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The CFA Franc Zone: Currency Union and Monetary Standard

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Abstract

The CFA franc zone comprises a group of countries in central and west
Africa whose currencies have been firmly linked to the French franc since
1948. It combines the features of a currency union with those of an
exchange rate peg, and an analysis of its effectiveness must examine both
dimensions. Viewed from the perspective of a currency union among the
African countries, it would appear that the zone would not constitute an
optimum currency area. But when France is viewed as an integral part of the
system, the benefits--including discipline, credibility, and stability in
international competitiveness--become clearer.

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- ii -

Contents

Summary

The CFA franc zone is the most prominent example in the modern world of an exchange arrangement in which a group of sovereign countries have combined not only to use a single currency but also to peg the value of that currency firmly to that of another currency. It differs in important respects from other currency unions, including the emerging unification of European currencies, and it cannot be evaluated only by recourse to conventional criteria for optimal currency areas.

By conventional criteria, it is difficult to argue that the franc zone in Africa constitutes a natural currency area: intraregional trade is quite limited, the structure of production varies enough across countries that the massive terms of trade shocks of the past two decades have affected countries in the region in quite different ways, and factor mobility does not appear to provide a sufficiently flexible response to those differences. All countries in the region have had low inflation rates, but the maintenance of uniformly low rates has placed pressure on the financial systems in a few countries. Real economic performance on average has been as strong as or stronger than that of neighboring countries that have pursued active exchange rate policies as part of an overall adjustment strategy, but again there have been important differences among countries.

The case for the currency arrangements of the CFA franc zone rests on viewing them as a combination of a currency union and a monetary standard. Because the participating African countries all trade heavily with France and other European countries, pegging to the French franc has contributed to overall stability in competitive positions. Because currency is issued by supranational central banks, and because France has had relatively strong price stability in the 1980s, the CFA franc countries have gained both discipline and credibility in the formulation of macroeconomic policies. In addition, the system's provisions for external credits in the form of overdrafts in the operations accounts with France have provided some cushion against the effects of deteriorating net foreign asset positions. Thus, if welfare depends primarily on price stability and growth, membership in the zone clearly has benefited these countries. If welfare depends as well on external balance, and if the nominal exchange rate could be changed in response to adverse terms of trade shocks without sacrificing the credibility of the authorities' commitment to financial stability, the net benefits would be less clear.

I. Introduction

The CFA franc zone comprises a group of countries in central and west
Africa whose currencies have been firmly linked to the French franc since
1948. It is the most prominent example in the modern world of an exchange
arrangement in which a group of sovereign countries has combined not only to
use a single currency but also to peg the value of that currency firmly to
that of another. It differs in important respects from other currency
unions, including the emerging unification of European currencies, and it
cannot be evaluated only by recourse to conventional criteria for optimal
currency areas. Most studies of the effectiveness of the zone have tended
to focus on the viability of the exchange rate peg; those that have empha-
sized inflation control as an objective have tended to find in favor of the
zone; those that have emphasized international competitiveness have been
more skeptical. But the other dimension of the problem is that the member
countries may have differing needs if the zone is not an optimal currency
area. This paper aims to put these two dimensions into perspective.

The paper begins by reviewing the relevant characteristics of the
countries in the zone and the nature of the zone's institutions (Section
II), and then examines various economic factors that might help determine
the viability of the zone (Section III). The main conclusions are
summarized in Section IV.

II. Development of the Franc Zone

The CFA franc zone owes its origins to the administration of French
colonies before and immediately after World War II. In the 1930s, France
undertook to establish currencies in each colony that would be firmly linked
to the French franc. At the end of the war in 1945, many of these
currencies were consolidated into "le franc des Colonies Françaises
d'Afrique" or CFA francs, or into CFP francs in the case of the Pacific
colonies. CFA francs were to be issued by the Caisse Centrale de la France
d'outre-mer (CCFOM, the central bank for overseas France), which had been
established during the war to provide a substitute for French bank notes
issued under the occupation. The governing principles for the broad franc
zone included (a) convertibility into French francs at a fixed parity,
(b) guarantee of convertibility by France through the establishment of
"operations accounts" for each colonial central bank with the French
Treasury, (c) free capital mobility throughout the zone, (d) pooling of most

foreign exchange reserves at the French Treasury, and (e) establishment of a
common trade and financial policy vis-à-vis the rest of the world. 1/

The original CFA franc zone covered a somewhat wider geographic area
than currently, reflecting its origins as a largely political rather than
economic entity. By the mid-1970s, the zone had been pared down to a
contiguous form through the departure of several countries, mostly but not
exclusively in other regions of Africa (Figure 1). The zone included, for
example, the islands of St. Pierre and Miquelon off the coast of Newfound-
land in the North Atlantic, until they adopted the French franc in January
1973. Another overseas Département of France, the island of Réunion,
switched to French francs in 1975. Comoros established its own currency in
1981 (the Comorian franc), which continues to be pegged to the French franc
at the same rate as the CFA franc. These territories, as well as others in
the franc zone, could have been included in the following analysis; their
omission, however, permits a clearer focus on the economic issues facing a
relatively homogeneous group of countries.

The other countries that left the zone--Djibouti in 1949, Guinea in
1958, Mali in 1962 until it rejoined in 1984, 2/ Madagascar in 1963, and
Mauritania in 1973--established independent currencies. Equatorial Guinea
became, in 1985, the first country in the zone without colonial ties to
France (and the first non-Francophone country). Thus it could be argued
that the CFA franc zone has evolved into a less politically motivated and
more economically structured grouping.

After some initial instability, the exchange rate for the CFA franc was
set in October 1948 at 0.5 CFA franc per French franc. That rate has
remained unchanged ever since, except for the revaluation necessitated by
the French currency reform of 1968. When the new French franc was intro-
duced at a rate of 1 new franc per 100 old francs, the value of the CFA
franc was left unchanged against the old franc, and the rate against the new
franc was set at 50 CFA francs per French franc. CFA francs have always
been freely convertible into French francs at the established parity, and

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1/ For histories of the origins of the franc zone, see Yansané (1984) and
references therein, Allechi and Mamadou (1989), Bloch-Lainé et al. (1956),
Neurrisse (1987), Saint Marc (1964), and Vizy (1989). Julienne (1988)
covers the 1955-75 period in detail. The institutional structure that was
in place prior to the implementation of major reforms in 1974 is described
in IMF (1963, 1969). On the emergence of the modern economic structure of
the zone, see Bhatia (1985) and McLenaghan et al. (1982).
2/ From 1962 through 1967, the parity of the Mali franc was equal to that
of the CFA franc, but the currency was not convertible. From 1967 through
1984, the parity was maintained independently against the French franc (at
100 Mali francs = 1 French franc), and convertibility was guaranteed through
a separate operations account with the French Treasury. Thus the main
practical implication of Mali's official absence from the zone in the latter
period was to enable it to run its own central bank and to limit circulation
of its currency (as legal tender) to within its own borders.

Figure 1

CFA Franc Zone: Membership

BCEAO

BEAC

Former members
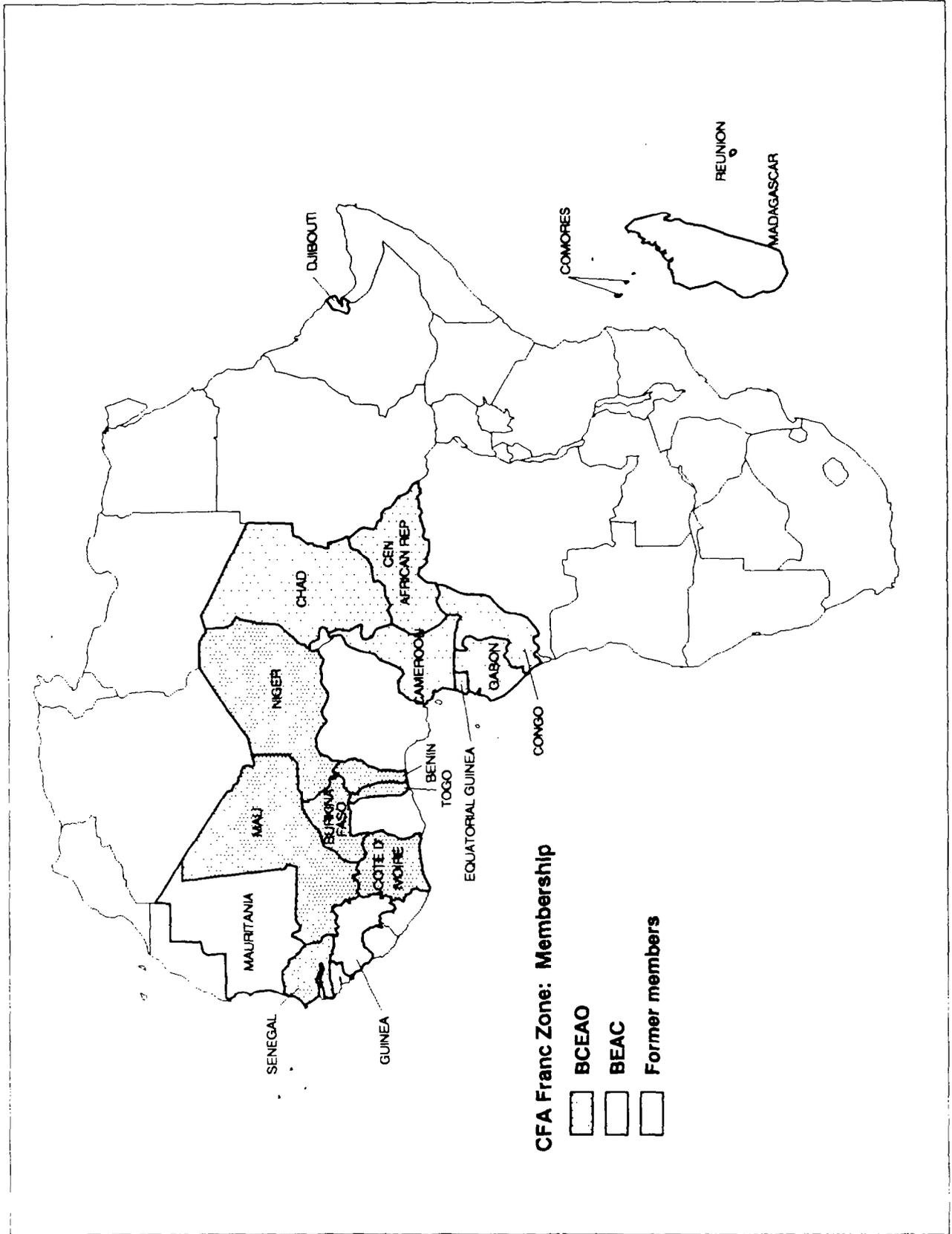
the degree to which capital is mobile vis-à-vis the rest of the world has
been determined essentially by the evolution of French capital con-
trols. 1/

The original institutional structure of the CFA franc zone became
inappropriate when the member countries gained independence in the late
1950s and early 1960s. Responsibility for issuing currency and overseeing
the system was then transferred from the CCFOM to African central banks;
although control of those banks was originally dominated by France, control
was shifted predominantly to the member countries in the early 1970s. In
the modern system, there are two different currencies in the CFA franc zone
and two parallel sets of institutional arrangements. This zone comprises
the seven member countries of the West African Monetary Union (WAMU), the
common central bank of which is the Banque centrale des Etats de l'Afrique
de l'Ouest (BCEAO), and the common currency of which is the "franc de la
Communauté financiére d'Afrique"; and six countries in central Africa whose
central bank is the Banque des Etats de l'Afrique centrale (BEAC), the
currency of which is the "franc de la Coopération financiére en Afrique
centrale."

In the Central (BEAC) region, the common central bank issues an
identifiable currency for each member country, but each country's currency
is legal tender throughout the region; in the Western (BCEAO) region, a
single currency circulates throughout the region. The two regional
currencies are equivalently defined and are both commonly known as the CFA
franc, but they are legal tender only within their own region; that is, the
currency issued by the BCEAO is not legal tender in the BEAC region, and
conversely. The statutes of each central bank permit, in principle, changes
in the parity against the French franc without regard to the other, subject
to unanimous agreement by the member countries (see Vizy (1989), pp. 28-29
and 49-52, for details). Nonetheless, because the parity in each case has
remained unchanged for over forty years and because the parallel arrange-
ments vis-à-vis France guarantee convertibility of either currency into
French francs, the CFA franc zone can be analyzed from most perspectives as
if it had a single currency.

There is a high degree of economic diversity among the countries in the
zone. As shown in Table 1, each region is dominated by a relatively large
country accounting for roughly a quarter of the region's output: Côte
d'Ivoire in West Africa, and Cameroon in the Central region. Nine of the 13
countries are classified as low-income, the three fuel exporters (Cameroon,
the Congo, and Gabon) have rather higher levels of per capita GDP, and Côte
d'Ivoire is an intermediate case. Four countries--Benin, Côte d'Ivoire,

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1/ For example, when France operated a dual exchange market in the early
1970s, the CFA franc countries maintained similar restrictions governing
transactions with countries outside the broad franc zone. The CFA franc is
not traded in exchange markets; rather, it is convertible through official
agencies at the established parity without any margins.

Table 1. CFA Franc Zone: Structure 1/

Region and Country 2/	population		GDP		
	millions	percent of total	billions of U.S. dollars 3/	percent of total	U.S. Dollars per capita 4/
West Africa (B.C.E.A.O.)	50.9	68.7	21.4	52.4	420
Bénin	4.6	6.2	1.6	3.9	350
Burkina Faso	8.8	11.9	2.5	6.0	280
Côte d'Ivoire	12.1	16.3	7.2	17.5	590
Mali 5/	8.0	10.8	2.1	5.1	260
Niger	6.9	9.3	2.1	5.2	310
Sénégal	7.2	9.7	4.7	11.4	650
Togo	3.3	4.4	1.3	3.3	410
Central Africa (B.E.A.C.)	23.3	31.3	19.5	47.6	840
Cameroon	11.5	15.5	11.5	28.1	1000
Central African Republic	2.8	3.8	1.1	2.7	390
Chad	5.5	7.4	0.9	2.3	170
Congo	2.1	2.6	2.3	5.5	1190
Equatorial Guinea 6/	0.3	0.4	0.1	0.3	470
Gabon	1.1	1.5	3.6	8.7	3230
Total	74.6	100.0	40.9	100.0	550

Source: IMF, International Financial Statistics; World Bank (1991).

1/ Members since December 26, 1945, except as noted. Data are for 1989; details may not add to totals, owing to rounding.
2/ BCEAO = Banque centrale des Etats de l'Afrique de l'Ouest; BEAC = Banque des Etats de l'Afrique centrale.
3/ Converted at 319 CFAF = US$1, the average value for 1989.
4/ Column 3 divided by column 1, rounded to nearest ten.
5/ left in 1962 and rejoined in 1984.
6/ joined in 1985.

Sénégal, and the Congo--have had substantial access to market financing, while the remaining countries have been primarily official borrowers. 1/

Relations between the CFA franc countries and France are an integral part of the system. Each regional central bank maintains an account, known as an operations account (compte d'opérations), with the French Treasury, into which it is obliged to deposit its foreign exchange reserves (other than balances needed for operational purposes). 2/ These interest-bearing accounts are denominated in French francs, and France guarantees the convertibility of the CFA franc into French francs in part by allowing overdrafts. Monetary discipline is maintained through (a) interest charges on overdrafts, (b) rules requiring the regional central banks to restrict credit (i.e. to raise the cost of rediscounting and to reduce its avail-ability) when balances fall below target levels, 3/ and (c) a limit on the extension of credit to each government to a maximum of 20 percent of the previous year's fiscal revenue.

The structure of the CFA franc zone--combining a currency union among sovereign countries with a firm peg to a cooperating country external to the zone--is virtually unique. Examples of somewhat similar systems would include the group of countries participating in the Eastern Caribbean Central Bank currency arrangements; the Common Monetary Area comprising Lesotho, South Africa, and Swaziland; and the Belgium-Luxembourg economic union. In each case, however, the structure is somewhat looser than in the franc zone:

- o   The Eastern Caribbean dollar--the currency of Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines--is pegged to the U.S. dollar. Unlike the French involvement with the CFA franc zone, however, the United States is not a party to that agreement.
- o   The currencies of Lesotho and Swaziland are both pegged to the South African Rand; although the Rand is legal tender in Lesotho, the three currencies are otherwise distinct, and in principle the parity of either of the smaller countries could be changed without the agreement of the other.

1/   The IMF classifies countries as official or market borrowers if two thirds or more of their total liabilities outstanding are owed to one category of lender or the other; the four countries cited in the text are classified as "diversified," or intermediate to those two criteria. For a complete list of country classifications, see IMF (1991, pp. 123-128).

2/   This rule is implemented as a requirement that at least 65 percent of reserves must be held in the operations account.

3/   The emphasis on rediscounting derives from the limited development of domestic financial markets and the absence of bank reserve requirements; for an analysis, see Bourdin (1980). To implement the credit restriction rules, each central bank's operations account balance is notionally allocated among the member countries, with a residual allocated to the bank itself.

o   The currencies of Belgium and Luxembourg are interchangeable for
      most purposes (although the Luxembourg franc is not legal tender
      in Belgium) and are linked to other European currencies through
      the exchange rate mechanism of the European Monetary system; those
      linkages, however, are formally less firm than those in the other
      listed arrangements, owing to the 2 1/4 percent margins on either
      side of the parity. 1/

The exchange rate stability of the CFA franc zone--unchanged against
the French franc since 1948--is quite extraordinary for a diverse group of
developing countries, and it has undoubtedly been a major determinant of
economic performance for the region. The countries in the zone have
forsaken the exchange rate as a policy instrument for maintaining interna-
tional competitiveness, but they have thereby gained a measure of economic
stability that might otherwise have been more difficult to attain. The
question, of course, is how to assess that trade-off.

III. Economic Issues

It is readily established that by most commonly accepted criteria, the
CFA franc zone by itself would not constitute an optimal or natural currency
area. This conclusion would hold regardless of whether one started from a
relatively narrow Mundellian perspective or from a longer list of relevant
factors. What is perhaps less obvious is that the zone cannot be evaluated
by those considerations alone, because the system is not confined to the
member countries in Africa. The conclusion that emerges from the following
discussion is that it is essential to view the zone as part of a broad
currency area that includes France, and that the role of France in support-
ing the system is also germane to the discussion.

1.   The traditional perspective: the zone as a currency union

The standard criterion for a natural currency area, following Mundell's
seminal article (1961), is that participating countries should be affected
similarly by disturbances (and thus have little need for relative price
shifts among them) and should have a high degree of factor mobility across
countries (and thus be able to adjust to asymmetric disturbances without
shifting relative prices). 2/ But there are a number of other criteria
that have been suggested at various times, and it is generally acknowledged
that there are no formal or parametric standards for evaluating the
appropriateness or effectiveness of any particular currency union. In

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1/ In 1990, the authorities in Belgium and Luxembourg took steps to
strengthen the linkages with the deutsche mark by announcing a policy of
adjusting interest rates to maintain the parity with the mark and to stay
well within the allowed EMS margins.
2/ Eichengreen (1990), for example, applies these criteria to European
countries and concludes that "Europe remains further than the currency
unions of North America from the ideal of an optimum currency area."

addition to Mundell's criteria, one could include (at least) the following: (a) reasonable flexibility of prices and wages (Marston, 1981); (b) similarity in preferences regarding inflation (Fleming, 1971; Haberler, 1970; Canzoneri and Rogers, 1990); and (c) a high degree of intraregional trade (McKinnon, 1963 and 1979). 1/

a.   Wage and price flexibility

Arguments related to the desirability of a currency union normally start from the presumption that the flexibility of wages and prices is limited. With the exchange rate fixed, flexibility of other prices would help each country to adjust independently to any disturbance that affected it differently from its partners. In the extreme, if all prices were fully flexible (with no costs incurred in producing that flexibility), then all exchange rates could be fixed with no loss in welfare, and the optimum currency area would be the world economy. In practice, of course, price flexibility is always limited, especially when it is necessary for prices to be reduced in absolute terms.

The main flexibility issue in the CFA franc zone concerns the ability of governments to reduce public sector wages or producer prices in response to reductions in export earnings, if devaluation is precluded. There have been some notable examples of such cuts, especially after the world prices of many export commodities dropped in the mid- to late-1980s. In addition, private sector wages have shown a reasonable degree of flexibility. Levy and Newman (1989) present detailed data that reveal widespread cuts in real wages in Côte d'Ivoire from 1979 to 1984, a time when the CPI rose by a cumulative 48 percent. Aggregate wages rose by 74 percent in nominal terms and by 18 percent in real terms during that period; but the microeconomic data show that real wages would have declined by 8 percent had there been no change in the composition of occupations. Overall, about 14 percent of the firms in the study had experienced nominal wage cuts, and a further 37 percent had had real wage cuts.

Nonetheless, there has not been a general tendency for domestic prices to respond flexibly to changing circumstances. For example, Figure 2 shows prices paid to coffee growers in the seven CFA franc countries with significant coffee exports, along with an index of world coffee prices, all denominated in CFA francs. 2/ These data show that when world coffee prices have risen--in the mid-1970s and the early 1980s--producer prices have broadly kept pace. But when prices leveled off in the late 1970s,

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1/ For a fuller discussion of the early literature, see Ishiyama (1975).
2/ Basic data are from the International Coffee Organization, Quarterly Statistical Bulletin, various dates. The published data for the Congo and Gabon are measured per kilogram of dry cherry coffee; those prices have been multiplied by two to make them equivalent to the prices for green coffee reported for the other countries. The market price is the ICO's indicator price for robustas (the variety produced throughout the region), converted from US dollars to CFA francs at end-year exchange rates.

there was little slowing of the growth rate of producer prices; and when market prices fell by half from 1984 to 1987, producer prices merely flattened out. The resulting gaps caused severe budgetary and other economic difficulties throughout the area. There also has been substantial and occasionally successful resistance to wage cuts, notably when a 1990 proposal for wage cuts of 10 to 40 percent in Côte d'Ivoire led to wide-spread strikes and unrest, after which the implementation of the cuts was indefinitely postponed. In any event, resistance to price and wage cuts is always strong, in developing and developed countries alike, and this avenue will not lead quickly to equilibrium.

b. Factor mobility

With wage and price flexibility limited, it becomes important for there to be a reasonable degree of factor mobility between countries. Notably, unemployed workers should move freely to countries where jobs are relatively plentiful to restore equilibrium over the medium to longer term. 1/ On this criterion, the record also is somewhat mixed. Labor mobility in the region would appear to be circumscribed by the large distances between population centers 2/ and the limited availability of transportation. Nonetheless, there is a long history of substantial international migration of labor among countries in West Africa. Zacharia and Condé (1985) estimated that, in 1975, 25 percent of employed people in Côte d'Ivoire were non-Ivoirians. Of those, about half were from Burkina Faso and nearly one quarter from Mali. Immigrant labor from those two countries as well as the Gambia and Guinea also accounted for a sizeable portion of the labor force in Sénégal.

For labor mobility to aid the functioning of a currency union, it is essential not just that migration take place but that it respond to shifts in relative real wages or other differences in economic conditions. These marginal responses are, of course, much more difficult to measure than the size of the movements. Religious and tribal factors may have a substantial influence on labor flows, and numerous regulations were implemented after independence was achieved in the late 1950s and early 1960s designed to reduce the importance of non-nationals that had developed during the colonial period. Nonetheless, in the modern era economics seems to be the dominant cause of international migration in the region. Although Zacharia and Condé were unable to determine the causes of migration in West Africa, they did note a high correlation with economic conditions. Furthermore, the

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1/ Labor mobility may also be supplemented by capital mobility, but what matters in this context is less financial than physical capital. The CFA franc is freely convertible into French francs, and there is thus a high degree of capital mobility. Whether this feature translates into movements of capital in support of economic activity where labor is relatively plentiful is more doubtful.

2/ The territory of the CFA franc zone is approximately 14 times as large as France, while the population is only about 1/3 larger than that of France.

Figure 2. Prices Paid to Coffee Growers, 1981-88

(in CFA francs per kilogram of green coffee)

Gabon

C.A.R.

Cameroon

Congo

Benin

Togo

Ct d'Ivoire

mkt price
(1981=100)

- 8a -
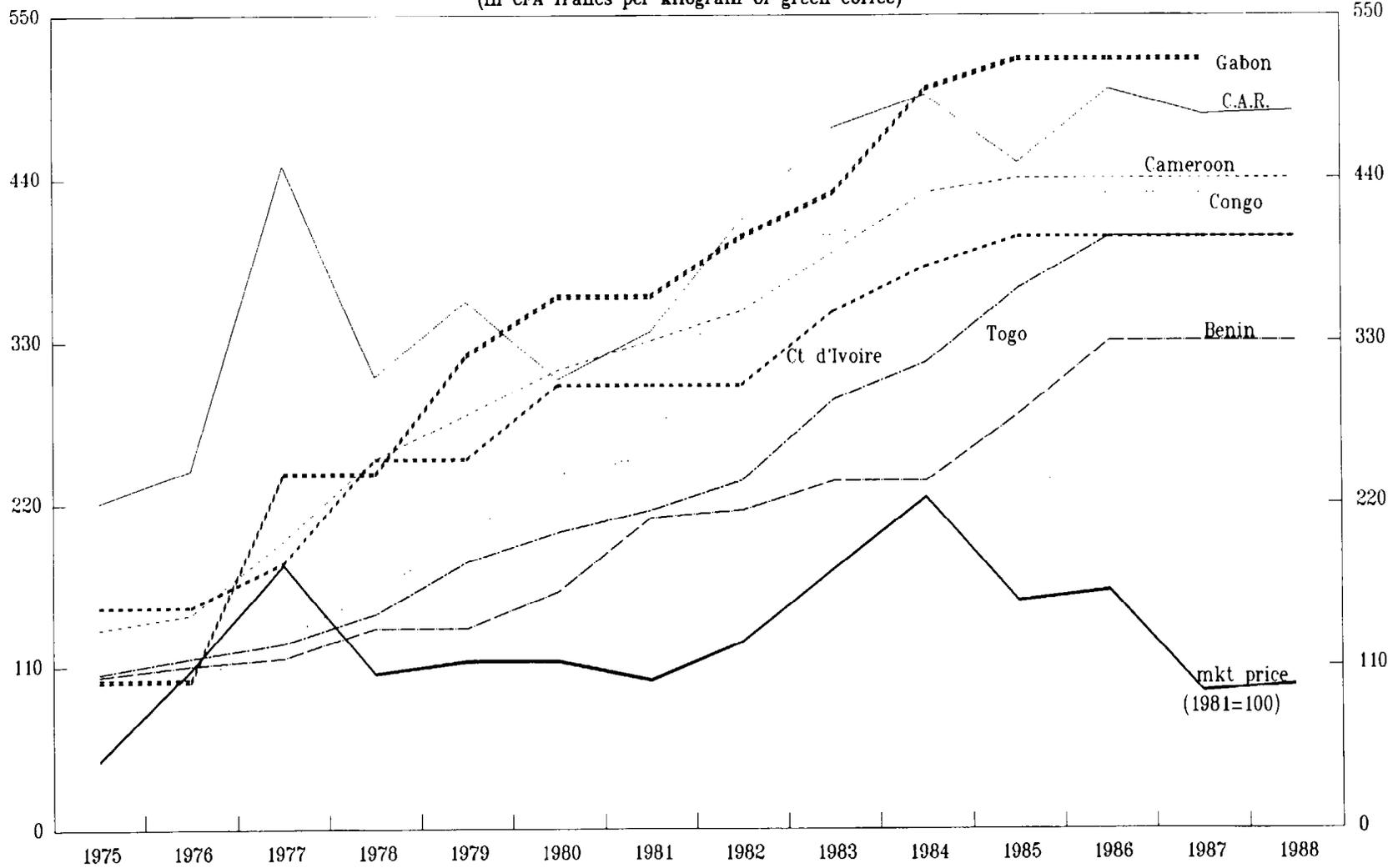
Source: see text.

geographic pattern of migration appears to shift over time, and many migrants may stay for short periods. (See also Mabogunje, 1972; Amin, 1974; and Fargues, 1986.)

c. Similarity of effects from disturbances

To the extent that countries in a currency union are unable to respond flexibly to external shocks, it becomes important for them to have some insulation from country-specific shocks. If, for example, the commodity structure of trade is similar for each country, then shocks will probably have similar effects across countries. Alternatively, if countries trade different goods but trade with the same countries outside the zone, then there will still be a reasonable probability that the entire currency area will be similarly affected by at least certain types of disturbances. As an important special case, a high degree of intraregional trade--as in the European Communities--can contribute substantially to regional stability in combination with a currency union.

Table 2 presents data on the structure of exports for countries in the CFA franc zone, both for the recent period (1985-87) and for selected earlier years (1965-67). 1/ These data reveal a wide diversity of exports among the member countries, and a pattern that has become more diverse over time. In the 1960s, most of the CFA franc countries were heavily reliant on traditional agricultural exports, but with a wide range of commodities. Three countries were predominantly exporters of coffee and cocoa; three of vegetable oils; two of livestock; two of timber; and two of cotton. Minerals were a relatively unimportant source of export revenues, except for diamonds for the Central African Republic and the Congo, calcium phosphates for Togo, and manganese for Gabon.

The most important change in the composition of exports over the past two decades has been the growing importance of minerals. From 16 percent in the mid-1960s, minerals now account for more than 40 percent of exports for the zone as a whole. For the 1985-87 period, eight of the thirteen countries derived more revenues from mineral exports than from any other commodity: four from petroleum and one each from uranium, phosphates, diamonds, and gold. 2/ Much of that increase came at the expense of traditional export commodities such as vegetable oils and timber.

The left side of the table shows the commodity export patterns of the West African countries, while the Central African countries are shown in the right section. The main differences between the two regions are that coffee and cocoa are more important in the Western group and that minerals play a

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1/ Data on import structure are not discussed here, since the external shocks affecting these countries have been predominantly on the export side.

2/ Gold exports were not in the data base for the 1960s, but the omission is not significant. Burkina Faso, the only country in the zone with substantial gold exports, began mining gold in 1984.

Table 2. CFA Franc Zone: Structure of Exports by Commodity

I. 1965-67

	Western Region								Central Region							CFA franc Zone total
	Benin	Burkino Faso	Côte d'Ivoire	Mali	Niger	Sénégal	Togo	Total	Cameroon	Central African Republic	Chad	Congo	Gabon	Equatorial Guinea 1/	Total	
Beverages	3.5	--	56.1	--	--	--	42.1	33.8	54.6	20.0	--	1.9	1.7		23.6	29.9
Cocoa	--	--	19.3	--	--	--	24.4	12.2	27.6	--	--	1.0	1.2		11.2	11.8
Coffee	3.5	--	36.9	--	--	--	17.7	21.6	27.0	20.0	--	0.9	0.5		12.4	18.1
Vegetable oils	66.7	12.5	1.0	18.3	70.3	78.3	9.4	27.0	3.4	3.0	0.4	2.1	0.1		1.9	17.5
Other food products	1.1	61.1	4.1	48.6	14.4	4.7	--	7.4	3.0	0.1	11.2	4.7	--		2.7	5.6
Fish	0.9	0.1	0.3	18.4	0.1	4.6	--	3.1	0.2	--	0.2	--	--		0.1	1.2
Livestock	0.2	56.5	--	28.0	13.4	--	--	1.8	0.1	0.1	8.1	--	--		0.7	2.2
Other	--	4.5	3.9	2.2	1.0	0.1	--	2.4	2.7	--	2.9	4.6	--		1.9	2.2
Agricultural materials	10.9	15.8	27.0	25.6	7.2	0.5	4.0	17.2	17.9	24.4	81.0	40.4	30.8		30.5	22.2
Timber	0.1	--	25.6	--	--	--	--	14.3	8.5	2.5	--	39.7	30.6		18.5	15.9
Cotton	7.8	12.0	0.6	23.5	5.3	--	3.9	2.0	6.8	18.7	79.3	--	--		10.4	5.2
Other	3.0	3.8	0.8	2.1	1.9	0.4	0.1	0.9	2.6	3.2	1.7	0.7	0.2		1.6	1.2
Minerals	0.1	0.1	1.5	0.2	0.5	7.7	38.4	5.1	15.9	51.8	1.6	39.5	57.9		34.3	16.2
Petroleum	0.1	--	0.4	0.2	0.3	0.1	--	0.3	--	0.5	1.6	2.3	21.1		7.1	2.9
Uranium	--	--	--	--	--	--	--	--	--	--	--	--	8.1		2.6	1.0
Calcium phosphates	--	--	--	--	0.1	7.6	38.4	4.2	--	--	--	--	--		--	2.6
Diamonds	--	--	0.1	--	--	--	--	0.1	--	51.4	--	37.2	--		9.5	3.7
Other 2/	--	--	1.0	--	--	--	--	0.5	15.9	--	--	--	28.7		15.1	6.1
Total of above	82.3	89.5	89.7	92.8	92.3	91.2	93.9	90.4	94.9	99.2	94.1	88.6	90.5		93.0	91.4
Other 3/	17.7	10.5	10.3	7.2	7.7	8.8	6.1	9.6	5.1	0.8	5.9	11.4	9.5		7.0	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0

- 10 -

Table 2. CFA Franc Zone: Structure of Exports by Commodity (continued)

I. 1985-87

			Western Region						Central Region							CFA franc
	Benin	Burkino Faso	Côte d'Ivoire	Mali	Niger	Sénégal	Togo	Total	Cameroon	Central African Republic	Chad	Congo	Gabon	Equatorial Guinea 1/	Total	Zone total
Beverages	27.9	--	58.8	0.4	2.0	--	23.0	41.8	27.9	29.0	--	0.5	0.5	46.0	10.8	27.1
Cocoa	24.0	--	35.5	0.3	2.0	--	10.6	25.3	14.4	0.1	--	0.3	0.2	41.0	5.3	15.9
Coffee	3.9	--	23.3	0.1	--	--	12.4	16.5	13.5	28.9	--	0.2	0.3	5.0	5.5	11.3
Vegetable oils	8.4	6.9	2.1	1.2	0.1	13.9	3.9	3.7	0.9	--	3.4	--	0.1	0.8	0.4	2.1
Other food products	0.9	12.7	5.0	5.4	12.3	29.9	0.4	8.2	1.2	0.4	1.2	0.9	1.4	0.6	1.2	4.9
Fish	0.8	--	2.7	0.2	0.1	28.7	0.3	5.2	0.3	0.4	--	0.1	1.2	0.4	0.6	3.0
Livestock	--	9.0	--	5.0	12.0	0.3	--	1.3	--	--	0.7	--		--	--	0.7
Other	0.1	3.7	2.3	0.1	0.2	0.9	0.1	1.8	0.8	--	0.5	0.8	0.2	0.2	0.6	1.2
Agricultural materials	29.7	36.7	14.9	73.8	1.7	2.4	12.7	15.9	9.8	25.2	80.3	6.4	11.1	45.1	11.7	13.9
Timber	0.2	--	10.6	--		0.2	--	7.1	6.4	11.3	--	6.4	11.1	45.1	8.5	7.8
Cotton	28.9	28.5	2.6	68.6	0.5	1.5	12.7	7.0	1.6	9.4	78.8	--	--	--	2.5	4.8
Other	0.6	8.1	1.7	5.1	1.2	0.7	--	1.7	1.7	4.5	1.5	0.1	--	--	0.8	1.3
Minerals	29.4	35.5	5.7	7.7	81.5	24.1	51.4	16.6	50.8	37.7	--	89.7	83.6	--	70.3	42.0
Petroleum	27.4	--	4.5	--	2.4	15.1	1.5	5.8	45.8	--	--	86.2	73.1	--	62.9	32.9
Uranium	--	--	--	--	79.0	--	--	5.3	--	--	--	--	4.1	--	1.5	3.5
Calcium phosphates	--	--	--	--	--	8.6	48.1	3.3	--	--	--	--	--	--	--	1.8
Diamonds	2.0	--	1.2	5.7	0.1	--	0.3	1.2	--	37.1	--	2.3	--	--	1.5	1.3
Gold 4/	--	35.5	--	2.0	--	0.4	1.5	1.0	--	0.6	--	0.2	--	--	0.1	0.5
Other 2/	--	0.1	--	--	--	--	--	--	4.9	--	--	1.0	6.4	--	4.3	2.0
Total of above	96.3	91.8	86.5	88.4	97.6	70.3	91.4	86.1	90.5	92.3	84.9	97.5	96.8	92.5	94.4	90.0
Other 3/	3.7	8.2	13.5	11.6	2.4	29.7	8.6	13.9	9.5	7.7	15.1	2.5	3.2	7.5	5.6	10.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: United Nations Statistical Office, Commodity Trade Statistics (via World Bank, TARS data base). Details may not add to totals, owing to rounding; -- indicates less than 0.5 percent.

1/ Joined the zone in 1985.

2/ Principally aluminum and manganese.

3/ Includes notably chemicals and manufactures.

4/ Gold was excluded from the original source data in the earlier period.

much more important role in the Central countries. These differences became accentuated between the mid-sixties and the mid-eighties.

A consequence of the diversity in export structure is that terms-of-trade shocks tend to affect countries in the zone--and the two regions--quite differently. Even if all of these countries pursued exactly the same domestic policies, their competitive positions would move quite independently whenever the prices of major exports tended to diverge. Since divergent trends have been a prominent feature of primary commodity markets over the past decade (Table 3 and Figure 3), this diversity may be judged to have been an important source of differences in competitive trends for the countries in the CFA franc zone.

The terms-of-trade data in Figure 3 are less timely than the data on world market prices in Table 3, so the two sets of data are difficult to compare. Nonetheless, the predominance of divergent trends is clear. From 1970 to 1980, changes in the terms of trade ranged from a 257 percent increase in Gabon (exporting principally timber, manganese, and petroleum) to a 38 percent decrease in Burkina Faso (live animals). From 1980 to 1987, the terms of trade worsened throughout the zone, but the magnitudes ranged from a 10 percent decline in Sénégal (fish, groundnuts, and chemicals) to a 44 percent decline in Cameroon (petroleum). 1/

d.   Similarity of inflation preferences

A fourth broad criterion, which is more political than economic in nature, is that countries participating in a currency union should be reasonably homogeneous in their tolerance of inflation. In general, one country might be willing to tolerate a higher rate of inflation than other countries, either because it has a relatively high degree of downward inflexibility of wages (and therefore would bear a higher cost from disinflation) or because it has a relatively narrow tax base or an inefficient fiscal system (and therefore would have a greater incentive to rely on the seigniorage from inflationary finance). It could be costly for such a country to constrain its inflation rate through participation in a currency union. On the other hand, such participation could contribute to wage flexibility or to fiscal efficiency by enhancing the credibility of the authorities' commitment to price stability, in which case the net benefits could even be stronger for high-inflation than for low-inflation countries (see Corden, 1991).

1/ Devarajan and Rodrik (1991) note that there also has been a wide range of experience regarding the variance of the terms of trade, with the Congo and Gabon having the most variable data and Niger, the Central African Republic, and Sénégal the most stable.

Figure 3. Terms of Trade, 1965-87

(1980=100)

Central Region

Central African Republic
Cameroon
Congo
Gabon

Western Region

Mali
Togo
Burkina Faso
Benin
Niger
Cote d'Ivoire
Senegal

Source: UNDP and World Bank (1989).

- 13 -
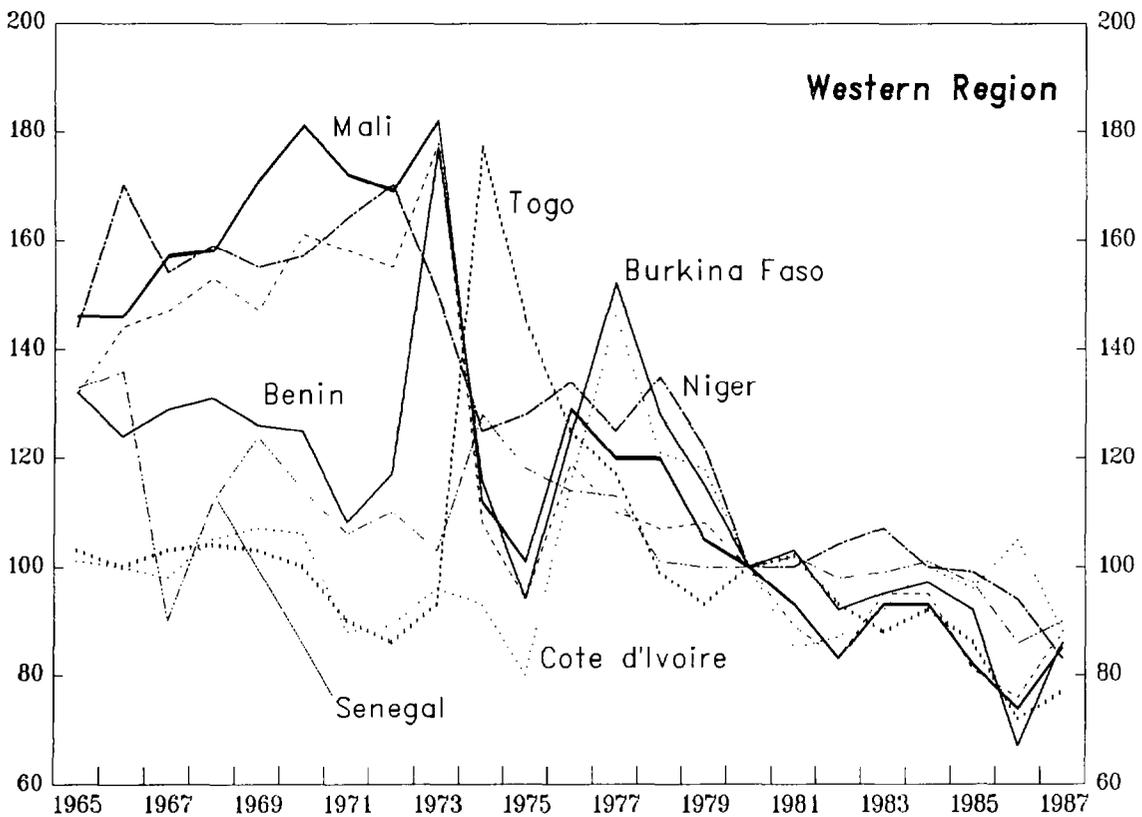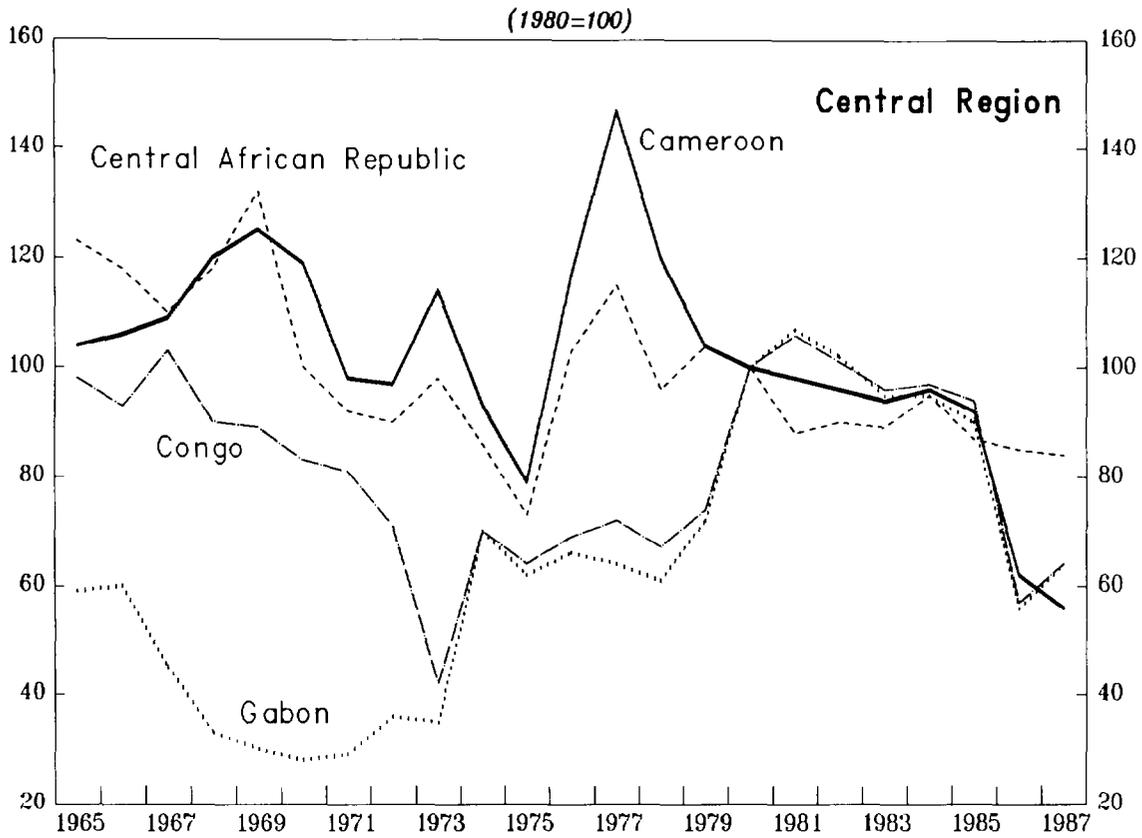
Table 3.   Changes in World Prices of Selected Commodities, 1980-90

(Percentage changes in U.S. dollar prices)

	1980-85	1985-90	1980-90
Uranium 1/	-40	-38	-63
Cocoa beans	-13	-44	-51
Palm oil	-14	-42	-50
Coffee	-6	-39	-42
Gold	-48	+21	-37
Petroleum 2/	-3	-18	-20
Fishmeal	-44	+47	-18
Phosphate rock	-27	+19	-13
Cotton	-28	+20	-13
Beef	-22	+19	-7
Logs	-30	+55	+7

Source: International Financial Statistics except as noted.

1/   Data for uranium are from Commodity Research Bureau (1990), updated to 1990 on the basis of the uranium component of the U.S. producer price index.
2/   Petroleum data from 1985 on are an average price of crude in world trade; earlier data are Saudi Arabian export prices.

The seigniorage issue is difficult to analyze for the CFA franc zone, because of the constraints that the system imposes on the member countries. 1/ That is, the data reveal only the constrained expansion of the monetary base and the resulting constrained inflation rates, rather than the expansion that the country would have selected in the absence of restrictions. With the currency union in place over more than forty years, there has been no opportunity to observe the alternative regime under which countries could choose whether to resort freely to inflationary finance. Nonetheless, the system does not force each country to have the same inflation rate, and if there were substantial differences in preferences, a pattern of relatively high- and low-inflation countries could emerge--though with ultimately disastrous consequences. 2/ But this has not happened. As may be seen from Figure 4, while there has been some dispersion of inflation rates, there have not been any persistent outliers; most member countries have moved between the top and the bottom of the range at one time or another. Furthermore, seigniorage rates (Figure 5) have been uniformly low over the past decade. For the period 1980-89, expansion of the monetary base (mostly currency) ranged from 0.2 percent in Côte d'Ivoire and Gabon to around 2 percent in Togo. These data may be compared with Europe and the rest of sub-Saharan Africa, where high-inflation countries typically have had seigniorage rates well in excess of 2 percent of GDP. 3/


1/ For a detailed analysis of the institutional difficulties in analyzing the distribution of seigniorage in the zone, see Honohan (1990a). The following discussion equates seigniorage with expansion of each country's monetary base, although--as Honohan argues--the actual distribution of revenues by the regional central banks might have differed markedly from that distribution in ways that are difficult to assess.

2/ Comparison with the EMS is instructive. From the 1979 inception of the EMS through 1986, there was a clear pattern of high- and low-inflation countries, validated in part through occasional realignments and in part through adoption of a wide band for the highest-inflation country, Italy. Then from 1987 through 1989, the dispersion of inflation rates was reduced, mainly through convergence of Italy and Ireland down toward the group mean, and there were no further realignments. For details, see Ungerer et al. (1990). The lesson from that experience is that the persistence of substantial inflation differentials, even in a quasi-union such as the EMS, is inherently unstable because the high-inflation countries will face increasing losses of competitiveness and speculative realignment pressures; see Dornbusch (1989).

3/ Cody (1991) calculates seigniorage rates for EMS member countries for 1979:2 - 1988:4. He finds that the United Kingdom and all of the countries in the narrow band of the exchange rate mechanism had rates between zero and one percent, while the others (Greece, Italy, Portugal, and Spain) were all 2.5 percent or higher. Grilli (1989) derives similar estimates over the period 1950-85. For 1980-89, Ghana, Sierra Leone, and Zaïre (three of the highest-inflation neighbors of the CFA franc zone) had rates of 2.6, 6.2, and 9.3 percent, respectively. For an analysis of the limitations of seigniorage estimates that ignore institutional considerations, see Klein and Neumann (1990) and Honohan (1990a).

Figure 4. Consumer Price Inflation, 1968 - 1989

(3-Year Moving Averages)

—Cameroon
--Senegal
—Cote d'Ivoire
- -Congo
— Gabon
- -Niger
---Togo
--Burkina Faso

-- Average of CFA countries
— France
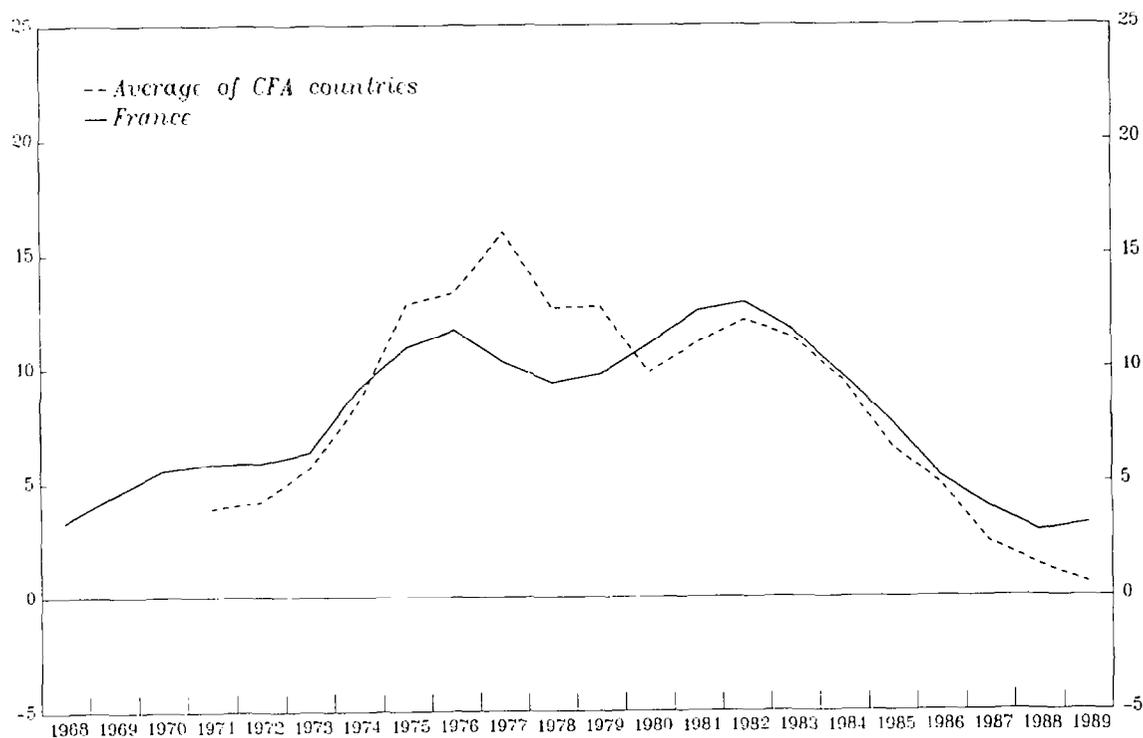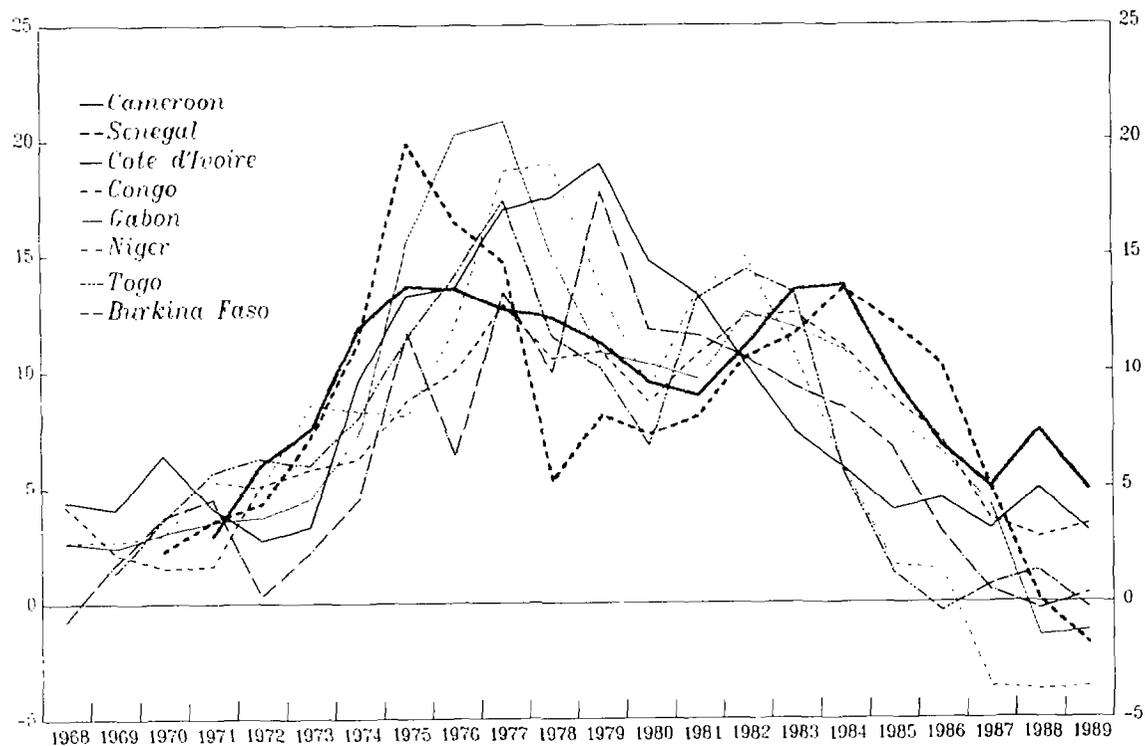
Source: IMF, International Financial Statistics; BCEAO (1991); and author's estimates.

Figure 5. Seigniorage Revenue, 1986-89 [1]
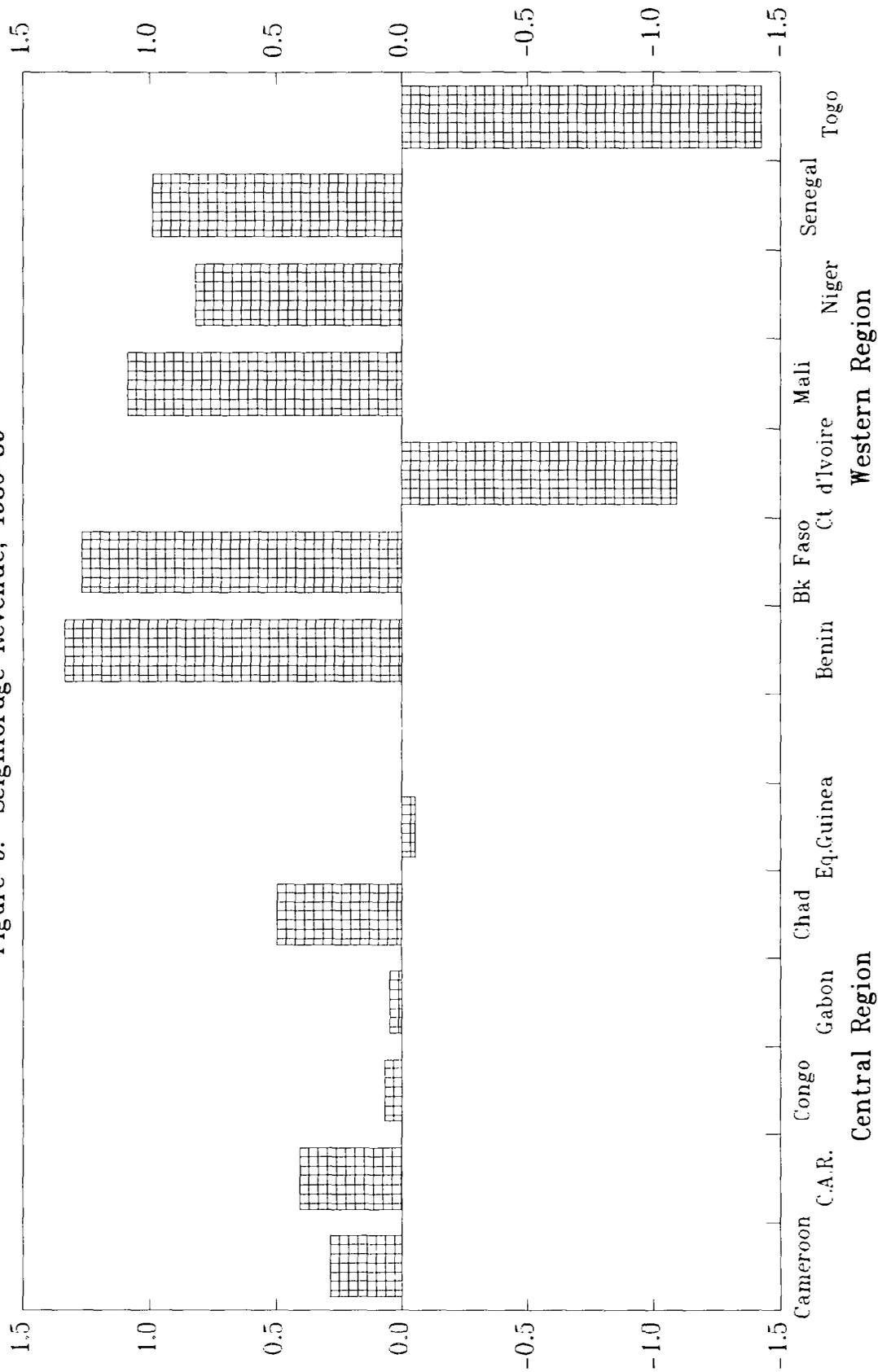
1/ Change in monetary base / GDP (%)
Sources: IMF, International Financial Statistics; World Bank, World Development Report; and BEAC, Etudes et Statistiques.

A conclusion that could be drawn from these data is that whatever differences there may have been in preferences regarding inflationary finance have been reasonably well contained by the financial system. None of the CFA countries has had recourse to seigniorage to the same extent as have high-inflation countries elsewhere. What is less clear from these data is whether the repression of strong inflation preferences in some member countries might have contributed to financial difficulties. For example, after the sharp fall in petroleum prices in the mid-1980s, a severe liquidity squeeze developed in Cameroon. The government initially incurred arrears in making payments to domestic suppliers and contractors, and the consequent rundown in bank deposits left many of the larger banks short of lendable funds and eventually unable to continue operating. 1/ The growth rate of the monetary base thus was held down, but at a high cost to the banking sector and to economic activity.

Another perspective on the seigniorage issue is suggested by Casella (1990). She develops a model showing that small countries must be given a disproportionate share of the benefits from a currency union if the union is to hold together. In this framework, a currency union that meets that criterion is preferable to cooperation with fixed exchange rates, since only the former would provide sufficient incentive for small countries to adhere to the system. Hence a relevant yardstick for the viability of a union is whether small countries receive relatively high portions of seigniorage revenues; there are other means of redistributing resources, but seigniorage allocation is the basic mechanism of the currency union. Comparing the size rankings of each country by GDP (from Table 1) with the rankings by seigniorage rates (from Figure 5) yields a Spearman rank correlation coefficient of 0.51; the null hypothesis of no correlation is rejected with 90 percent confidence. The four countries with the highest seigniorage rates are all below median size, and the four countries with the lowest seigniorage rates are all above median size. Thus the zone's monetary arrangements have been applied--whether intentionally or not--so as to redistribute money toward the smaller countries.

e.   Intraregional trade

Intraregional trade constitutes a relatively small portion of total trade for the CFA franc countries: certainly minuscule in comparison with intra-European trade, for example. Consequently, the beneficial effect on transactions costs from using a common currency would be smaller here than for Europe. As shown in the 1985-87 data in Table 4, reported trade within the CFA franc zone accounted only for some 7 1/2 percent of total international trade for the member countries as a group. That figure compares with 55 percent in intraregional trade over the same period for the countries participating in the exchange rate mechanism of the European Monetary System. Furthermore, even 7 1/2 percent may overstate the importance of intraregional trade somewhat, because entrepôt trade has been

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1/ For a review of the way the banking crisis developed, see "Liquidity Crisis Squeezes Banks," Africa Economic Digest (11 September, 1987), p. 24f.

Table 4. CFA Franc Zone: Direction of Trade

	Western Region								Central Region							CFA franc Zone total
	Benin	Burkino Faso	Côte d'Ivoire	Mali	Niger	Sénégal	Togo	Total	Cameroon	Central African Republic	Chad	Congo	Gabon	Equatorial Guinea 1/	Total	
I. 1965-67																
Within CFA																
Franc Zone	8.0	41.7	4.4	23.6	8.2	2.3	3.7	6.8	2.1	0.9	1.4	0.8	2.7	--	1.9	5.0
France	49.4	36.0	46.4	19.6	54.4	61.7	34.7	48.4	50.5	50.5	48.6	39.8	47.8	--	47.9	48.2
Other Europe	23.2	10.4	25.2	9.8	12.3	13.8	36.5	20.7	27.7	19.8	22.0	41.0	21.8	--	27.2	23.1
North America	5.4	2.2	11.3	1.5	2.8	2.1	3.2	6.7	8.8	11.9	5.9	3.4	16.9	--	10.0	7.9
Japan	1.2	0.4	1.4	0.8	2.0	0.8	9.8	1.8	1.8	1.6	2.4	0.8	1.1	--	1.5	1.7
Rest of World	12.6	9.2	11.2	44.5	20.4	19.3	12.4	15.6	9.1	15.2	19.8	14.2	9.6	--	11.6	14.1
II. 1985-87																
Within CFA																
Franc Zone	4.9	24.5	8.2	25.2	7.2	9.7	6.5	9.8	5.1	0.8	12.6	2.0	4.1	7.4	4.1	7.4
France	20.2	32.9	22.7	25.6	55.2	32.5	24.6	26.9	33.3	44.9	32.6	26.5	40.3	1.7	34.4	30.1
Other Europe	38.8	20.3	37.6	29.9	16.6	23.7	37.2	32.8	40.5	24.2	42.1	29.5	22.1	79.4	31.4	32.2
North America	7.0	3.8	10.4	4.6	2.5	4.7	5.5	7.8	6.1	1.7	8.7	33.3	17.5	0.1	15.9	11.2
Japan	5.0	3.5	2.6	1.7	2.6	2.7	3.7	2.8	4.9	2.0	0.8	1.7	2.7	0.2	3.2	3.0
Rest of World	24.2	15.1	18.6	12.9	15.8	26.7	22.3	19.8	10.2	26.5	3.2	7.0	13.2	11.0	11.0	16.2

Source: Direction of Trade Statistics and author's estimates; data are total trade (exports plus imports)

1/ Equatorial Guinea is excluded from the 1965-67 data because it had not yet joined the zone. Mali also was not in the zone at the time, but its currency was pegged independently to the French franc.

only imperfectly allowed for; the relatively high estimates for the land-locked countries Mali, Burkina Faso, and Chad reflect substantial exports to Sénégal, Côte d'Ivoire, and Cameroon (respectively) that are destined for re-export.

There are several explanations for the limited extent of measured intraregional trade. First, because incomes are very low throughout the region, there is only a limited internal market for the tradable goods that these countries produce. A fortiori, there is only limited potential for specialization of production within the region. Second, the transportation and communication networks in the region are limited, especially in view of the long distances involved (see Ojo, 1987). Third, there is a degree of protection of domestic producers in a number of countries. In most instances, imports from countries within the same region (west or central) are exempt from restrictions, but imports from countries in the other region in the zone may not be. 1/ Fourth, an indeterminate but probably sizeable portion of intraregional trade would be concentrated in the informal sector and thus not subject to measurement in these data.

2. Additional considerations: the zone as a monetary standard

In addition to benefits that might accrue from belonging to a currency union, the CFA franc countries may derive benefits from adhering to a monetary standard vis-à-vis the French franc: in effect, becoming part of a broad European monetary zone. These benefits might include the economic stability that would come from gaining credibility for policies or discipline in the implementation of those policies; guaranteed convertibility of the currency; and economic and other forms of support from France or other countries. But the benefits must be assessed against the costs associated with the loss of monetary policy as an independent policy instrument over the longer run and the potential for overvaluation of the real exchange rate. 2/ The trade-off would be improved to the extent that trade is directed toward Europe, since similarities in the direction of trade serve a

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1/ The regions are defined differently for trade and financial purposes. For example, Côte d'Ivoire exempts member countries of the Economic Community of West African States (ECOWAS) from certain tariffs and restrictions. That area includes the seven members of WAMU, plus nine other West African countries that are outside the franc zone. Proposals surface occasionally for establishing a common currency for the ECOWAS region; see, for example, Balogun (1990).

2/ For an overview of the issues relating to the choice of exchange rate regime for developing countries, see Aghevli, Khan, and Montiel (1991) and Corden (1990). The choices available in practice are, of course, broader and more complex than just fixed vs. flexible rates. If the CFA franc zone were to be altered, options would range from changing the parity against the French franc to establishing independently floating currencies. The intention of the present paper is not to compare those options, but rather to evaluate the strengths and weaknesses of the existing regime relative to the performance of countries with relatively greater flexibility.

similar function as a high degree of intraregional trade, both by contributing to the advantages of using a given currency for trade in the (broad) region and by helping to stabilize effective competitiveness.

a. Discipline

There can be little doubt that the CFA franc zone's currency arrangements have imposed a degree of discipline on financial policies in the member countries. Figure 6 illustrates this point by comparing inflation rates for the 1980s in the CFA franc countries with inflation in France and in neighboring African countries. 1/ The choice of the neighboring countries as comparators is apt because they have been subjected to similar external shocks but differ primarily in the choice of exchange regime. To illustrate the similarity of shocks, the CFA countries as a group experienced a decline in the terms of trade averaging 27 percent from 1977 through 1987, and the standard deviation around that trend was 7 percentage points. For the neighboring countries as a group, the figures were 27 percent and 9 points, respectively. For both groups of countries, the effect of the terms of trade loss on GDP--using the formula suggested by Hamada and Iwata (1984)--averaged -0.8 percent per annum. 2/ All of the neighbors, however, have had relatively flexible managed or floating exchange rates, in contrast to the countries in the zone. 3/

All of the member countries had inflation rates close to or below French rates in the 1980s, and the average for the zone was just 4.2 percent, compared with 6.5 in France. In contrast, the neighboring countries

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1/ The neighboring countries shown in the chart include all those that are contiguous to the CFA franc zone except Guinea, Liberia, and the Sudan, for which data were unavailable. Data also were missing for Equatorial Guinea. Honohan (1990b) provides statistical evidence, based on principal components analysis, that inflation rates in the zone have converged toward the French rate over the longer run. For a comparison with Latin American countries, see Connolly (1985).

2/ For the full period covered by the World Bank data (1965 through 1987), the countries in the zone experienced a much larger decline in the terms of trade than did the neighboring countries (30 percent, compared with 12 percent), a larger standard deviation around the trend (25 percentage points, compared with 14 points), and a larger impact on GDP (-0.4 percent per annum, compared with -0.3).

3/ Five of the six high-inflation neighboring countries--the Gambia, Nigeria, Ghana, Sierra Leone, and Zaïre--have independently floating currencies. The Libyan dinar is pegged to the SDR; the Algerian dinar and the Moroccan dirham are pegged to other currency baskets; and the Mauritanian ouguiya and the Guinea-Bissau peso are classified as managed floating currencies. The ouguiya is adjusted on the basis of movements in a basket of currencies, while the peso is adjusted relative to the SDR on the basis of estimated domestic inflation. For details, see IMF (1990). The Latin American countries in Connolly's (1985) comparison had adopted crawling-peg regimes.

Figure 6.   Average Inflation Rates (GDP Deflators), 1980-89

(in percent per annum)
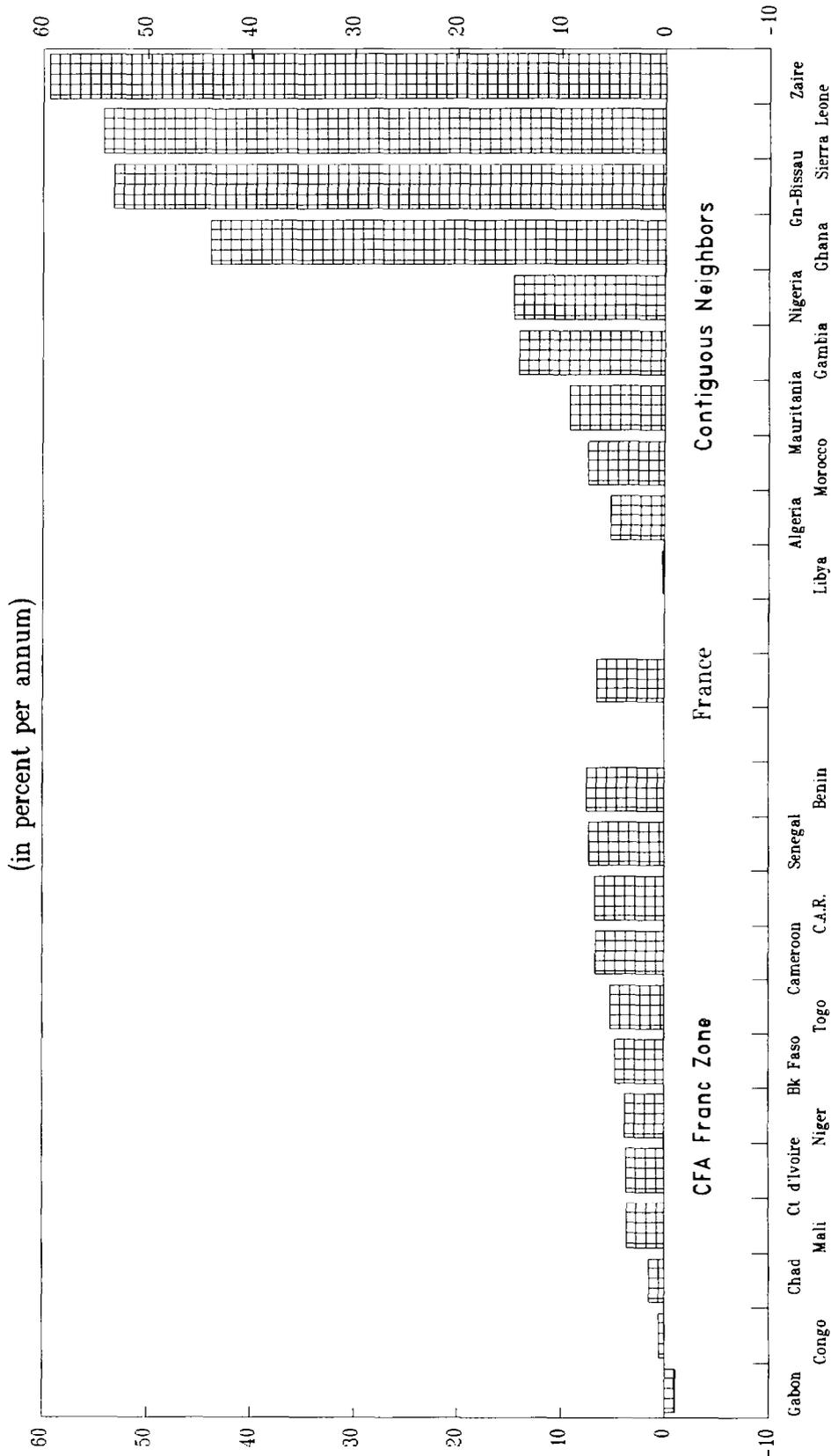
Source: World Bank, World Development Report, 1991.

had a wide range of inflation experiences; the four Northern countries had moderate rates, but the sub-Saharan group had average annual inflation rates ranging from 14 percent (the Gambia) to nearly 60 percent (Zaïre). Although these data obviously do not reveal what would have happened in the CFA franc countries under alternative exchange arrangements, the conclusion that the existing arrangements contributed to price stability is hard to resist.

Devarajan and Rodrik (1991) have developed a methodology for quantifying the trade-off between fixed and flexible exchange rate regimes for the CFA franc zone, based on a trade-off between price stability and growth. In their framework, welfare is a function of departures of real growth from the potential rate or of the inflation rate from a target value. They postulate that there is a fixed inflation differential (estimated to be 12 to 15 percent) between the two regimes, and they derive estimates of the maximum weight that the authorities could assign to output smoothing relative to inflation smoothing and still find that welfare would be improved by fixing the exchange rate. They conclude that the current regime would make sense only if the authorities have an "excessive anti-inflation bias" (p. 24). That conclusion, however, is based on the additional assumption that there exists a long-run trade-off between price stability and real growth; under the alternative interpretation that the cost of price stability is a rise in the variance of the growth rate rather than a reduction in its level, the case for exchange rate fixity is much stronger. 1/

  b. Credibility

Whether a program aimed at price stability contributes to or reduces growth is largely a question of credibility. Specifically, the achievement of price stability would be a Pyrrhic victory in the absence of policy credibility, because a sustained gap between the authorities' objectives and the public's expectations would imply that stability could be won only at the cost of reduced growth in real output. As Giavazzi and Pagano (1988) and Agenor (1991) have argued, membership in a currency union can enhance the credibility of an exchange rate peg by raising the cost of violating the initial commitment. In any event, lack of credibility does not seem to have

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1/ The basic result in Devarajan and Rodrik is that if (a) a 1 percent real appreciation reduces real GDP growth by 0.15 percent relative to the potential growth rate; (b) a 1 percent adverse terms-of-trade shock reduces growth by 0.4 percent; (c) the average variance of the terms of trade is 5.4 percent per annum; (d) the inflation differential between flexible and fixed regimes is 13.8 percent; (e) the authorities aim to maintain real growth at 2 percent above the natural rate; and (f) average inflation under the fixed rate regime is 8 percent above target; then welfare would be improved by shifting to a flexible regime as long as the authorities are prepared to tolerate at least 1.5 percent higher inflation in order to stimulate growth by 1 percent. If average inflation under the fixed rate regime is 2 percent above target instead of 8 percent, the tolerance requirement rises to 6 percent inflation per 1 percent growth. In any case, if the stimulus to growth is temporary, the limits on this ratio appear much more reasonable.

been an extensive problem in the CFA franc zone, as evidenced by the absence of a long-run trade-off between price stability and growth. Figure 7 shows average real growth rates for the same group of countries and the same time period as in Figure 6. 1/ While the growth experience of the CFA franc countries has been nowhere near as uniform as their inflation record, the average has held up reasonably well. The mean annual growth rate for the zone in the 1980s was just over 2 1/2 percent, compared with rates around 2 percent in France and for the neighboring countries as a group. 2/

A still more positive picture emerges from a comparison of growth rates for international trade (Figure 8). From 1976 through 1987, all of the CFA franc zone countries experienced positive trade growth in real terms (exports plus imports, measured in 1980 US dollars), and the average was somewhat above the growth in real GDP (3 1/4 percent, or about 3/4 of a percent above the growth of output). In contrast, half of the neighboring countries had negative real trade growth, and the average growth rate was just 3/4 of a percent.

What has proved to be a cost for the countries in the CFA franc zone is that they have experienced greater volatility of real output, compared with neighboring countries that have made active use of exchange rate policy. From 1971 through 1987, the standard deviation of annual growth rates for real GDP averaged 6.9 percentage points for the countries in the zone and 4.6 percent for the contiguous neighboring countries. This finding is consistent with the Devarajan-Rodrik (1991) model, which postulates a trade-off between output smoothing and inflation smoothing in the choice of exchange rate regime. On the other hand, domestic investment as a percent of GDP has been both higher and more stable in the zone than outside (with a mean of 23 percent and a standard deviation of 19 percentage points, compared with 19 percent and 28 points for the neighboring countries). 3/ And trade as a percentage of GDP has been about as high and as stable as in

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1/ Growth data were not available for two neighboring countries: Libya and the Gambia.

2/ These comparisons are essentially unaffected by weighting considerations. Taking unweighted means, growth averaged 2.6 percent in the CFA franc zone and 1.8 percent in the neighboring countries. Weighting by 1989 GDP shares yields rates of 2.5 and 1.9 percent, respectively. Devarajan and de Melo (1987b, 1990) and Guillaumont et al. (1988) also found that real growth in the CFA zone has been as high as or higher than other sub-Saharan African countries.

3/ These calculations are based on data from UNDP and World Bank (1989). The figures given in the text are unweighted averages across countries in each group for which data are available.

Figure 7. Average Real GDP Growth, 1980-89

(in percent per annum)

CFA ▦ Franc Zone   France   Contiguous Neighbors

| Gabon | Chad | Ct d'Ivoire | Bk Faso | Cameroon | Senegal | | Algeria | Mauritania | Nigeria | Gn-Bissau | Zaire |

Congo   Mali   Niger   Togo   C.A.R.   Benin   Morocco   Ghana   Sierra Leone
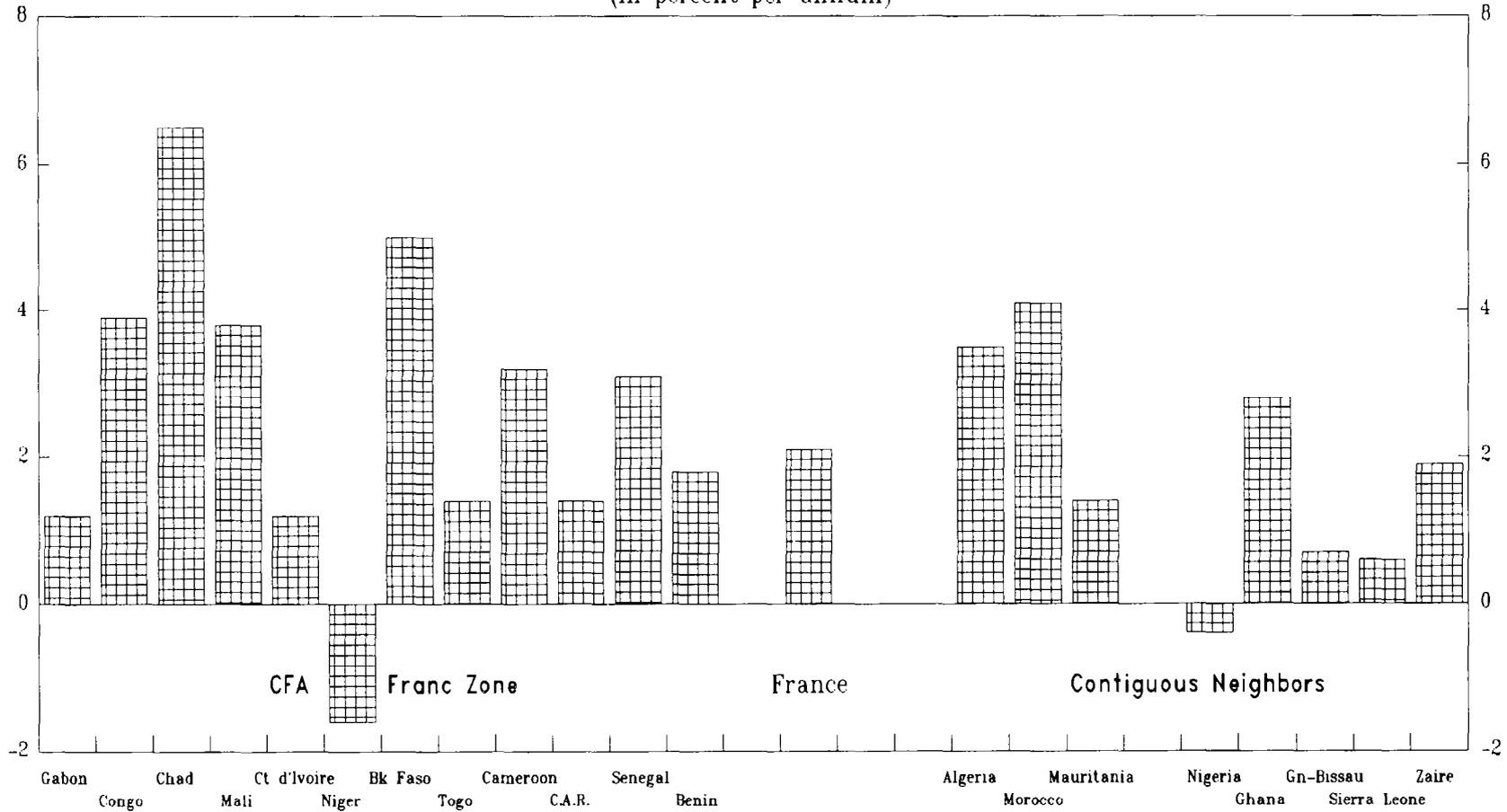
Source: World Bank, World Development Report, 1991.

Figure 8. Growth in International Trade, 1976–1987

(1980 US dollars, growth in percent per annum)
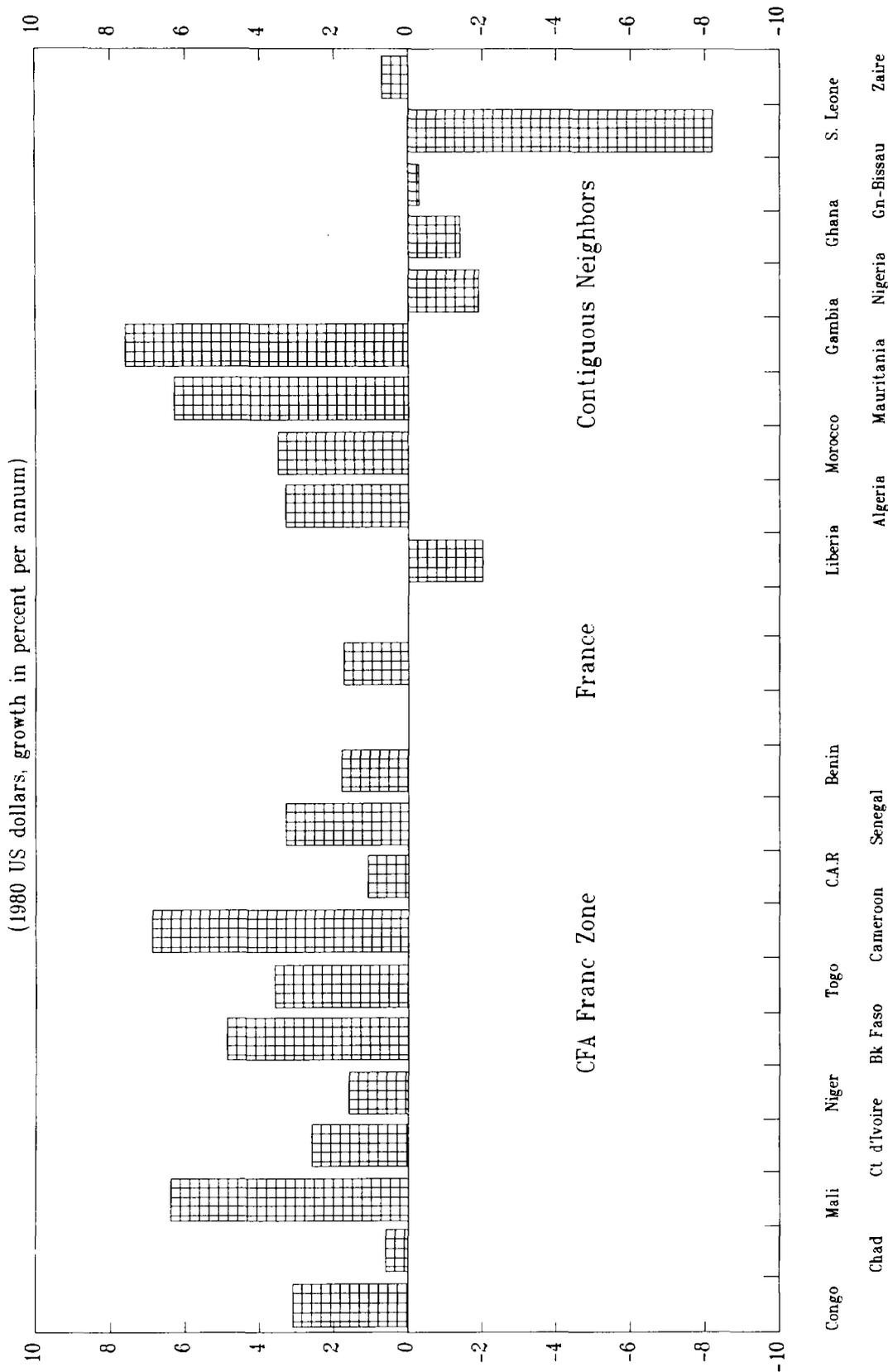
Source: UNDP and World Bank (1989), and IMF, International Financial Statistics.

the neighbors. 1/ On balance, therefore, it is ambiguous as to whether
the countries in the zone have incurred any significant net real costs by
following a hard currency policy. 2/

    c. Competitiveness

    With the nominal exchange rate pegged firmly to the French franc, the
CFA franc countries could nonetheless find their real effective exchange
rates (REERs) becoming overvalued, for a number of reasons. First, infla-
tion could be high relative to partner countries. Second, the anchor
currency might appreciate relative to other partner countries. Third,
because the weights in the effective rates vary across countries, exchange-
rate or relative-price movements elsewhere could generate changes in REERs.
Fourth, the countries could suffer a major terms of trade loss. Fifth,
relative unit factor costs could rise, for example because of a failure to
keep up with technological changes or improvements in the quality of human
capital. While the first three factors could cause the REER to appreciate,
the latter two would cause the equilibrium rate to depreciate relative to
the actual rate. 3/

    It has already been seen that inflation (as measured by GDP deflators)
has been near or below that of France on average for the 1980s. Another
perspective, highlighting the cumulative movements in relative price levels,
is given in Figure 9. These data, which focus on consumer rather than
output prices, show an even more marked tendency toward relative price
declines. Cameroon is the only one among the eight countries for which data
are available to experience a cumulative price increase in excess of that in

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1/ Over the period 1971-87, the ratio of exports to GDP averaged 24
percent inside the zone, compared with 29 percent outside. Because of the
relatively higher growth in trade for the CFA franc countries, the two
ratios had equalized at 25 percent by the mid-1980s. For the full period,
the standard deviation of changes in the ratio of total trade to GDP
averaged roughly 12 percentage points for both groups of countries.

2/ Some studies have drawn less sanguine conclusions about real effects.
Devarajan and de Melo (1990) use different groups of comparators (all other
sub-Saharan African countries; all other low-income countries; and all other
exporters of primary commodities) for a similar set of calculations. They
conclude that export growth, investment, and external adjustment were gener-
ally inferior in the CFA franc zone in the 1980s. Corden (1990) notes that
Côte d'Ivoire resorted increasingly to import restrictions in the late 1970s
after a rise in public sector expenditure weakened the external position.

3/ The REERs discussed here are measured as an index of the nominal
effective exchange rate (defined such that an increase represents an
appreciation) adjusted for movements in the domestic consumer price index
(CPI) relative to a weighted average of CPIs in partner or competitor
countries.

France since 1978. 1/ Whatever the limitations in data comparability, there certainly is no bias toward sustained inflation relative to France.

The heavy solid line in the next diagram (Figure 10) is the REER for France, which has shown remarkable stability (as have the REERs for other EMS member countries) through the turbulence of the 1980s. Thus, appreciation of the anchor currency has not been an independent source of overvaluation for the countries that are pegged to it. Nonetheless, at least a few of the CFA franc countries--Cameroon, Côte d'Ivoire, and the Central African Republic--have appreciated in effective terms. 2/ The reasons for these appreciations are not transparent, since the REERs are influenced by a large number of currencies and national price levels. One factor that may be important is that these particular countries have relatively substantial trade with the United States (cf. the direction-of-trade data in Table 4, above). In particular, the REERs for Côte d'Ivoire and Cameroon appreciated markedly in 1986 and 1987, when the dollar was depreciating sharply. That factor alone cannot account for the net movements over the longer run, 3/ but it does illustrate how differences in trading patterns can affect overall competitiveness levels.

Notwithstanding these observations, the fact remains that there has not been a general tendency for real exchange rates to appreciate in effective terms. 4/ It is noteworthy in this regard that throughout the CFA franc zone, trade is directed very heavily toward France and other western European countries (Table 4, above). France is the most important single trading partner for every country in the zone, except for Equatorial Guinea, which trades primarily with Spain. More significantly, in view of the success of the EMS in stabilizing intra-European exchange rates and competitiveness, trade with western European countries as a group makes up a substantial majority of trade for all of the CFA franc countries. To that


1/ 1978 is the first year for which comparable data have been collected. CPIs for the CFA franc countries are typically measured by prices in the capital city, weighted according to purchases either by African or by resident European families.

2/ The five CFA franc countries shown in Figure 9 are the only ones for which REER data are published in International Financial Statistics.

3/ From 1978 through 1990, the French franc depreciated by less than 2 percent in real terms relative to the U.S. dollar, based on relative CPIs. For a detailed examination of the determinants and effects of real exchange rate movements in the three largest countries in the zone, see Devarajan and de Melo (1987a).

4/ Medhora (1990) examines the effects of REER variability in the WAMU countries and finds that it has neither weakened nor redirected trade significantly.

Figure 9. Consumer Price Index Relative to France, 1978 - 1989
(1978 = 100)
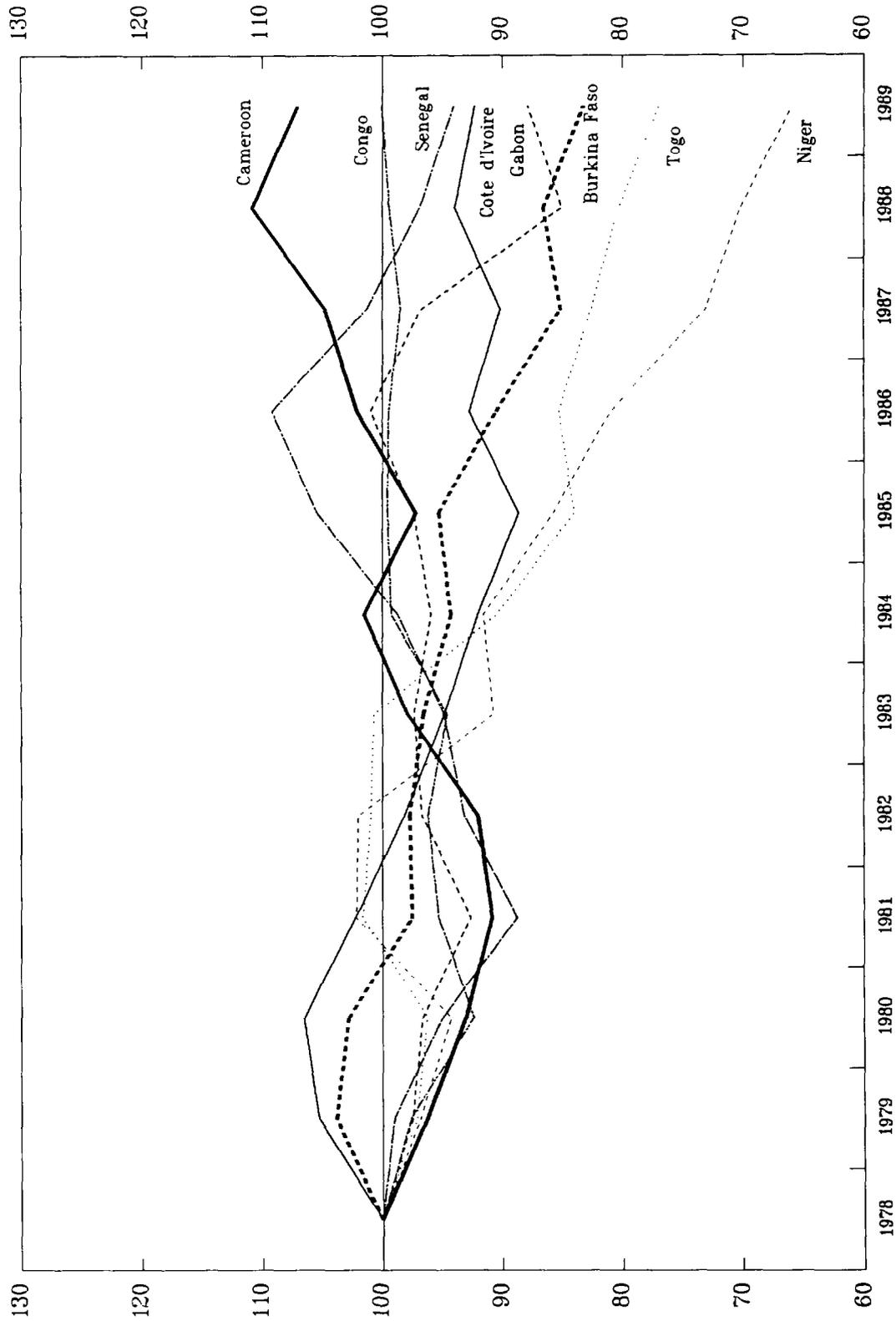
Source: IMF, International Financial Statistics.

Figure 10. Real Effective Exchange Rates, 1978–1990

(1978 = 100)
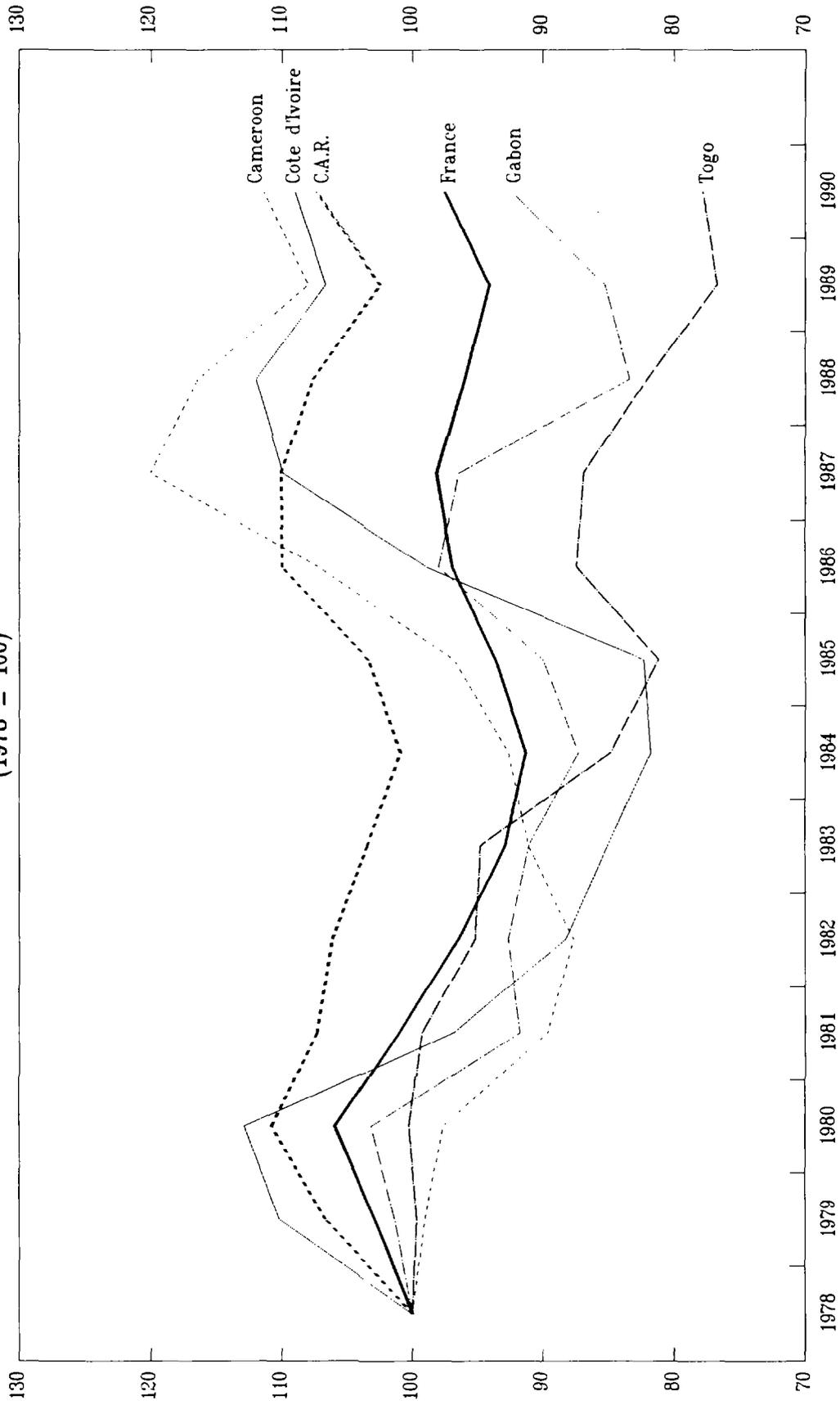
Source: IMF, International Financial Statistics

extent, the stabilizing effect of pegging to the French franc has been enhanced. 1/

If the CFA franc countries have lost competitiveness in the 1980s, the origins of the problem must be sought more in factors that might have caused the equilibrium rate to depreciate--notably adverse terms of trade shocks--rather than in observed appreciations. As noted above, there have been a few cases of major real effective appreciations, of which the 36 percent increases in Côte d'Ivoire from 1985 to 1988 and in Cameroon from 1982 to 1987 are the most striking. But there have also been some notable real depreciations, and the net movements in these series since the late 1970s do not by themselves reveal very much about the pressures that might have emerged on competitiveness or on external payments balances.

    d.   External balance

In spite of the various advantages conferred by the exchange arrange-ments, the CFA franc zone has developed a serious external imbalance in recent years. Figure 11 illustrates this problem by graphing both the aggregate current account balance and the overall balance of payments. The current account balance had averaged a seemingly manageable 3 1/2 percent of GDP from 1971 through 1977, but then worsened to an average of 7 1/4 percent of GDP over the next 11 years. Correspondingly, the overall balance turned negative in 1979 and has been on a downward trend ever since. By the end of 1990, these deficits had more than wiped out the region's holdings of net foreign assets. As shown in Figure 12, the second largest country in the zone, Côte d'Ivoire, then had accumulated net foreign liabilities of some 450 billion CFA francs (more than 20 percent of annual GDP), while the rest of the zone averaged approximately zero net balances.

As a result of this deterioration in the external position, many of the CFA franc countries have developed arrears in servicing foreign debts and have had to reschedule part of those debts in recent years. As shown in Table 5, the extent of rescheduling of debts to official creditors has been, on average, slightly less than in neighboring African countries (seven weeks of GDP during the period covered, compared with 8 weeks for the other coun-tries) but nonetheless pervasive. All but one of the CFA franc countries has concluded one or more rescheduling agreements with the Paris Club since 1986, and four of those totaled more than two months of GDP. The CFA franc zone thus has not been immune to the financial pressures that have plagued

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1/ Macedo (1985) and Nascimento (1987) argue that a basket peg would be preferable to a single-currency peg in that it would further stabilize competitiveness. Neither paper, however, deals with the question of whether a basket peg would have the same degree of credibility as the existing arrangements. Guillaumont and Guillaumont (1989) discuss the stabilizing effect of European monetary integration on the CFA franc zone.

Table 5. Official Debt Reschedulings, January 1986-July 1990

	Amount Rescheduled 1/	
	In millions of US dollars	In weeks of GDP
CFA Franc Zone	5,565	7
Western region:	2,936	7
Benin	193	6
Burkina Faso	0	0
Côte d'Ivoire	1818	13
Mali	107	3
Niger	119	3
Sénégal	394	4
Togo	305	12
Central region:	2,629	7
Cameroon	535	2
Central African Republic	32	2
Chad	38	2
Congo	756	17
Gabon	1258	18
Equatorial Guinea	10	5
Neighboring countries 2/	17,095	8
Algeria	0	0
Gambia	17	4
Ghana	0	0
Guinea	319	6
Guinea-Bissau	46	14
Mauritania	169	10
Morocco	1,977	5
Nigeria	11,851	21
Sierra Leone	86	5
Zaïre	2,630	14

Source: Kuhn (1990); World Bank (1991); and author's calculations.

1/ These data cover Paris Club reschedulings of obligations issued, guaranteed, or insured by creditor governments. In a few cases, countries may have rescheduled the same debts more than once. For details, see Kuhn (1990) and Sevigny (1990).

2/ GDP data are unavailable for Liberia and the Sudan, neither of which had any reschedulings during this period.

Figure 11. External Balances, 1971 - 1988

(as a percent of GDP)

Overall Balance

Current Account Balance
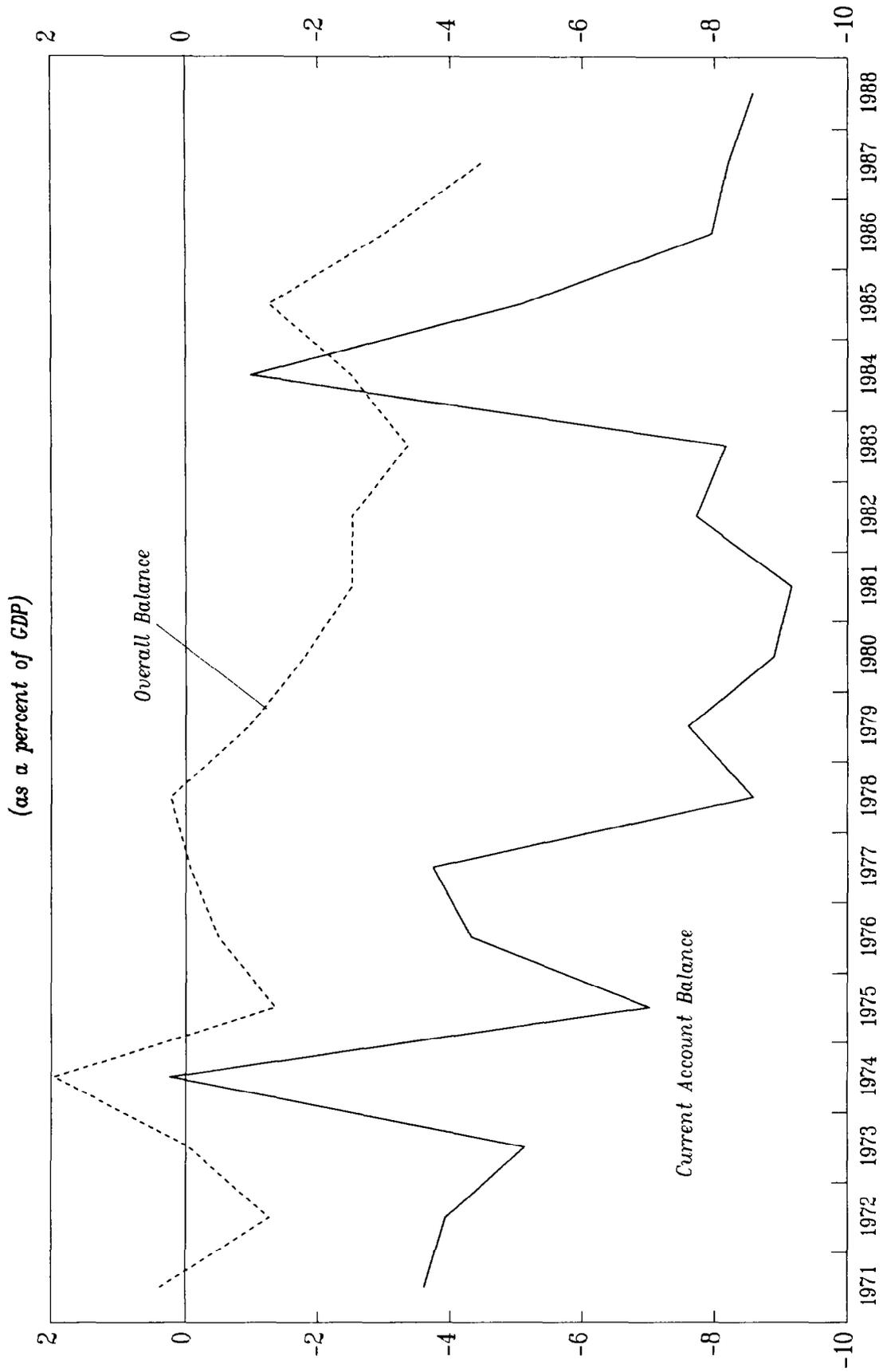
Sources: IMF, Balance of Payments Statistics and International Financial Statistics.

Figure 12. Net Foreign Assets, end-1990
(in billions of CFA francs)

Central Region

Western Region

Cameroon   Congo   Chad   Benin   Ct d'Ivoire   Niger   Togo
      C.A.R   Gabon   Eq. Guinea   Bk Faso   Mali   Senegal
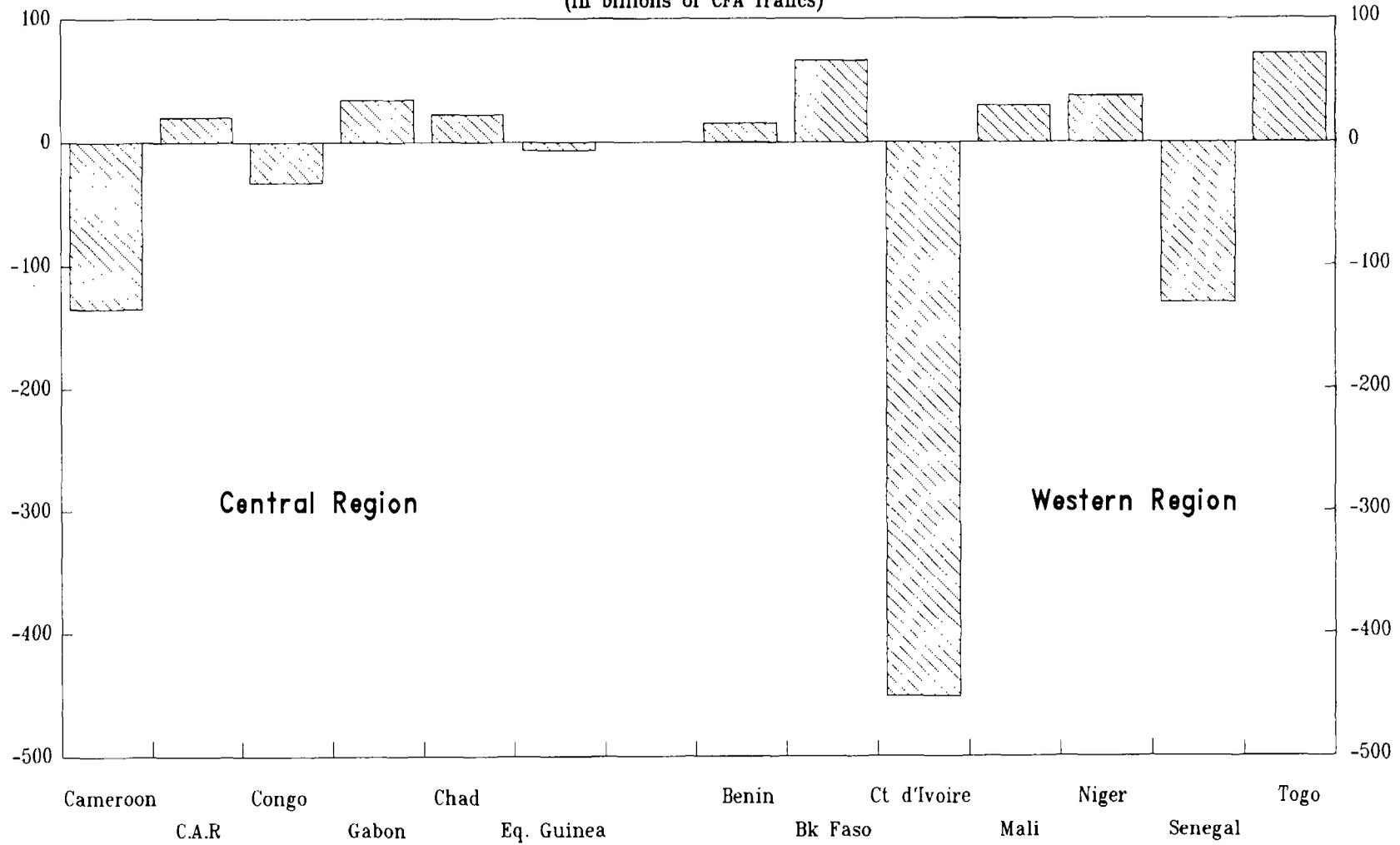
other developing countries, although their problems for the most part have not extended to arrears to the IMF or to the World Bank group. 1/

The predominant adverse shock to the CFA franc zone in recent years has been the worldwide collapse in primary commodity prices. 2/ Notably, from 1980 to 1990, petroleum prices (affecting 33 percent of the zone's exports) fell by 20 percent; coffee prices (11 percent of exports) fell by more than 40 percent; and cocoa prices (16 percent of exports) fell by more than 50 percent (see Tables 2 and 3). This terms-of-trade shock may not account for the whole of the deterioration in external balances, but it certainly has greatly increased the financing gap faced by many of the CFA franc countries.

The obvious implication of the sustained decline in export prices is that absorption must ultimately be reduced to match the lower value of output unless alternative forms of output can be found to replace those that are no longer so lucrative. More aggressive depreciation of the real effective exchange rate could play an important role in that process. If the exchange rate were available as a policy instrument, devaluation could be used to reduce expenditure on imports and to raise the profitability of nontraditional exports. But in any event, the success of that policy would depend on the persistence of money and wage illusion or other rigidities and is subject to exactly the same criticisms as any other attempt to aim a nominal instrument at a real target. 3/

In the face of a major decline in the terms of trade, countries face an unavoidable trade-off between the risk of financial collapse if the external imbalance fails to turn around under a hard-currency policy, and the risk of financial collapse if an attempt to correct the imbalance through an active exchange rate policy induces upward pressure on domestic prices and wages. In the CFA franc zone, as throughout much of the developing world, the consequences of this trade-off have been mitigated through external support. In this case, the support has come to some extent through overdrafts in the operations accounts with the French treasury, and to a greater extent through recourse to Fund credits.

1/ Four of the neighbors contiguous to the zone have accumulated obligations to the IMF that have become at least temporarily overdue by six months or more: Liberia, Sierra Leone, Sudan, and Zaïre. (Zaïre's overdue obligations were cleared in May 1989.) Liberia and Sierra Leone also have been classified by the World Bank as being in non-accrual status (obligations overdue by six months or more). None of the CFA franc zone members have had arrears to the IMF of six months or more, but the Congo was classified by the World Bank as in non-accrual status in September 1991.

2/ For an analysis of the commodity price collapse in the context of longer-run trends, see Boughton (1991).

3/ Devarajan and Rodrik (1991) avoid this problem by developing a model in which each country's welfare depends on the short-run trade-off between inflation and growth.

IV. Conclusions

There is no simple answer to the question of whether the CFA franc zone has been an effective set of arrangements for economic policymaking in the member countries. By conventional criteria, it is difficult to argue that the franc zone in Africa constitutes a natural currency area: intraregional trade is quite limited, the structure of production varies enough across countries that the massive terms-of-trade shocks of the past two decades have affected countries in the region in quite different ways, and factor mobility--though important--does not appear to provide a sufficiently flexible response to those differences. All of the countries in the region have maintained low inflation rates, at least by sub-Saharan standards, but the maintenance of uniformly low rates has placed pressure on the financial systems in a few countries. In real terms, economic performance in the region has generally been as strong as or stronger than that of neighboring countries that have pursued active exchange rate policies as part of an overall adjustment strategy.

The contention of this paper is that the case for the CFA franc zone rests on viewing it as a combination of a currency union and a monetary standard. This approach is roughly equivalent to viewing the whole franc zone, including France, as a currency union, except that the role of France as the anchor country is clearly different from that of the CFA franc countries. This case is obviously different in that regard from the EMS: Germany's status within the European system is identical to that of the other member countries, but its role as both the largest and the lowest-inflation country enables it to serve informally as the anchor country for the exchange rate mechanism. In contrast, France's connection to the CFA franc zone is more separate, and its role as the anchor country is more formal.

Because the participating African countries trade heavily with France and other European countries, pegging to the French franc has contributed somewhat to overall stability in competitive positions. Because currency is issued by supranational central banks, and because France has had relatively strong price stability in the 1980s, the CFA franc countries have gained both discipline and credibility in the formulation of macroeconomic poli-cies: inflation has been low, apparently without a sacrifice in output growth. In addition, the system's provisions for external credits in the form of overdrafts in the operations accounts with France have provided some cushion against the effects of deteriorating net foreign asset positions.

In the final analysis, the answer depends on the nature of both the welfare function and the policy transmission process, issues that extend beyond the boundaries of this paper. If welfare depends primarily on price stability and growth, then membership in the zone clearly has benefitted these countries. If welfare depends as well on external balance, and if the nominal exchange rate can be changed in response to persistent adverse terms of trade shocks without sacrificing the credibility of the authorities' commitment to financial stability, then the answer is less clear.

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