and black markets declines as importers do not need to buy foreign exchange in those markets. In addition,

as the BCR sells more foreign exchange, it reduces the money supply and consequently the means of payments to buy foreign exchange in the other markets. The exchange rate differential between official and the other markets is at present only about 5 percent, so that the actual multiple market has almost the same effect as a unified fixed exchange rate system.[37] (See Appendix B.)

For future discussion it is convenient to have in mind the size and structure of the official and dollar accounts markets as they presently exist in El Salvador. The following figures are given in millions of U.S. dollars and correspond to the 1987 calendar year. The figures presented are only the potential amounts for each category and may vary with BCR policy. For example, there are $735 million of imports that can qualify for transactions in the dollar accounts market. However, the BCR might make official foreign exchange available for some of these imports, thereby switching the transactions from the dollar accounts to the official market.

The <u>official market</u> is basically composed of five items:

1. Traditional exports: 386
   - Coffee 354
   - Sugar 12
   - Shrimp 20

2. Imports: 277
   - Services (Insurance and Freight) 60
   - Oil 104
   - Fertilizer 27
   - Capital Goods 86

3. AID Transfers (1988 figures): 240
   - Development Assistance 40
   - ESF 155
   - Other 20
   - PL 480 7
   - Section 416 8
   - Earthquake Assistance 10

4. Public Sector Debt: 58
   - Receipts: 111
     - AID 53
     - IDB 23
     - Other 35
   - Payments: 53

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[37] See Daniel Gross, "Dual Exchange Rates in the Presence of Incomplete Market Separation," <u>IMF Staff Papers</u>, 1988, pp.437-460.

5. Banking Capital:
   Receipts: 101
   Payments: 107

Official Market Balance:
   Receipts: 838
   Payments: 437
Surplus: 401

The dollar accounts market potentially includes the following items:

1. Non-Traditional Exports: 240
   CACM 138
   Other 102

2. Imports: 735

3. Services:
   Receipts 308
   Payments 363

4. Transfers (family remittances excluding AID): 260

Dollar Accounts Market Balance:
   Receipts 808
   Payments 1098
Deficit: 290

According to private estimates, family remittances in the black market amount to between 450 and 500. Additionally, unrecorded exports and imports are transacted in the black market, but there are no available estimates.

The overall balance (including both the official and dollar accounts markets) results in a surplus as a consequence of AID transfers. Clearly, if AID transfers were eliminated the exchange market as now implemented would collapse. In the next section an alternative exchange rate system is discussed that tries to reduce the risk of a balance of payments crisis.

SECTION 6: SPECIFIC POLICIES

6.A Suggested Changes in the Exchange Rate System

The exchange rate system now in place has three basic kinds of problems:

First, Fixed Exchange Rates. In the present international environment, with most major currencies floating independently, a small country like El Salvador cannot maintain a strictly fixed exchange rate system under inflationary conditions or it will lose competitiveness. The maintenance of a fixed exchange rate under such conditions would require the government to alter its policies -- fiscal, monetary, income, etc. -- promptly and strongly in response to domestic or external disturbances in order to re-establish equilibrium in relative prices. Under present political conditions, it seems clear that the Salvadoran government is not prepared to accept the short-term adjustment costs and sacrifice required to maintain the fixed exchange rate system, especially given the civil war environment. In the case of severe balance of payments difficulties, like those experienced by the Salvadoran economy, a more flexible exchange rate system should be a realistic option to prevent a balance of payments deterioration if foreign transfers are gradually reduced.

Second, Exchange Controls. The present system of exchange controls has prolonged many of the balance of payments problems and led to disintermediation and, consequently, will not contribute to the changes required to improve the balance of payments. In addition, the application of exchange controls entails the rationing of scarce resources through means other than the price mechanism. As a general rule, such rationing will take place in accordance with established economic and social priorities, as embodied in the regulations governing exchange control procedures. In spite of this, however, officials of the BCR invariably find themselves with discretionary powers to allocate foreign exchange. The danger then arises that decisions made by officials in certain "gray areas" not clearly defined by exchange control regulations -- especially for those foreign exchange approvals typically made on a case-by-case basis -- will be influenced by the potential profits to be made by exploiting the exchange rate differential between the official and the black markets. Indeed, the political leverage of certain groups with vested financial interest in the maintenance of controls may account for some government reluctance to dismantle them. Given these considerations, a market-determined exchange rate system should be the objective of policy reform. A major aim of a market-determined exchange rate is to attract into the formal market the extensive illegal or unofficial exchange transactions. This reform could enlarge the supply of foreign exchange by enhancing family remittances and possibly other capital inflows. Another reason for the introduction of a market-

determined exchange rate is to shift the determination of the exchange rate from the government to market forces. With the rate determined in an open market, the government will be able to focus decision making on other areas of economic management.

Additionally, exchange rate flexibility and accompanying liberalization may be expected to affect both official foreign exchange reserves and capital flows through the following channels. A floating exchange rate removes the need for official intervention to defend the value of the domestic currency, so that in case of a reduction in foreign aid, reserve losses, official overborrowing and external payments arrears may be avoided. Private capital flows are also likely to respond positively to the removal of the risk of a steep devaluation from an unrealistic exchange rate and to the liberalization of exchange controls on the repatriation of capital and investment income. Capital reflows (or simply stopping capital flight) will, however, require domestic interest rates to be competitive with foreign rates. Nonetheless, domestic interest rates may not need to be as high as before liberalization or the initial adjustment of the exchange rate, since they will not have to compensate for expectations of devaluation. It is difficult to determine the magnitude of these effects in the case of El Salvador, first because, in general, capital flight is by its nature not directly measurable and, second, because of inherent institutional risk.

Third, Multiple Exchange Markets. The multiple exchange market has little practical effect on the balance of payments at present. As discussed above, the exchange rate differentials among the official, dollar accounts and black markets have been so small that there is no reason to maintain a multiple exchange rate system that, even though unimportant now, could produce a misallocation of resources. Unification of the foreign exchange markets together with removal of controls may constitute an efficient solution to achieve market equilibrium.

Summarizing, the recommendation is to implement a free and more flexible unified exchange rate system in order to improve competitiveness and the balance of payments. It might be argued that a free market may be too risky for a small country like El Salvador because of its small volume of foreign exchange transactions, its relatively inflexible trade flows and its less developed financial markets. First, however, it should be noted that the volume of foreign exchange operations is not negligible, as the total volume of such operations (for imports, for exports of goods and services, etc.) is approximately U$S 4,000 million including the official and dollar accounts markets and an estimate of U$S 800 million for the black market. This is equivalent to 75 percent of GDP. Second, as shown in Section 4, there is a high response elasticity of exports to the real exchange rate in El Salvador. Third, a simultaneous financial reform is also suggested in which interest rate policy would be changed at the same time as

liberalization of the exchange market. Liberalization of the exchange market will not work well under present economic conditions. Until a program of macroeconomic adjustment and major trade and financial reforms are also carried out, little can be expected from changes in the exchange regime alone. The discussion of specific exchange rate policies for El Salvador within a free, unified exchange rate system involves the analysis of policy constraints and potential market instability. How the market will work and how the exchange rate should be determined under a free, unified exchange rate system will be discussed in the next sections.

6.B Policy Constraints

There are at present several constraints on exchange rate policy in El Salvador. The most important are:

1. The lack of genuine monetary policy instruments, such as open market operations, weakens the ability of the BCR to control the money supply and makes it difficult to stabilize the exchange rate in the context of a fiscal deficit like El Salvador's. At present, in sustaining the fixed parity at 5 colones per dollar, the BCR sterilizes the excess money supply by selling foreign exchange. However, in the event that AID transfers were suspended, the BCR would not have sufficient international reserves to sterilize monetary expansion and, without appropriate monetary policy instruments, the stability of the money supply would be very difficult to sustain.[38]

2. The insolvency of several banks undermines savings mobilization. This, in turn, increases country risk and discourages the capital inflows that are required to balance external accounts and enlarge the supply of foreign exchange. The principal aim of a unified, market-determined exchange rate system is, precisely, to increase the supply of foreign exchange.

3. Interest rate ceilings discourage the demand for financial assets denominated in colones and induce a greater demand for foreign exchange to hedge against inflation and potential future devaluations. This fact can contribute significantly to exchange rate instability, as any monetary expansion not demanded by the public at existing interest rates will result

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[38] In the case of a fixed exchange rate, the monetary authority can never keep the money supply under control, as shown by the monetary approach to the balance of payments. In the case of managed float, however, the BCR can simultaneously manage the exchange rate and the money supply.

in an excess demand for goods or foreign exchange.[39]

4. Administrative restrictions derived from the nationalization of the banking system do not allow banks to operate in the existing parallel market by buying and selling foreign exchange, thereby impeding the monetary authority from holding a large portion of the foreign exchange supply.

All these restrictions lead to the conclusion that, due to the resulting limited room to maneuver, El Salvador is also limited in choosing ways to manage the exchange rate more effectively in a free market context.

6.C Potential Instability

El Salvador is likely to experience a number of shocks that are unpredictable and that might impose instability on the financial and foreign exchange markets. Instability might arise from any of the following events:

1. Civil war could produce major turmoil at any moment. However, since the civil war has now been going on for almost ten years, economic agents are somewhat accustomed to guerrilla attacks. If political conditions remain under control, the current level of the civil war may not be a major obstacle to improving the exchange rate system. Nevertheless, a shock could always occur without prior notice. The resulting instability cannot be afforded by any market-determined system, and an emergency exchange control system might have to be implemented in a major emergency.

2. Coffee price fluctuations, which contribute significantly to export income and to trade balance results, constitute another important source of instability that could be reflected in the foreign exchange market. Coffee prices affect the real exchange rate through increases or reductions in the value and supply of exports. Coffee booms in the past have contributed to an appreciation in the real exchange rate, and thereby to a reduction in non-coffee exports. As long as non-coffee exports respond to the real exchange rate stimulus, they also depend on real exchange rate variations. Coffee price variations certainly exert a large influence on trade performance.

3. Institutional reforms such as nationalization of the

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[39] The determinants of the demand for financial assets already mentioned provide evidence for the substitution among money, goods and foreign exchange. See "El Sector Financiero de El Salvador", op. cit., Table 10B: Apéndice Econométrico.

banking system, agricultural reforms, etc. contribute to an environment of general uncertainty in economic developments that affects economic agents' expectations and behavior. Additionally, possible future political changes constitute another source of uncertainty. Results from elections may bring about widely differing alternative policy options.

4. Capital flows and transfers will continue to play an important role in the foreign exchange market, especially with uncertainty concerning future AID flows, which may well be reduced in the future. Capital movements, which are highly sensitive to risk and pessimism that can dominate in El Salvador, constitute another important source of instability. In addition, the lack of a well developed capital market does not help in attracting capital flows from abroad.

All these policy constrains and factors affecting stability are taken into account in the proposal presented in next section.

6.D Alternative Exchange Rate Systems within a Unified Free Market

As indicated above, a free, unified market for foreign exchange would constitute an important innovation in El Salvador. A free market together with a flexible exchange rate constitute two major changes in the system now in practice. Unification alone would not greatly alter the present situation since, de-facto, a unified foreign exchange market already exists where the black market rate has recently exceeded the official rate by only about 5 percent. This narrow gap makes it much less difficult to undertake a major reform of the exchange rate regime at this point, an opportunity that should not be lost, as will be indicated below.

Three kinds of exchange rate systems are distinguished in the economics literature: fixed exchange rates, floating exchange rates, and exchange controls. As already explained, fixed and floating exchange rates are clearly preferable to exchange controls.[40] Recently, analysis has shifted to investigating the optimal degree of intervention in the foreign exchange market, where zero intervention is synonymous with flexible exchange rates

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[40] Exchange controls are inconsistent with achieving equality between domestic and international rates of transformation and substitution among commodities and do not permit optimal intertemporal maximization. Exchange controls do not facilitate international flows of goods and services, the ultimate welfare-improving phenomenon, and thus do not permit the attainment of a Pareto-optimal free trade and capital flow situation. See A. Krueger, "Exchange Rate Determination", p.121, Cambridge Surveys of Economic Literature.

and full intervention is a regime of fixed exchange rates. Intermediate situations correspond to a managed float system. Since a fixed exchange rate in El Salvador did not contribute to sustaining competitiveness and equilibrating the balance of payments -- after the economy began to run fiscal deficits, inflation soared, capital flight increased and the terms of trade became increasingly adverse -- only the alternative of implementing a more flexible exchange rate system will be considered here, as recommended above.

There are several options for implementing a more flexible exchange rate system within a free, unified market: crawling peg, free float or managed float. However, none of these options can be considered a solution that will stop the loss of competitiveness and equilibrate the balance of payments if the reforms of government expenditure and trade and financial policies already outlined above are not implemented simultaneously.

Crawling Peg. A crawling peg system is one in which the exchange rate is pegged to a foreign currency and this parity is adjusted according to a certain rule.[41] The rate of adjustment -- or the rate of devaluation, called mini-devaluations -- is generally fixed and different from zero (otherwise, it would be a fixed exchange rate). A crawling peg is similar to a fixed exchange rate system in that, during a certain period of time, the exchange rate remains fixed and the money supply changes passively according to changes in the demand for money. Sometimes crawling pegs are divided between active and passive. An active crawling peg system is one in which the exchange rate is fixed in advance, as in the Southern Cone "tablitas". A passive crawling peg consists in a rule of smooth adjustment of the exchange rate according to past domestic and international inflation, in which the government tries to sustain purchasing power parity.

The adoption of a crawling peg would be a significant improvement with respect the existing fixed exchange rate, as it would prevent imbalances due to differing rates of inflation followed by a sudden adjustment of the exchange rate to offset such differences. However, as the crawling peg usually incorporates less economic information than is available in foreign exchange markets, the authorities only know that the rate they have set is out of equilibrium when the demand and supply of foreign exchange

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[41] This definition is in accordance with the crawling peg system in operation in inflationary Latin American countries. The original definition applied in developed countries states that a crawling peg system is one where there is one official exchange rate which is allowed to move within rather narrow bands; markets outside the band are prohibited, and the bands around the peg are adjusted only under conditions of extreme disequilibrium.

do not match each other. For example, the crawling peg system usually neglects other sources of trade-account shifts, such as long-term changes in a country's terms of trade. Additionally, the crawling peg system fits well only when the balance of payments depends mostly on the current account which, in turn, is responsive to changes in competitiveness. When capital movements or transfers are important, a sustained balance of payments equilibrium may require a more complicated rule to adjust the exchange rate. As discussed later, a passive crawling peg system can be considered a special case of a managed float. Finally, the experiences of other countries using an adjustable peg have shown both the difficulties of parity analysis and the dangers of politicization inherent in such regimes.

Free Floating. A free floating system can be defined as one in which the central bank does not intervene in the foreign exchange market. Under the crawling peg system, the central bank has to buy and sell foreign exchange to equilibrate the balance of payments -- and by so doing loses the monetary control. In a free floating system, the central bank leaves the exchange rate to adjust until the market clears, and as long as it does not intervene, there are no official reserves transactions. Thus, under a free floating system, the central bank maintains the money supply permanently under control.

There may be concern that a floating exchange rate would tend to be unstable in El Salvador because of the relative thinness of financial markets. In response, it can be said that the actual black market, which varies freely, is stable enough. Moreover, as can be seen in Appendix B, a simple econometric model shows that 94 percent of the variation in the black market exchange rate can be explained by changes in past levels of exchange rates and interest rates, without destabilizing forces. Furthermore, according to this model, the black market rate is not a free floating exchange rate because incomplete market separation permits the BCR to stabilize the black market rate through its intervention in the official market. Additionally, from the econometric results, interest rate policy can also contribute significantly to the stability of the exchange rate. If nominal interest rates do not adjust promptly to changes in inflationary expectations, currency substitution between colones and dollars will be a source of exchange rate volatility. Under a free floating system, the stability of the exchange rate can usually be achieved through the stability in the monetary aggregates together with appropriate interest rates (see Appendix B).

Most importantly, a permanently "realistic level" for the real exchange rate -- a level that does not induce expectations of future devaluation -- is required in order not to encourage currency substitution. This objective is not always easy to attain in a free floating system. A tight monetary policy that may produce an immediate response in the stability of the nominal

exchange rate may also result in currency appreciation as prices of non-tradable goods do not react with the same speed. In the case of a monetary expansion, an opposite problem arises. If, for example, a 10 percent increase in the nominal money supply causes a 10 percent depreciation of the exchange rate, the price level rises by less than 10 percent, according to the foregoing argument, leaving the real money supply above its original level. This excess supply of money causes a further depreciation that constitutes the well-known "overshooting" phenomenon.

It is possible that, immediately after floating, the nominal rate will exceed its long-run equilibrium level through overshooting. If the market perceives the need of a 10 percent change in the long-run equilibrium exchange rate, the overshooting hypothesis states that the exchange rate will initially depreciate by more than 10 percent and afterwards fall to its long-run level. There are different explanations for this kind of phenomenon[42] but no strong theoretical arguments, in favor or not, of the possibility of overshooting -- which finally depends on the speed of adjustment of assets, the interest elasticity of the demand for money, and the degree of responsiveness of the trade balance to changes in relative prices.[43] Without statistical estimates for all these parameters, what is going to happen cannot be predicted precisely. According to previous econometric estimates, the speed of adjustment and the interest semi-elasticity of the demand for financial assets (M2) are both quite low, indicating that a large increase in interest rates will be needed to compensate for a deterioration in the real exchange rate.[44] However, the velocity of capital movements in the balance of payments should be considerably greater, according to past experience and the lack of financial investment opportunities in countries with underdeveloped capital market such as El Salvador, so that the possibility of overshooting is meaningful. However, as long as the reaction of the current account balance to changes in the real exchange rate is significant, because exports and imports are not too rigid, the probability of overshooting diminishes.

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[42] See, for example, R. Dornbush, "Exchange Rate Dynamics," Journal of Political Economy, December 1976; and G. Calvo and C. A. Rodriguez, "A Model of Exchange Rate Determination Under Currency Substitution and Rational Expectations," Journal of Political Economy, June 1977.

[43] See J. Frenkel and C. A. Rodriguez, "Un Análisis de las Propiedades Dinámicas del Tipo de Cambio Flexible," CEMA, May 1980.

[44] See "El Sector Financiero de El Salvador", op. cit., Tablas 10B y 11B del Apéndice Econométrico.

Another concern about the adoption of a free floating exchange system is that it could lead to a free fall in the exchange rate. Such a depreciation of the colon could contribute to an accumulation of inflationary forces. The possibility of an initial jump in the exchange rate cannot be ruled out in the presence of large economic imbalances, especially if AID transfers are eliminated. However, such a result should not be attributed to the foreign exchange system. The initial depreciation would reflect the required changes in relative prices for market forces to clear the market and re-establish equilibrium. Moreover, as already discussed for a fixed rate system, if AID transfers are eliminated an initial devaluation is unavoidable. The advantage of leaving the exchange rate free to float is that the initial jump will not be an administrative decision but rather a market determination without political pressures.

In any event, even if AID flows were eliminated, a free fall in the exchange rate cannot be permanent because the official market would not be far from equilibrium, especially since many illegal transactions would be absorbed into the market. Moreover, a free fall in the exchange rate would require a permanent decline in the demand for money, which is highly improbable if interest rate policy is modified as suggested earlier. Volatile exchange markets can be expected if the inflationary expectations of exchange market participants change significantly without an accompanying adjustment in nominal interest rates. Under such conditions, economic agents would prefer to hold foreign currency instead of domestic currency.

From the previous discussion it is clear that stability of the money supply, interest rate flexibility, and a more developed capital market are three prerequisites to implementing a free floating system successfully. In addition, political and institutional stability is required in order to operate a free floating market. Monetary stability is not easy to attain under present conditions. The BCR does not have genuine monetary policy instruments, and the incipient nature of the capital market does not make financial investment in El Salvador attractive enough to expect a significant inflow of capital. Finally, institutional instability (e.g., problems of bank insolvency) could also be reflected in foreign exchange markets.

To sum up, it can be stated that a free floating system may be too risky in view of the existing difficulties referred to above that make it unfeasible or undesirable. Some of the concerns with respect to a free floating system may be reduced by intervention in foreign exchange markets in order to avoid volatility, overshooting, etc. This is the managed float system that is discussed next.

Managed Float. A managed or "dirty" float system differs from

a free or "clean" float in that the monetary authority intervenes in the foreign exchange market. Intervention can be defined as any sale or purchase of foreign exchange against domestic currency which the monetary authorities undertake in the foreign exchange market. Intervention may also come through monetary policy operations that involve sterilization.

The objective of a managed floating system is to resist exchange rate movements in the market that may seem unjustified in the light of fundamental economic factors. Fundamental economic factors in the case of El Salvador would be: (1) export competitiveness; and (2) overall balance of payments equilibrium within a calendar year.

Objectives (1) and (2) are usually complementary but may occasionally be inconsistent, especially in the unlikely event of large capital inflows into El Salvador that could produce an appreciation of the colon. A permanent adjustment in the nominal exchange rate in order not to lose competitiveness should be the most important goal to enhance sustained economic growth. It is generally accepted that exchange rate movements tend to reflect relative inflation rates in the long run, but the latter have not proved to be reliable indicators of such movements in the short run. According to the priorities given above, in the event of pressure for currency appreciation the BCR should intervene in the market to buy reserves in order to sustain the level of the exchange rate and could also reduce interest rates if capital inflows were too strong (an unlikely event in El Salvador, as noted above). In the opposite situation, in which, even when export competitiveness is attained, the overall balance remains in deficit, the BCR should not intervene but should rather allow market forces to bring about further depreciation and adjust interest rates simultaneously in order to achieve the balance of payments equilibrium goal.

The appropriateness of the exchange rate level has to rely on eclectic, qualitative judgments. For this reason, it may be the case that when the exchange rate depreciates at a faster rate than the perceived long-run equilibrium, i.e., overshoots the equilibrium level, the BCR could intervene in the market to reduce an improper depreciation in the exchange rate. In an analogous way, if as a consequence of the tightening of monetary policy the real exchange rate appreciates, then the BCR might have to intervene and buy foreign exchange or reduce interest rates in order to sustain competitiveness.

A managed floating system allows a certain degree of control over the money supply and the exchange rate at the same time. Interventions in the foreign exchange market require a coordinated mix of monetary and exchange rate policies to achieve goals (1) and (2). In addition, as long as the general economic strategy is non-inflationary economic growth, a blend of monetary and fiscal

policies have to be coordinated as well to achieve internal and external equilibrium. Basically, the idea is that since changes in monetary conditions generally have the most immediate impact on exchange rates -- as explained in Appendix B -- monetary policy should be directed more towards achieving exchange rate objectives, while fiscal policies should be directed towards achieving the desired level of domestic demand.

This approach is not easy to implement because there is a relatively close relationship between the size of the budget deficit and the growth of the money supply. As emphasized above, the budget deficit has to be reduced through curtailing expenditures. Until this corrective policy is undertaken, it will be very difficult to keep the money supply under control, as the BCR does not have at its disposal other monetary instrument besides selling AID foreign exchange funds. Moreover, the lack of a well-developed capital market does not allow a more independent monetary policy. This is another reason, in addition to attracting foreign capital, to implement a government securities market as soon as possible to help in financing the fiscal deficit. Finally, as stated before, interest rate policy has to become more flexible, aiming toward total liberalization. In this process, interest rate policy has to be in accordance with changes in the money supply, while also allowing for positive real interest rates to encourage the demand for colon-denominated financial assets and discourage foreign currency assets.

The effectiveness of a managed floating system in preventing undesired movements in exchange rates depends in part, on its impact on the flow of funds through the market. It also depends on domestic monetary conditions, but especially on the way it influences expectations about the future course of the exchange rate. The market's perception of the degree of commitment by the authorities to achieving internal and external equilibrium -- basically by reducing the fiscal deficit and sustaining monetary stability -- is, therefore, crucial. When managed floating is directed essentially at offsetting the impact of inappropriate domestic policies on the exchange rate, it is unlikely to be effective because expectations of future devaluations and inflation will counteract official intervention. If, however, appropriate domestic policies are being pursued but market forces are, nevertheless, pushing the exchange rate out of line with sustainable current and capital account positions, official intervention will succeed in facilitating a smooth adjustment.

A managed floating system may thus be a useful alternative in implementing a more flexible exchange rate, as it allows the government to manage a blend of monetary and exchange rate policies by intervening in the foreign exchange market. In this respect, the managed floating system appears to be a superior system to either a crawling peg and free floating.

In summary, this section makes the two main recommendation of the study:

First, El Salvador should implement a free and more flexible, unified exchange rate system.

Second, El Salvador's monetary authorities should used a managed or "dirty" float to achieve the greater flexibility and unification of foreign exchange markets.

Reasons for the second recommendation are explained in the preceding section. Since the prerequisite conditions do not exist for a totally free-market exchange rate, some intervention is justified until the prerequisites can be met. Intervention should, however, be aimed only at preventing instability and smoothing out exchange rate changes that are transitory. Intervention should not be oriented toward keeping the exchange rate for the colon within preconceived limits that are different from those determined by market fundamentals.

SECTION 7: POLICY IMPLEMENTATION

The objective of section is to lay out the characteristics of the long-run policy package, as well as the transitional steps required to establish this eventual policy package. The proposal for a free and more flexible exchange rate system is not difficult to implement, given a change of mind with respect to the role for the foreign exchange market in resource allocation and a recognition of how monetary stability assures exchange rate stability within the context of a free market system. In addition, the implementation of a new foreign exchange system should be laid out together with operational guidelines for foreign reserve management by the BCR, as this constitutes a critical element in any strategy for economic development.

7.A Liberalization and Unification of the Foreign Exchange Market

The objective of the items listed here is to move as quickly as possible to a unified exchange rate regime. To do this, one needs to remove the distinctions between an "official" and a "black" market, so that in the end only one foreign exchange market survives. Some measures would be transitionary, but in these cases exceptions to full freedom of foreign exchange access have been made as an expedient, taking into account some of the special constraints facing El Salvador. What is proposed for liberalization and unification of the foreign exchange market in El Salvador is not a totally free market but free enough to allow any person or firm, including financial institutions and foreign exchange dealers, to buy and sell foreign exchange in the market for any purpose with the following exceptions:

1. Traditional export proceeds from public institutions or enterprises would have to be surrendered to the BCR until a more liberal trading mechanism is developed in the future. Non-traditional exports could be freely sold in the market. The recommendation to continue sale of traditional export proceeds to the BCR is due to the institutional structure for traditional exports. Currently, public or quasi-public institutions (e.g., INAZUCAR, INCAFE) market most traditional exports, and it is these institutions that receive the foreign exchange proceeds, not the producers. It is the policies of these institutions that affect incentives for farmers, not basically the policies of the BCR. If these institutions are privatized, then all export proceeds would be sold at the unified market rate.

2. All public sector foreign exchange operations, including foreign debt payments and receipts, would be channeled through the BCR to allow better coordination and monitoring, thereby avoiding unnecessary disturbances to the market.

3. Holdings of foreign exchange deposits would only be permitted for exporters, importers and foreign exchange dealers who, in turn, would be allowed to become indebted in foreign exchange to the banking system and abroad.

4. Financial institutions as well as foreign exchange dealers would be limited in their foreign exchange positions, and excess foreign exchange would be deposited at the BCR. These limits would be determined by the BCR by establishing appropriate ratios for foreign and domestic indebtedness. The reason for these controls is to prevent major dealers from controlling the market by using their market power or inside information. Also, controls could be applied to prevent dealers from taking imprudent positions in foreign exchange that might subsequently create crises or pressures for government bailouts. The level at which these controls might be set can only be worked out in consultation with the BCR.

5. Foreign exchange dealers would have to be previously approved by the BCR and be subject to its regulations.

6. Holding of government securities denominated in foreign currencies would be allowed without limit without having to be computed in the foreign exchange exposure of financial institutions and foreign exchange dealers.

The major changes proposed are the following:

1. Foreign exchange transactions for any purpose would be freed, with the exceptions cited above, and exchange controls eliminated. Transactions would be simple and without administrative restrictions, which is a way to legalize black market operations and attract them into the formal market. If foreign exchange transactions remain cumbersome, then the black market will continue to operate.

2. Banks, other financial institutions and foreign exchange dealers would be allowed to engage in foreign exchange transactions. At present, banks and other financial institutions are severely limited in their foreign exchange operations.

3. Restrictions on imports, such as those cited earlier, would be eliminated and replaced by import tariffs to allow a freer trade system. A free exchange rate that is more "realistic" -- closer to equilibrium than now -- together with liberalization of imports will discourage smuggling.

4. Permits for foreign exchange dealers or foreign exchange houses to operate should be easy to obtain once BCR regulations regarding minimum capital requirements, bookkeeping and supervision by the BCR are fulfilled. This

framework will bring the existing illegal exchange houses within the formal system. Moreover, as soon as the market is completely freed, illegal foreign exchange operations should not be permitted since they would then be motivated by other types of illegal activities.

5. Capital movements between El Salvador and abroad would be liberalized, allowing financial institutions and other economic agents to operate in international financial markets through selling and buying foreign financial assets within the limits imposed by the foreign exchange position. Private enterprises would be free to obtain loans from abroad, except to take certain back-to-back loans. However, dollar denominated deposits would be allowed only to exporters and importers.

Under this proposal, the unification of the foreign exchange market would take place almost immediately because everyone would be able to buy and sell foreign exchange for any purpose at the existing rate without any restriction and with no incentive for under-invoicing exports or over-invoicing imports.

7.B The Mechanism for the Market: Auction or Interbank System?

An important choice in instituting a managed float system is whether it should take the form of an auction or an interbank market. The basic objective of auction and interbank market systems is to establish an exchange rate that will move flexibly to equilibrate the supply and demand for foreign exchange and thereby reduce dependence on exchange controls and trade restrictions. The choice between the two types of arrangements must take in account the institutional and economic structure of El Salvador.

In El Salvador, where there is a sufficient number of capable commercial banks, together with a pre-existing network of operators dealing in the black market for foreign exchange, an interbank arrangement is likely to be more efficient and will require fewer government resources to ensure its success. The existing expertise of banks -- though perhaps not as important as before nationalization -- and of foreign exchange dealers will allow the market to function in a natural and easy way. Under the present nationalized banking structure, the risk of collusion among participants is highly unlikely. In addition, the BCR has the possibility for better management of the exchange rate by coordinating exchange rate and monetary policy within the banking system. However, the BCR must take care that its intervention through the banking system is designed to smooth adjustments in foreign exchange markets and not to prevent adjustment. Moreover, as the BCR may also coordinate foreign exchange allocation among institutions and enterprises, the risk of concentration in the access to foreign exchange is also negligible.

Nevertheless, the nationalized banking system, while avoiding the risks of collusion and concentration, might endanger the system through political allocation of foreign exchange rather than free access to the market. For this reason, the implementation of an interbank market under the present condition of the banking system would be less than perfect. There is no way to avoid this problem until the financial sector is restructured but, to some extent, provision for freedom of entry through licenses for exchange houses to operate may reduce the risk of misallocation. However, while it is possible to achieve sufficient institutional depth quickly, the volume of operations of private exchange houses may be almost meaningless compared to the rest of the financial system.

The participants in an interbank market would be commercial banks, financial institutions in general (e.g., saving and loan associations), the BCR and foreign exchange dealers specially licensed for the purpose. Freedom of entry into the foreign exchange market is the most important factor to ensure a competitive environment. However, as long as most financial institutions are managed like a holding corporation of state-owned companies, competitiveness will be difficult to attain under the present condition of the financial system. With an interbank system, the exchange rate will be determined in negotiations between banks and their clients and in transactions among banks. The exchange rate is free to vary from hour to hour and day to day. However, as a consequence of the holding company management, the exchange rate will be controlled by the BCR through the commercial banks and financial institutions in general.

Market participants may be limited in their foreign exchange positions. This regulation is to prevent banks and foreign exchange dealers from taking imprudently large exposures to exchange rate risk and to prevent major dealers from attempting to corner the market or from using inside information to speculate through their foreign exchange positions. The BCR may set maximum commissions or spreads between buying and selling rates to be charged by commercial banks and foreign exchange dealers.

The alternative of an auction system would not make too much difference, compared with the interbank system, in the case of El Salvador because of the existence of a nationalized banking system. The principal philosophy of the auction market is that auctions approximate the working of the price mechanism by allocating scarce foreign exchange resources to those who value them most. The auction system is not recommended in the case of El Salvador for several reasons:

-- The BCR does not have sufficient manpower capability to conduct the auction and would therefore require additional resources.

-- The auction is a cumbersome mechanism which requires all residents to obtain permission to open convertible currency accounts in order to auction funds through authorized banks. Family remittances, for example, require only a simple system such as the black market provides. For this reason, an auction system would not be able to attract all black market operations into the formal market.

-- Since auctions are periodic, they are a less efficient clearing mechanism than an interbank market that functions on a continuous basis.

-- Auctions would require considerable input from the BCR (e.g., to decide how much foreign exchange is going to be auctioned, when and under what terms), and the role of the authorities is more central than in an interbank market. For this reason, there is greater probability of fixing the parity artificially, as under a fixed rate system.

Perhaps the basic differences between interbank and auction system arrangements are the treatment of the supply of foreign exchange to the market and the frequency and continuity of exchange rate adjustments. An essential feature of an auction market arrangement is that it requires the surrender of foreign exchange to a centralized unit, usually the central bank. In contrast, in an interbank arrangement the ownership of foreign exchange may remain diffused in the private sector.

7.C Is a Large Initial Adjustment Likely in the Exchange Rate?

The question that immediately arises is whether the level of the exchange rate would jump and by how much once the market begins to operate. It is unlikely that economic authorities and agents think that the exchange rate will fall, but this is not so absurd under certain conditions, as will be indicated below. These kinds of questions are not easy to answered in advance, as they will depend mainly on the expectations of economic agents regarding the success of the reforms and the results of economic policy in general. El Salvador's economic situation will, of course, also play an important role.

The money supply will play a prominent role in determining the level of the exchange rate. A tight monetary policy, both before and after floating the exchange rate, will be a necessary condition for stability during the period of implementation. However, this alone will be insufficient if destabilizing expectations prevail. These usually appear in an inefficient market in which, after a devaluation, economic agents predict further devaluations without considering future monetary policy strategy or other economic policies. If that is the case, successful intervention can be carried on by the BCR by selling international reserves after floating.

The crucial issue for stabilizing expectations is credibility. The government has a major role to perform here by announcing the whole package of economic reforms -- guidelines for which were discussed above -- and showing its willingness to comply with the implied commitments. The Salvadoran government has a good reputation in this respect in holding the money supply under control -- but has not been so good in balancing the budget. According to these considerations, if the BCR pursues a tight monetary policy and economic agents believe in it, then it would even be possible for the exchange rate to fall, as a lack of liquidity restrains the demand for foreign exchange and the supply that now exists is supplemented by an increased supply of foreign exchange after liberalization.

If monetary policy is too rigid after floating, so that the exchange rate does not adjust, then the initial appreciation will cause the real exchange rate to deteriorate even further. In view of the previous discussion indicating that a devaluation is required to restore competitiveness, the BCR will have to buy international reserves in the market and ease and monitor the money supply to allow the exchange rate to increase smoothly.

7.D Pre-existing International Payments Arrears

Pre-existing external payments arrears may create difficulties in the early operation of the foreign exchange market and affect confidence. When in the past the official rate at the moment of application for foreign exchange was lower than the black market rate, and there was no exchange rate guarantee, then a substantial loss arose for debtors. Information about external payment arrears for the private sector could not be obtained from the BCR in the first phase of the study, so that it cannot now be assured whether there may be difficulties from this source at the beginning of the implementation of the reform package. If this problem were to come up, the best way to attack it would be to register all the applications with the BCR according to due dates and reschedule their payments. In this respect, early contacts with creditors are recommended in order to ensure an appropriate environment for the start-up of the market. If not, the backlog of arrears could undermine confidence and paralyze new imports.

7.E Managing the Float

Managing the floating exchange rate is not an easy task because two different kinds of goals have to be attained at the same time. First, the exchange rate has to be adjusted to a currency basket that permits a more stable real exchange rate to maintain competitiveness. Second, the floating exchange rate has to equilibrate the balance of payments. In achieving both objectives at the same time, the BCR might lose control over the money supply, and inflation could then quickly arise, bringing

about balance of payments disequilibrium.

Referring first to exchange rate adjustment, the appropriate way to adjust the exchange rate is fully explained in Loehr (1988) in which an average cost of a given bundle of goods in trading partner countries was calculated for several years. It should not be necessary to use more sophisticated formulas which propose "optimal weights" to minimize the variance of the real exchange rate since El Salvador's measure of competitiveness did not differ widely when using different weights (Loehr, op. cit.).

In adjusting the exchange rate in order not to lose competitiveness, two different kind of situations may be confronted.

1. The balance of payments is running a deficit. As already explained, a balance of payments deficit reflects a disequilibrium between the demand for money and the existing money supply. If the exchange rate adjustment to maintain competitiveness is not sufficient to equilibrate the balance of payments because the existing deficit requires further devaluation, the BCR may sterilize the excess means of payments, either by selling foreign exchange or by tightening the money supply through open market operations, as will be explained below. Both kinds of measures have the same effect. The first may be more expeditious in stabilizing the market until open market operations can be fully implemented. The actual mechanism to intervene by selling foreign exchange is to supply more foreign exchange to the commercial banks or foreign exchange dealers and thereby capture the excess colones.

Open market operations to sterilize the excess money supply will require an increase in interest rates which should, in turn, attract foreign capital to help close the balance of payments deficit. This kind of result cannot be immediately attained because it will depend on the many factors described above. A prerequisite for sustained equilibrium in the balance of payments through permanent capital inflows to finance a current account deficit is to transmit credibility to the market. Credibility will be difficult to attain in the present circumstances if economic agents perceive a permanent disequilibrium in the current account originating from a permanent fiscal deficit. In addition, though credibility is a necessary condition, it is not sufficient in the case of El Salvador because of the other institutional and political risks that make capital inflows difficult.

2. The balance of payments equilibrates before the exchange rate has adjusted sufficiently to attain competitiveness. In this second case, the BCR has to buy foreign exchange in order to increase further the exchange rate until competitiveness is attained -- but that operation will increase the money supply which will, in turn, produce higher inflation that will require greater devaluation to restore competitiveness, etc. This process will

end up with increased inflation and a simultaneous deterioration in the balance of payments. Although this situation is not likely to occur given the present condition of the foreign exchange market, it is probable, that after liberalizing and floating, family remittances could put downward pressure on the exchange rate that would require additional purchases of foreign exchange by the BCR. At the same time, the BCR has to sterilize the means of payments through open market operations in order not to induce higher inflation. However, sterilizing the money supply through open market operations may require an increase in the interest rate. The final equilibrium could be an appreciation of the exchange rate if higher interest rates attract capital inflows. As can be seen, it is not easy to sustain competitiveness with a managed float without producing inflation when permanent transfers or capital flows enter the country.

An alternative way to improve the real exchange rate without increasing inflation would be a reduction in domestic credit by an amount equal to the original monetary expansion that was needed to buy reserves. However, this alternative will require a reduction in domestic credit to the private sector or to the public sector. The former may induce a recession, while the latter will require a reduction in government expenditures. In case such an adjustment policy is not applied, a reduction in credit to the public sector will require a different source of financing and an interest rate increase. In this case, as before, the interest rate increase may induce capital inflows, etc. Given these considerations, it is not likely that competitiveness can be improved without a simultaneous reduction in the government expenditures.

7.F Managing Foreign Exchange Reserves at the BCR

The management of a nation's foreign exchange reserves is normally the responsibility of its central bank. The objectives of BCR management are substantially different from those of a private sector institution whose goal is essentially that of profit maximization. BCR objectives must reflect the current concerns of the government, no matter how independent it may be. In any case, profit is hardly the appropriate measure of BCR performance, even though the BCR could generate a healthy surplus on its operations.

In line with the multiple objectives of the government, the BCR should pursue the following goals in its reserve management by allocating its foreign exchange portfolio among various tranches. The tranches of primary concern are:

1. Liquidity Tranche
2. Income Tranche
3. Gold Tranche
4. Credit Lines

Each is discussed in turn.

1. Liquidity Tranche. Because of the openness of the economy, and because of the seasonality and lumpiness of receipts from sales of traditional primary exports, foreign exchange inflows and outflows will not necessarily move in unison. Information on cash flows and reserves during the year, seasonality, cyclical variations in inflows, etc., could not be obtained from the BCR in this first phase of the study. In any event, the BCR will have to maintain considerable sums of foreign exchange in the form of liquid assets. A major objective of reserve management must be the ready availability of foreign exchange to meet essential national needs in those cases in which the market would require large adjustments in the exchange rate to provide adequate foreign exchange. When scarcity of foreign exchange is transitory (e.g., due to seasonal factors) it does not make political sense to allow large variations in the exchange rate which, in turn, could be translated into inflation with all its bad repercussions.

The obligation of commercial banks, other financial institutions and foreign exchange houses to surrender their foreign exchange surplus above a certain maximum position is a forced mechanism that allows the BCR more international liquidity, but the BCR should at least pay international money market interest rates on those deposits. In addition, the BCR could pay attractive interest rates -- normally higher than international rates -- on voluntary foreign exchange deposits with longer maturities in order to attract such funds from banks and foreign exchange dealers. Alternatively, the implementation of a government securities market could also permit the BCR to increase liquid international reserves which would, at the same time, contribute to financing the fiscal deficit and thereby reduce pressure on the monetary base.

Foreign exchange management should involve a precise budgeting of receipts and payments, monthly at least, to prevent surprises and to make opportune decisions in related fiscal, monetary and interest rate policies. There is no set formula for establishing a "safe reserve level" which is in itself an elusive quantity. It depends heavily on the openness of the economy, capital movements, transfers, seasonality, etc. Many of these factors can change constantly, so that a reserve level that is safe in one year or one quarter can be unsafe the next. The safe level must therefore be a matter of judgement and experience involving trading patterns and the volatility of inflows and outflows of foreign exchange. The most popular rule of thumb for determining a safe level of reserves is the value of three months of imports -- which is used by the IMF and World Bank. However, the level of reserves should accommodate the widest divergence between receipts and payments. In this respect, it is better to err on the side of excess liquidity, since funds not immediately required can usually be invested in international money markets. Indeed, increasingly powerful techniques of cash management are being developed for maximizing returns on short-term funds.

In any event, a minimum liquidity level should be established, below which replenishment would be made either from the income tranche (see below) or from established credit lines. Any funds in excess of those required for liquidity purposes will be allocated to the income tranche until the upper, "safe" reserve level is reached. The allocation of reserves in excess of the safe level will depend on whether this excess is viewed as temporary or likely to persist over a longer term. If it is viewed as short term, the reserves should be added to the liquidity tranche, even though that tranche may already be at its optimal level. If it is seen as medium term, it should be assigned to the income tranche.

Recently, El Salvador seems to have had no serious liquidity difficulties, so that present reserve levels appear to be adequate. This makes it a particularly good time to implement a new foreign exchange system while the government can take advantage of existing AID transfers and the initial BCR reserve position to afford the risks involved during the first steps of its implementation.

2. Income Tranche. The holding of foreign exchange reserves involves an opportunity cost with respect to the goods and services that might otherwise be imported if the reserves were spent immediately. Foreign reserves over and above those needed for liquidity should be deployed in such a way as to maximize the rate of return on their investment. Funds held purely for liquidity purposes should also be placed in the highest yielding assets consistent with the schedule of likely payments. The strategy should be to minimize the amount of funds lying idle in current accounts by making use of overnight, call or other short-term opportunities.

3. Gold Tranche. One objective in maintaining reserves is to guard against total ruin. The gold tranche of a reserve portfolio probably fills this role better than any other holding. It is an asset which, even in the most unsettled times, is likely to find a willing buyer. The great drawback of gold is that it is not an earning asset, so that the security of holding significant quantities of gold involves an opportunity cost in terms of the return that could be earned on alterative investments which, in times of high interest rates, can be considerable. In recent years gold holdings have shown clearly the possibility for capital gains and losses. However, although the price of gold can fluctuate widely in a short time, it will probably keep pace with inflation over the long run. Furthermore, the price of gold is likely to rise in times of calamity as happened in October 1987.

4. Credit Lines. Even with the best planning in the world a country's liquidity holdings can prove inadequate to meet a run on the country's foreign reserves. Although the exchange rate will be floating in the proposed system, it may not be sufficient to equilibrate the balance of payments under all circumstances. A

run might occur overnight and, in the special case of El Salvador with a significant risk of revolution, the country's liquidity position could change quite dramatically. In preventing this kind of situation, it is useful for the BCR to have access to adequate credit lines with international financial institutions. Such credit lines must, of course, be put in place in good times. It is costly and difficult, indeed even impossible, to obtain credit lines once the crisis has set in.

The advantages of short-term credit lines may be both strategic and tactical. The loss of reserves may be so serious that the availability of even short-term credit lines can buy the time to develop a long-term strategy for correcting the external position, including drawing on the facilities of the IMF under a program of adjustment, long-term loans from World Bank, IDB, AID, etc. Tactically, the drawing down of credit lines could make it unnecessary to sell from the BCR's income tranche and incur a capital loss. Information from the BCR was unavailable at this stage of the study on how the BCR currently manages its foreign reserves and how the state of negotiations is with international agencies and private foreign banking institutions. For this reason, precise conclusions and recommendations cannot now be made on exactly how to manage foreign reserves in the case of implementing a foreign exchange market reform as proposed in this paper.

7.G Implementation of Monetary Policy Instruments

A money market should be implemented simultaneously with the foreign exchange market in order to allow the BCR to manage monetary and exchange rate policy as effectively as possible. At least an interbank call money market should be implemented, allowing all financial institutions and exchange houses to supply and demand liquidity and freely determine an interbank interest rate. The BCR could intervene in that market by supplying or sterilizing funds in order to attain price and exchange rate stability.

In addition, the BCR could issue government treasury bills or BCR monetary bills with short-term maturities into the interbank market and into the money market to be purchased by individuals and firms. The BCR could manage interest rates through the nationalized banks without fears of collusion among banks. An auction system could be implemented at the BCR in order to sell and buy these short-term securities. As repeatedly emphasized, interest rates have to be attractive to encourage capital inflows. After economic agents have become more confident and experienced with short-term government securities, it should be possible to implement longer-term bonds to finance a reasonable portion of the government deficit.

Finally, the BCR could impose reserve requirements or forced

investments on financial intermediaries. Reserve requirements must be established appropriately and, as a rather blunt instrument, should be relied on only under comparatively difficult conditions. This kind of instrument is therefore not recommended unless emergency situations arise, especially in view of the present precarious situation of many banking institutions.

SECTION 8: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This report has touched on a wide-ranging set of conditions associated with the foreign exchange rate regime in El Salvador. Indeed, the exchange rate of any currency, and the colon is no exception, reflects the simultaneous interaction of all macroeconomic variables in the country. The macroeconomic forces and conditions that have been dealt with in this study are those seen as most important in understanding variations in the real value of the colon and in exchange rate policy. The purpose here, at the end of the study, is to provide a listing of some of the main findings and a summary of the most important conclusions. Obviously, the details reside in the preceding sections of the document.

8.A Summary of Findings

Some of the main findings of this study are:

-- El Salvador's colon has appreciated in real terms almost continuously since the mid-1970s and is now overvalued.

-- The official devaluation of the colon in January 1986 did little to arrest the pace of real appreciation of the currency and has not restored competitiveness in trade. That devaluation was quickly offset by monetary expansion and the resulting internal inflation. Also, the devaluation was probably too small, relying on AID flows and trade and exchange restrictions to maintain external balance rather than relying on trade performance and privately motivated transactions.

-- Multiple foreign exchange markets currently exist in El Salvador. There is a fairly large and stable black market coexisting with an official market and a much smaller dollar accounts market.

-- The BCR currently intervenes in all exchange markets in El Salvador. Sales of foreign exchange in the official market reduce demand in the black market, thereby affecting exchange rates in that market as well. Measures affecting the demand for money (such as interest rate controls) affect the demand for foreign exchange in black market. Other examples are readily available.

-- Small spreads between the official and black markets (recently about 5 percent) do not indicate that the black market is weak. Rather, this indicates that liquidity is tight and that the BCR has foreign exchange reserves to sell. The latter is mainly attributable to AID transfers. This also confirms the observation that the BCR can and does determine

the exchange rate in the black market.

-- The international terms of trade are not responsible for El Salvador's poor trade performance. Almost all of the shifts in the international terms of trade are due to swings in the prices of petroleum and coffee. International prices of items other than these have often moved in El Salvador's favor, yet trade performance for these items has been poor. Changes in the international terms of trade, whether or not caused by petroleum and coffee prices, can affect the real value of the colon.

-- Internal terms of trade have shifted in favor of the production of non-traded items and against the production of tradable goods.

-- Export competitiveness seems to have deteriorated. Real non-coffee exports have declined in almost every recent year except 1987. Traditional exports other than coffee have deteriorated sharply.

-- Real imports have not declined in recent years.

-- Prospects for improving trade performance are not good.

Reasons for this include:

-- Institutional arrangements discriminate against the production of traditional exports.

-- Non-coffee exports and imports are very sensitive to the real exchange rate which has appreciated.

-- The system of trade and exchange controls currently existing implies high levels of protection. Also, many inefficient and arbitrary allocative decisions are inherent in that system.

-- Rates of effective protection are high and discriminate against exports.

-- Policy changes important for improvements in trade performance are apparently not being made.

-- El Salvador's competitive loss is largely attributable to:

-- civil war;
-- a fiscal deficit and resulting monetary expansion;
-- a lack of monetary tools to manage inflation;
-- financial repression and negative real interest rates;
-- a decrease in the demand for money.

8.B Conclusions and Recommendations

Based on the findings listed above, the following conclusions and recommendations can be made:

-- Devaluation of the colon is required, but not by itself. Other reforms are needed along with devaluation. Devaluation by itself, without other reforms, will simply repeat the ineffective 1986 experience.

-- El Salvador should allow the value of the colon to be determined by market forces and should unify the exchange rate regime.

-- The type of exchange rate regime to be put in place is less important than the policy reforms accompanying a change in the regime. Of the regimes considered -- the current fixed peg, an auction market, a crawling peg, a free float and a managed float -- only the current fixed peg and auction systems are inadvisable. Among the others, a managed float is preferred.

-- Two general options are available to restore a sustainable external balance. These are to increase output and to decrease absorption. Only the latter is viable in the short run and as long as the civil war continues.

-- The fiscal deficit must be reduced, along with the monetary expansion that it implies.

-- Reforms in the trade regime should liberalize trade and reduce effective protection.

-- Monetary reforms are required, including reforms in interest rate policy, the banking system and in the ability of the government to issue and manage appropriate securities.

-- Details on implementing a managed float and the reforms required to accompany it are offered in Section 7.

-- The time to implement a managed floating exchange rate regime and the policies to accompany is now. The external balance has recently been adequate given the transfers from AID. However, that external position would deteriorate rapidly should AID transfers fall. In this latter case, the set of reforms required would be much more problematic.

8.C Sequence and Priorities

The general recommendations are for wide-ranging reform. The main concern is that, without broad reform, any devaluation will achieve the same results as those obtained in 1986 -- results that were almost nil. It must, however, be recognized that all the

reforms discussed above are unlikely to be implemented simultaneously. To the extent that they are not, the favorable impacts of the recommended changes in the foreign exchange regime will be weakened. Thus, some attention should be focused on the sequence of actions and on establishing a set of conditions that are feasible and ensure that some favorable consequences flow from changes in the foreign exchange regime.

The primary recommendations for the foreign exchange regime are:

-- El Salvador should move to a unified exchange rate system. Such a system would eliminate distinctions between the official and black markets.

-- The BCR may chose to intervene in the foreign exchange market to prevent instability and to smooth adjustment. The BCR should not, however, intervene to establish a preconceived exchange rate for the colon different from the rate determined by underlying long-run market conditions.

-- The time for foreign exchange market unification is now. The premium on dollars in the black market has been small and AID flows are large. Unification should thus result in only a small depreciation of the colon.

Preconditions that would improve on the feasibility of these recommendations are:

-- The fiscal deficit should be reduced, mainly by a reduction in public sector expenditures. Without such a change appropriate monetary policy will be difficult to maintain.

-- Tight monetary policy should be maintained. Monetary tightness during 1988 has been appropriate.

-- The dollar accounts market should be liberalized, and commercial banks should be allowed to act as intermediaries.

-- Interest rate policy should be reformed. If money markets are not able to adjust to inflationary expectations, substitutions between colones an dollars will occur, causing exchange rate instability. If inflationary expectations increase, interest rates should be allowed to rise, thereby increasing the demand for money and preventing a possible "free fall" in the exchange rate for the colon.

-- Policy makers must prepare themselves to act decisively. Reforms should be announced and acted on quickly. It is very important to establish expectations that reforms will be carried out in a consistent, objective manner.

After unifying and liberalizing the foreign exchange regime, El Salvador should move quickly to reform the trade regime and to pursue the financial reforms that have been extensively studied in "El Sector Financiero de El Salvador", op. cit. To the extent that the latter reforms are delayed, favorable impacts from the reform of the foreign exchange regime will be weakened.

APPENDIX A: EFFECTIVE PROTECTION

The concept of effective protection focuses on the fact that, in many import-substitution industries, final goods are produced from imported inputs while tariffs are charged on the entire final good including its inputs. Tariff protection does not protect the production of the inputs that are imported, but only the proportion of production done domestically. If the tariffs charged on inputs differ from the tariff charged on the final product, the effective protection of production carried out domestically will be different from the nominal level of protection on the final product. Since production in international markets is also done by combining inputs that are tradable, the proper way to determine what the level of effective protection is, is to compare domestic value added with the protection to international value added (i.e., without the protection) for the same operation. The latter is the closest thing possible to a "free market" alternative to domestic production and serves as a bench mark against which the effect of protection can be compared. Effective protection can be defined as the percentage by which domestic value added differs from free-market value added for a given process as a result of protection. (For details on the concept see B. Balassa, et. al., The Structure of Protection in Developing Countries, The Johns Hopkins University Press, Baltimore, 1971). The effective rate of protection can be calculated as:

$$ERP = [DVA/FVA - 1] * 100$$

where DVA is domestic value added with the protection and FVA is free-market value added.

Some numerical examples should make the concept clear. Suppose there is some good A which is available internationally at a price of $200. Suppose further that good A is produced from three inputs, X, Y, and Z, and that these inputs can be purchased internationally for $50, $30 and $100 respectively. Total input cost to A production is $180. Thus, in international markets, producers combining X, Y, and Z into good A create value added of $20.

Consider a developing country which decides to engage in import substitution for good A by importing X, Y, and Z and combining them into good A domestically. Assume that a 50 percent tariff is placed on A and the inputs X, Y and Z. The 50 percent tariff raises the imported cost of good A to $300 and the cost of the inputs to $75, $45 and $150, respectively. Thus, the cost of duty-laden inputs totals $270. Domestic value added is $30. Effective protection on the portion of production carried out domestically is 50 percent (i.e., [($30/$20) - 1] * 100 = 50).

Now suppose that in the same country the producers of good A

receive a duty exemption on the imported inputs. Good A is still protected by the 50 percent tariff and still sells for $300, but now the imported inputs cost producers only $180. Thus, domestic value added is $120, and the effective rate of protection on the portion of production carried out in the country is 500 percent (i.e., [($120/$20) - 1] *100 = 500).

In general, if both inputs and outputs are protected by the same level of tariffs, then the effective rate of protection will equal the nominal rate (as was the case in the first numerical example). If rates of protection on imported inputs are less than the rate of protection on final products, then the effective rate of protection on the final good will exceed the nominal rate of protection (as in the second example). Also, the smaller the ratio of domestic value added to the value of the final product, the higher the rate of effective protection relative to the nominal rate. Finally, the greater the gap between the duty on imported inputs and the duty on final goods, the greater will the difference between effective and nominal protection.

In El Salvador, effective protection on the production of import substitutes is likely to be much greater than the nominal rate of protection on final goods. In general, El Salvador's tariff structure levies lower tariffs on inputs than it does on final products. Thus, effective protection will exceed nominal protection. Also in El Salvador, there tends to be low value added in some import substitution production, and therefore effective protection is likely to exceed greatly nominal protection. If duty exemptions are given on imported inputs, effective protection is higher yet.

It is possible for effective protection to be negative when the tariff rates on imported inputs exceed the nominal rate on final products. In the example used above, if the tariff rate on the imported inputs was 60 percent, then the inputs would cost the producer $288. If the tariff on good A were still 50 percent, so that it sold for $300, domestic value added would be $12. Domestic value added would be $8 less than free-market value added, and the effective rate of protection would be -40 percent ([($12/$20) -1] * 100 = 40). It is easy to imagine negative effective protection on export activities. Exports are sold at world prices, which are presumed to be unaffected by the actions of a small developing country. Thus, protection on exports is zero. If there are any duties on imported inputs, then effective protection on exports is negative.

Protection can influence the level of effective protection through the exchange rate. A single duty on one item is not likely to have a significant effect on a country's exchange rate, but high levels of protection in general will have the effect of appreciating the country's currency over the value that would exist should there be no protection. Protection reduces the demand for

imports and therefore reduces the demand for foreign exchange, thereby reducing the price of foreign exchange. The domestic currency appreciates. The resulting appreciation will reduce the rate of effective protection below that implied by the tariff structure alone.

Returning to the example used above, good A sells for $200 in free markets and its inputs sell for $180. If the exchange rate is 5 pesos to the dollar, then A costs P1000; the inputs cost P900. Free market value added, in pesos, is P100. If a 50 percent tariff is levied on A and the inputs are duty-free, then A sells for P1500, and domestic value added is P600. The rate of effective protection is 500 percent. So far this is the same example as before, but everything is converted to domestic currency. Now, however, consider the case where a high general level of protection causes the exchange rate to be overvalued. Instead of an exchange rate of five pesos to the dollar, the rate that may represent the non-protection rate might be, say, six pesos to the dollar. Therefore, in calculating the effective rate of protection it is necessary to compare the protected situation (duties and an overvalued exchange rate) with the non-protected situation (no duties and a non-protection exchange rate). The protected situation has already been described and results in domestic value added of P600. The non-protected situation would have good A and its inputs imported duty free <u>and at the non-protection exchange rate</u> of six pesos to the dollar. Good A's free-market value would be P1200 and the inputs' value would be P1080. Free-market value added would be P120. Thus, the rate of effective protection is 400 percent. Free market value added is P120. Protected value added is P600. The effective rate of protection is [(P600/P120) - 1] * 100 = 400 percent[45] rather than the 500 percent that was calculated without taking into account the effect of exchange rate overvaluation.

The same currency overvaluation that reduced the effective rate of protection on import-substitution activities would also reduce already negative effective protection on exporters.

Consider an export activity where the final product, X, sells for $100. Assume that X is produced using an imported input, M, selling for $20 in world markets. Assume further that M is burdened with an import duty of 50 percent. At 5 pesos to the dollar, exporters sell X for P500. Inputs cost them P150 and so domestic value added is P350. Free market value added, evaluated at five pesos per dollar, is P400. Thus, effective protection is negative (i.e., domestic value added is less than free-market value added). Without taking into account any effect that general

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[45] Free market value added is P120. Protected value added is P600. The effective rate of protection is [(P600/P120 - 1] * 100 = 400.

protection has on the exchange rate, effective protection is -12.5 percent. If the exchange rate is overvalued because of the general level of protection, then domestic value added with protection must be compared with free-market value added at the non-protected exchange rate, say six pesos per dollar. At six pesos per dollar, X sells for P600 and M costs P120. Value added is P480. Since with protection domestic value added is only P350, the effective rate of protection is -27 percent (i.e., [(P350/P480) - 1] * 100 = - 27).

APPENDIX B: A SIMPLE MODEL FOR THE DETERMINANTS OF THE EXCHANGE RATE

Analytical framework

In a simple open economy -- one producing only tradable goods in fixed quantities, facing fixed world prices, and using a fixed exchange rate -- disequilibrium in the money and goods markets cannot be corrected through price adjustments, as in a closed economy, but rather through changes in international reserves of the BCR. The money supply becomes endogenous, as described in the now-familiar monetary approach to the balance of payments (J. Frenkel and H. Johnson, "The Monetary Approach to the Balance of Payments", 1976). To show this result clearly, it is useful to divide the money stock (M) into three parts: an exogenous or policy related part -- domestic assets (credit) of the BCR (DC); an endogenous part -- international reserves of the BCR (R); and the money multiplier (m) given exogenously.

For equilibrium in the money market, Ms = (DC+R) * m, the money supply, has to be equal to money demand

$$Md = P * L(i, y, dP/dt)$$

where P is the price level, and L is a function depending positively on real income (y) and positively on the interest rate (i) (assuming M defined as M2) which is basically determined by devaluation expectations and the international rate of interest (Fisher's open economy theory) and negatively related to inflationary expectations (dP/dt) assuming perfect foresight. Inflationary expectations in the case of tradable goods only are equivalent to devaluation expectations. For simplicity it is assumed that P is exogenously determined by international prices (P*) and the exchange rate (E) (purchasing power parity). The exchange rate is assumed to be fixed by the monetary authorities who stand ready to buy and sell foreign exchange at the fixed price rather than letting the market determine the exchange rate at each moment. Equating Md = Ms then gives the basic relationship among international reserves, domestic credit and the determinants of the demand for money (or financial assets in general)

$$R = - DC + P/m * L (y, i, dP/dt) \quad [1]$$

which substituting for P and i leads to:

$$R = - DC + P/m * E * L (y, i, dE/dt) \quad [2]$$

where dE/dt is the actual rate of devaluation (assuming perfect foresight) whose effect depends on the semi-elasticities of interest rates and inflationary expectations (a positive effect for interest rates and a negative effect for inflationary expectations).

Equation [2] shows the international reserves component, actually the balance of payments, as a residual determined by the change in the desired holdings of money by the public at fixed output and prices, less the policy determined change in the amount of domestic credit. The money multiplier variable is also a policy instrument. The meaning of this equation is that any increase in domestic credit from the BCR not desired by the public will leak out in international reserves, thus causing the balance of payments to deteriorate.

Assuming that domestic credit expansion is used to finance the fiscal deficit, there is a straightforward relationship between the fiscal and balance of payments deficits.

The BCR may try to restore balance of payments equilibrium through four approaches:

1. by increasing the level of the exchange rate, i.e., a devaluation, that would increase the flow demand for money for the same level of transactions and restore the balance of payments equilibrium. This argument may be not true if a devaluation raises inflationary expectations, which in turn reduce the demand for money. Nevertheless, it seems evident that the exchange rate cannot remain fixed with an existing fiscal deficit because the balance of payments will collapse. Moreover, devaluation will imply a contraction in the real money supply that, in any event, will improve the balance of payments initially. A different result would be obtained by raising the rate of devaluation, which will bring about higher expectations of devaluation and declining demand for money, thus causing the balance of payments to deteriorate. In that situation a simultaneous reduction in the money supply would be required to avoid losing international reserves.

2. by increasing the interest rate, which should enhance the demand for financial assets, which in turn would bring capital into the financial system either by Salvadorans' repatriating capital or increasing foreign indebtedness. This argument may again induce increased expectations of devaluation if economic agents believe that higher interest rates will imply higher rates of devaluation and higher inflation. In any event, raising interest rates will improve the balance of payments at least transitorily.

3. by offsetting the monetary expansion through open market operations which is the proper way to reestablish equilibrium, though it may imply a transitory deflation of the economy.

4. by reducing the money multiplier through higher reserve requirements or forced investments, which is an effective way to improve the balance of payments transitorily, though it is

an inadequate instrument in the long run as it causes the profitability of the banking institutions to deteriorate and increases interest spreads which negative affects private investment. In addition, in the case of El Salvador with a delicate banking system, it might be too dangerous to increase the tax burden on it.

Floating Exchange Rate

El Salvador's black and dollar accounts foreign exchange markets constitute an example of managed float, as the BCR influences them through selling reserves. The following is a simple model to test whether the black market rate is influenced at present by monetary conditions. The rationale of the model is the same as before, except that instead of assuming the exchange rate fixed, it is allowed to vary freely, leaving the money supply fixed.

Assume, for simplicity, that domestic prices are determined by external prices (P*) and the equilibrium exchange rate (TC) (according to purchasing power parity). The latter can be expressed as:

$$TC = P/P^* \quad [3]$$

where equilibrium in the money market implies

$$Ms = Md = P^* L (y, i)$$ which expressed in logs.

Solving for TC (with all variables except the interest rate expressed in logs) yields the following equation:

$$TC = M - P^* - L (y, i) \quad [4]$$

This relation implies that a depreciation of the exchange rate (an increase in TC) will occur in the following cases: (1) a reduction in international prices (implicitly including an appreciation of the currency in which P* is measured); (2) an increase in the money supply greater than in money demand; (3) a decrease in interest rates when considering M2, or an increase in interest rates when considering M1; and (4) a reduction in domestic production.

Substituting the following traditional short-run demand for money function:

$$(Mo/P)t = eo + e1\ yt + e2\ it + (1 - O)\ (Md/P)\ t\ -1$$

for L (y, i) in equation 4 yields the following expression for TC:

$$TCt = - Oeo - Oelyt - Oe2\ it + Mt - (1 - O)\ Mt-1$$

$$- P^*_t + (1 - O) P^*_{t-1} + (1 - O) TC_{t-1} + Z_t \qquad [5]$$

where Z is a random error term with standard assumptions; income elasticity e1 > 0; interest rate semi-elasticity e2 > 0; and the adjustment coefficient 0 < O < 1.

Equation 5 has been estimated with monthly date. However, lack of monthly data on income and international prices did not allowed them to be included as explanatory variables. M is measured as M1 and is assumed to be under the control of the monetary authority within a managed float system. TC is the interest rate on time deposits.

The following table summarizes the econometric results for the period April 1983 to August 1988.

As can be seen, 94 percent of the variation in the parallel exchange rate can be explained by the past level of the exchange rate and the level of interest rates. The fact that the money supply is not significant in explaining the exchange rate reflects the fact that the black market is not free to adjust with floating. Incomplete market separation permits the permanent intervention of the BCR in the official market to sustain stability in the black market. In addition, BCR intervention sterilizes excess liquidity and contributes to stabilizing the money supply as well. An interesting result is that interest rates play a significant role in stabilizing the black market, reflecting that economic agents substitute colones for dollars rapidly -- thus inducing a depreciation of the colon -- when interest rates are not sufficiently attractive.

The main conclusion is that, although the BCR cannot fully control the money supply, the black market exchange rate is mainly determined by the official market and interest rates. As long as the BCR has foreign exchange from AID, it has the ability to intervene successfully in the market and, by fixing the official rate, the BCR achieves the stabilization of both the black market exchange rate and the money supply. In this way, the BCR attempts to enhance its credibility. There is, however, one important condition: the availability of AID funds. Finally, adequate levels of interest rates contribute significantly to market stability.

SMPL 1983.04 - 1988.08
65 Observations
LS // Dependent Variable is LER
Convergence achieved after 4 iterations

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.2848578	0.1797852	-1.5844340	0.119
LM1A	-0.0784952	0.1309153	-0.5995874	0.551
LM1A(-1)	0.1753336	0.1326165	1.3221092	0.191
R	-0.0359715	0.0177505	-2.0265011	0.047
R(-1)	0.0086822	0.0175365	0.4950915	0.622
LER(-1)	0.9062391	0.0444302	20.396936	0.000
MA(1)	0.3036232	0.1403764	2.1629216	0.035

R-squared	0.945504	Mean of dependent var	1.638160
Adjusted R-squared	0.939867	S.D. of dependent var	0.168026
S.E. of regression	0.041204	Sum of squared resid	0.098463
Durbin-Watson stat	1.992656	F-statistic	167.7176
Log likelihood	118.7722		

SMPL 1983.04 - 1988.08
65 Observations
LS // Dependent Variable is LER
Convergence achieved after 4 iterations

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.1628262	0.1582996	-1.0285256	0.308
LM2A	-0.0254410	0.2006372	0.1268008	0.900
LM2A(-1)	0.0907597	0.2002462	0.4532403	0.652
R	-0.0335973	0.0178290	-1.8844167	0.065
R(-1)	0.0109345	0.0176238	0.6204338	0.537
LER(-1)	0.9093134	0.0452996	20.117731	0.000
MA(1)	0.3464540	0.1397336	2.4795463	0.016

R-squared	0.944455	Mean of dependent var	1.638160
Adjusted R-squared	0.938707	S.D. of dependent var	0.168026
S.E. of regression	0.041593	Sum of squared resid	0.100366
Durbin-Watson stat	1.991041	F-statistic	164.3673
Log likelihood	118.1524		