

## POLICY RESEARCH WORKING PAPER

# Preserving the CFA Zone

## Macroeconomic Coordination After the Devaluation

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An examination of the federalist aspects of macroeconomic management after devaluation in the CFA Franc Zone, how to maintain macroeconomic discipline in a monetary union, how to prevent mismanagement in one state from spilling over to another, and how to use the zone's institutions to make devaluation succeed.



## Summary findings

On January 12, 1994, the CFA franc — the currency of the thirteen African states of the CFA Franc Zone — was devalued 50 percent. The event had been expected for some time, but the magnitude and one-shot nature of the devaluation posed problems for members of the zone's two monetary unions.

Devarajan and Walton conclude the following, among other things, about what has happened:

- Inflation has been substantially lower than in most developing countries, but the mechanisms of macroeconomic discipline have been inadequate, especially for fiscal discipline. The recent crisis has its roots in failures of fiscal discipline as much as in the constraints on restoring competitiveness because of the fixed parity.

- The transmission of inflation across states has not been a problem in the past, but could be more of one in the future with the common nominal shock, the temporary loss of the French franc as an anchor, and the rising importance of supranational quasi-fiscal deficits.

- For macroeconomic coordination, it is appropriate to continue relying on a mixture of rules and discretion and not on the market, at least in the medium term. The 20-percent rule has been inadequate in the past and should be supplemented by annual targets for fiscal performance (including deficit-to-GDP ceilings, a

primary surplus requirement, and no borrowing to finance current spending).

- Sanctions on errant states should be imposed through reduced access to borrowing. Central-bank and at least some foreign borrowing should be conditional on meeting the annually agreed-upon targets.

- The central banks' ability to impose these sanctions should be strengthened, possibly by channeling a portion of foreign credit going to the zone through the central banks. Technical assistance may also help.

- Insulation can be effected by ensuring that quasi-fiscal deficits are explicitly financed by country budgets, reversing the recent trend to internationalize them by having the BCEAO finance part of the national banks' portfolio problems.

- The current size of the quasi-fiscal deficit (and hence the future earnings position) of the two central banks should be assessed early and put on the budgets of the various national governments, with allocation based on the original source of the problem. If necessary, additional measures should be undertaken to secure a strong capital base for the central banks.

- Exit from the zone is best discouraged by securing the zone's credibility. It should also be clear that those that exit because of macroeconomic problems will not have easier access to international sources of finance.

This paper — a product of the Public Economics Division, Policy Research Department — is part of a larger effort in the department to study structural adjustment in Sub-Saharan Africa. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Carlina Jones, room N10-063, extension 37699 (19 pages). June 1994.

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# **Preserving the CFA Zone: Macroeconomic Coordination After the Devaluation**

**Shantayanan Devarajan and Michael Walton\***

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On January 12, 1994, the CFA Franc—the currency of the thirteen African states comprising the CFA Franc Zone—was devalued 50 percent<sup>1</sup>. While the event had been expected for some time, the magnitude and "one-shot" nature of the devaluation pose a new set of problems for the members of the zone's two monetary unions. Unless properly managed, the change in the CFA Franc's parity could undermine the credibility of the zone's monetary and exchange rate standards, negating a major benefit of zone membership and possibly threatening the very existence of the monetary unions<sup>2</sup>. Avoiding this outcome requires mechanisms that prevent problems in one country from endangering the monetary union—that is, mechanisms of macroeconomic coordination. While coordination is always important in a monetary union, it becomes especially relevant in the wake of a devaluation.

The CFA zone served its members well, with low inflation and relatively high growth, until the turbulence and loss of competitiveness of the 1980s (the seeds of which were sown in the commodity booms of the 1970s). This was achieved in a world otherwise full of capital controls and flexible exchange rates. The zone continued to confer low inflation in the turbulent 1980s, even while the loss in competitiveness and financial discipline contributed to a deepening economic, financial and human crisis. As the rest of the world moves towards open capital accounts and fixed exchange rates in the 1990s, the CFA zone's convertible currency and strong, independent Central Banks should prove even more valuable commodities.

A large, one-shot devaluation of the CFA Franc was the best means of preserving the benefits of the zone at a new but still fixed currency rate while restoring competitiveness in the member countries. But securing a large, real depreciation (many estimates suggest 50 percent in local currency terms is required) is tough enough for a single country. At a minimum it requires sound fiscal and monetary policy and measures to prevent the maxi-devaluation from triggering a wage-price spiral. Is it more difficult in a currency union? After the devaluation, could the excesses of some members be exported to the rest of the union, jeopardizing the success of the whole enterprise?

The answers to these questions, and the related policies to accompany a large devaluation of the CFA Franc, depend on three sets of issues:

- (a) how to keep members of the union on the macroeconomic straight and narrow;

If and when this fails,

- (b) how to insulate the whole union from the problems of errant states, so that fiscal (or other) problems in one country do not magnify problems in the central bank, and *pari passu* in other countries; and

- (c) how to do so in a manner that discourages exit from the union by states suffering macroeconomic difficulties. Not only would this be a permanent loss to the exiting state, it could damage the credibility of the zone as a whole.

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<sup>1</sup> 100 percent in local currency terms.

<sup>2</sup> Throughout this paper, we will refer to the CFA Zone as the thirteen African countries which use the CFA Franc as their currency, recognizing that these countries belong to two different monetary unions, namely, UMOA and the members of BEAC. While most of the policies we advocate apply to the CFA Zone, they are aimed at preserving and strengthening each of the two unions. Most of the discussion and data will concern BCEAO, UMOA's central bank, although a number of points apply to BEAC. Finally, note that Comoros also uses a currency called the CFA Franc but since it has its own control bank, none of the coordination issues raised here apply to it.

These are perennial questions that have always been relevant to the zone. They are particularly important in the aftermath of a devaluation, since the major price shock could spark union-wide inflation. The recent history of the CFA Zone suggests it is highly unlikely that every country will follow exemplary macroeconomic policies after a devaluation. Some will be susceptible to added instability that could threaten the success of a devaluation.

This paper reviews the history of the relationship between zone-wide controls and national macroeconomic management, assesses the risks of added instability after a devaluation and outlines solutions to reduce these risks. We draw on parallels with the debate on the European Monetary Union in our conclusions on coordination in the CFA zone.<sup>3</sup>

### **Current Mechanisms for Enforcing Macroeconomic Discipline**

The monetary unions in the CFA zone have used two methods to enforce macroeconomic discipline:

- (i) annual, country-specific credit allocations issued by the two union-wide central banks;
- (ii) the rule that central bank credit to any government cannot exceed 20 percent of that country's previous year's fiscal receipts.

Thus, the zone uses a mix of discretionary and rule-based mechanisms. The credit allocation is the province of every central bank, and in the case of the CFA zone, is practiced through the bank's refinancing facility. The "20 percent rule" is necessitated by the fixed parity of the CFA Franc. Without a rule like this, governments could finance their deficits by monetization at will. The ensuing inflation would drain the zone's foreign exchange reserves, making the fixed exchange rate unsustainable. Note that the 20 percent rule links central bank credit to a government's revenue performance, thereby reducing the possibility of deficits in one country spilling over into another.

How effective have these methods been in practice? At one level, they have been remarkably successful at maintaining macroeconomic discipline in the zone. The fixed parity was preserved for over 45 years. The membership of the two monetary unions has changed very little. Mauritania has left and Mali has joined UMOA; Equatorial Guinea has joined the BEAC Zone. Inflation in the CFA countries has been considerably lower than in their African neighbors.<sup>4</sup> Looking more closely, however, we find that the discretionary mechanism has not always been applied to promote macroeconomic stability. Meanwhile, the 20 percent rule has proved an increasingly ineffective mechanism for overall fiscal discipline. Not only has the rule been openly broken by some countries, but several governments have found indirect means of getting around the ceiling. That the zone found itself in a crisis in the 1990's is only partially attributable to adverse

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<sup>3</sup> We are concerned here with one set of reasons for supporting closer inter-country relations: the potential for the two monetary unions to support macroeconomic stability and credibility. This is distinct from other motivations for regionalism, including the case for an optimal currency area and a customs union. The CFA countries do not have many of the characteristics of an optimal currency area: they face different trading structures, and so face differential terms of trade shocks; they trade much less with each other than the rest of the world; and factor mobility amongst the countries is quite imperfect. Reducing internal barriers will help economic efficiency, but the major gains from trade will be from reduced barriers to trade with the principal external trading partners. Internal liberalization should be designed to spur, and not substitute for, external liberalization. Monetary integration makes sense in the zone countries independently of inter-country liberalization, but can also form one part of an overall program of strengthened integration.

<sup>4</sup> See Devarajan and de Melo (1991), Boughton (1991).

external shocks. It is also testimony to the fact that the disciplinary mechanisms have been inadequate, especially in times of boom and bust.

The central problem is the weakness of fiscal controls. The 20 percent rule restricts government borrowing from the central bank only; there are no limits on either foreign or other domestic borrowing by governments.<sup>5</sup> Furthermore, it applies only to direct lending from the central bank to the governments. The limit does not apply to government guaranteed borrowing, nor to government loans which commercial banks rediscount with the central bank. CFA governments have made use of these unrestricted instruments to finance public expenditures. As Tables 1 and 2 show, in some years, net foreign borrowing exceeded net domestic borrowing (central bank plus other domestic borrowing) by a factor of two or three. More recently, the governments of Cote d'Ivoire, Senegal, Cameroon, Gabon and Congo have run arrears with the domestic banking sector. Finally, as their revenues have fallen, many governments (Cameroon, Congo, Cote d'Ivoire, Togo) have not been in a position to repay outstanding debt, resulting in a violation of the rule. In addition, some countries (Benin, Niger) have been granted exceptions to the 20 percent rule due to "particularly difficult" circumstances.

Foreign borrowing is limited by a country's creditworthiness or, in the case of low-income countries, by concessional aid flows. The debt crisis has taught us that both of these are fickle sources of discipline. In the CFA zone there appear to have been greater opportunities for larger countries to borrow abroad (often due to "loan-pushing" by commercial banks or the enthusiasm of export credit agencies) until the problems of the 1980s revealed how precarious the underlying position of these countries were. Note from Tables 1 and 2 that Côte d'Ivoire and Senegal borrowed from abroad the most, both in absolute terms and as a percentage of government expenditures. To the extent that runaway fiscal deficits in the large countries are more likely to have zone-wide consequences, this loophole in the 20 percent rule is particularly worrisome.

Domestic borrowing (other than from the central banks) does not directly threaten price stability, but it has a perverse effect on the central bank's own liability position and income, and hence on the zone's coherence. The banking systems in Côte d'Ivoire and Senegal are in a crisis. This is partly due to the declining profits of the private sector, squeezed between an overvalued exchange rate and domestic recession. It is also a consequence of the arrears which the governments of these two countries have been running with the financial systems and private sectors. The governments have taken steps to restructure the banking systems by absorbing some of the bad debts, but the net effect has been to worsen the income position of the BCEAO. For example, in Côte d'Ivoire, the banks received government paper in exchange for their bad debts—which they could then rediscount with the BCEAO at an interest rate of only 3 percent. In effect the BCEAO has absorbed some of the costs of bad debts that have their roots in part in the fiscal deficit of a member country.<sup>6</sup> But the BCEAO liability is shared by all the member states. Thus, Côte d'Ivoire's and Senegal's financing part of their fiscal deficits by arrears to the private sector has led to the export of these countries' deficit to the union as a whole. Note that these credits from the BCEAO to the governments do not come under the 20 percent rule, again demonstrating the rule's porosity.

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<sup>5</sup> One example of the latter loophole is seasonal crop credits—which in some countries became a *de facto* form of public-sector finance as public-sector marketing agencies accumulated substantial debt.

<sup>6</sup> There are, of course, other sources of the banking sectors' portfolio problems, including the low profitability of an enterprise sector hit by recession and declining competitiveness.

Having established that the "rule" part of CFA discipline leaves much to be desired, we consider now the "discretion" part, namely, credit allocation by the central bank. Credit is allocated to countries annually based on their estimated credit demand and the central bank's reserve position. The credit demand, in turn, is built up from inflation and real-output targets. In this way, credit allocation in the CFA zone closely resembles the monetary programming exercises conducted by the International Monetary Fund. However, monetary programming exercises are undertaken for individual countries whereas each central bank's credit allocation is to members of a currency union. If capital were perfectly mobile across countries in the union, it would not be possible to sustain different credit and inflation targets (i.e., different real interest rates) across the countries. Since capital is not perfectly mobile in the CFA zone, though, it is possible to view credit allocation as country-specific monetary programming exercises. The recent reforms in the operation of the money market in UMOA permit the central bank to manage credit allocation on a week-by-week basis (using the interest rate as an instrument). In practice, however, this market has not been widely used in the zone and some "coarse tuning" of credit allocations is still necessary.

The CFA zone's track record of low, long-term inflation would suggest that credit management has been consistent with non-inflationary money growth over the long run. But the central banks have not been able to prevent temporary bursts of inflation, especially those driven by expansionary fiscal policy following a commodity price boom. It is also noteworthy that over 90 percent of the low-interest agricultural export credit has gone to Côte d'Ivoire and Senegal, further emphasizing the bias in subsidizing resources to the larger countries (Table 3). A similar problem has occurred with loans to fledgling public enterprises in UMOA countries. To the extent these have contributed to the portfolio problems of the banking systems of these countries, the burden has been internationalized by BCEAO, with the "tax" spread over the whole union.

### **The Transmission of Economic Problems Across States**

We now turn to the potential implications of the large devaluation. Will such a nominal shock strain the mechanisms of macroeconomic management and coordination?

In low-inflation countries, large nominal devaluations have often led to large real devaluations with only a moderate and temporary acceleration of inflation.<sup>7</sup> The absence of an inflationary history means an increase in the price level after a devaluation is less likely to get transmitted into an indexation- or expectations-driven spiral. However, this is by no means guaranteed: it depends on the underlying economic conditions supporting the return to low inflation. Monetary policy that does not accommodate such a permanent acceleration is a necessary condition. But to recite the need for tight money is of little help. Underlying this are two more fundamental factors: the fiscal position and wage management. Usually both fiscal contraction and real-wage reductions are necessary in the short run to support a swift return to low inflation with new relative prices. Low-inflation countries which neglect these precepts (Mexico in the early 1970s is a good example) find their devaluation triggering a jump first to moderate and then to high inflation.

The CFA zone has thirteen countries. Even with the benefit of a history of low inflation, the effective management of a devaluation represents a macroeconomic and political challenge to each of them. The probability of some going off course on either fiscal management or real wage policy must surely be high. This raises the two questions that are at the center of this note: Can the institutions of the two unions

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<sup>7</sup> See Kiguel (1992).

be used to help reduce the probability of individual countries' going off course? And, if some do, can the whole union be insulated from such failures in some countries?

In principle the issues apply equally to each country in the zone. But failures in the "core" countries in each union—Côte d'Ivoire and Senegal in UMOA and Cameroon and Gabon in BEAC—would be particularly costly, at a minimum in terms of the proportion of the population affected by failure, and potentially in terms of greater spillover effects. Furthermore, failure in the core countries would mean that the whole exercise might have to be repeated. Finally, as we have seen, the larger countries in UMOA have experienced laxer discipline and have contributed more than their share to the union's problems.

We therefore now examine potential transmission mechanisms of inflation between states, starting with a review of what past experience in the zone tells us about their importance. The next section proposes some solutions.

As in individual countries, for inflationary acceleration to be sustained, it would have to be underwritten by the monetary policies of the central banks. Each of the central banks draws up a financial program that essentially accommodates nominal output growth in individual countries, and allocates money and credit growth accordingly. It is probably realistic to assume that the central bank lacks the power to force a severe credit crunch on individual countries: it can lean against the wind of ongoing inflation, but not go totally against the state of markets and wage and price movements. There are then two mechanisms by which inflationary acceleration in one country can be transmitted to others, and so to the whole union: through wage and price movements in one country directly affecting changes in another (that are then largely accommodated by money and credit policy) or through the transmission of underlying problems, such as the internationalization of fiscal or quasi-fiscal deficits. We look at each in turn.

#### *Direct transmission of wage and price movements*

Are wage and price movements quickly equalized across the member countries of the CFA? Completely free movement of goods and factors of production would assure this. In the absence of perfect factor mobility, the prices of tradeables would still be expected to converge (except for differences in each country's basket of tradeable goods and differential movements in the international prices of these goods) but those of nontradeables would respond to domestic market conditions, so that overall inflation may not be synchronized. The historical evidence bears out this reasoning. There is indeed a common pattern in price movements: inflation has been in the range of zero to eight percent for most countries for most of the time in the past three decades, with a tendency to accelerate in the 1970s and decelerate in the 1980s. Yet, significant differentials remain, between France and the members of the two zones and among the zone members.

Past work suggests that the best way to characterize inflation in the CFA zone is the following:

- an imperfect overall association of inflation across countries, either between France and the CFA zone members or amongst zone members<sup>2</sup>;

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<sup>2</sup> In technical terms, both Honohan (1990) and Boccara and Devarajan (1993) rejected co-integration (that is evidence of inflation following a common path to a significant extent) between France and CFA countries. The latter study also rejected co-integration between the two core countries and each other and the smaller countries, with the single exception of Côte d'Ivoire and Burkina Faso.

- a common core of inflation between the CFA zone members and France, that can be interpreted as a common tendency of zone members to converge to the French, or international inflation rate;
- divergences from this core, sometimes substantial, explained by country-specific factors.

Inflation patterns in 1976—a particularly turbulent year—illustrate. In UMOA, Côte d'Ivoire experienced an inflationary burst from 5 to 10 percent per annum, when French inflation was 4 percent and falling. This can largely be explained by the investment boom that followed the coffee and cocoa price gains in Côte d'Ivoire. However, with the possible exception of Burkina Faso, there is little evidence of this being transmitted: inflation was flat in Senegal and falling in Togo. Similarly in BEAC in 1976, Cameroon experienced a major deceleration of inflation while Congolese inflation was rising.

Analysis of the differential between inflation in zone countries and France also confirms that correlations of this differential are weak, variable and sometimes negative. In other words, an inflationary acceleration in one country—taking it above core inflation—has not, in the past, tended to spill over into inflation in another.

This pattern is further confirmed by the behavior of wages. While labor institutions and wage policy in CFA countries are interrelated,<sup>9</sup> and there is a tradition of labor movement for both skilled and unskilled work, there are substantial wage differentials across states (Figure 1). Furthermore, there is little evidence of wages moving together (Table 4). These observations must be qualified by the fact that our knowledge of this area is still quite limited. The need for further research is especially acute.

Nevertheless, the evidence so far appears to be reassuring. There has been little direct transmission of price or wage inflation across frontiers. Divergences from the core rate are primarily due to local shocks, and a fuller analysis would show that macroeconomic conditions and the tightness of product and labor markets in individual countries were the principal factors in explaining such differences.

### *Fiscal and quasi-fiscal deficits*

It is clear that fiscal and public-sector wage management is central to moderating inflation in individual countries. Fiscal policy is also undoubtedly important in explaining divergences of country inflation rates from the core inflation rate of France: increased spending puts pressure on the markets for domestic goods, and increased wages directly raises inflation. Does this raise a federalist issue? Can fiscal laxity in one country lead to the transmission of inflation?

At one level, this comes back to the same issue as before: if fiscal difficulties lead to an acceleration of inflation in one country, there is some risk that others will follow. As just discussed, this appears not to have been important in the past.

Where the federalist issue enters is through the actual and potential quasi-fiscal deficits of the two central banks. A quasi-fiscal deficit is equivalent to the losses of the central bank. In the 1980s, economists came to realize that it was necessary to think of such losses as part of the government's deficit. Characteristic sources of such deficits were foreign exchange losses (in Yugoslavia) and banking losses that were taken over by the central bank (in Chile). They are called "quasi-fiscal" deficits since they are a public

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<sup>9</sup> In Côte d'Ivoire, some salaries—notably those of teachers—are linked to levels in France.

sector liability that has, in the end, to be financed, just as a fiscal deficit. They are financed either by monetary creation or credit creation, both of which have inflationary consequences. The issue is germane to the Franc Zone because the central banks are supra-national while government budgets are national<sup>10</sup>.

In UMOA and BEAC there are two potential sources of quasi-fiscal deficits, that could be of importance in the wake of a devaluation:

- foreign exchange losses;
- banking system losses that are financed, in part, by the central bank.

Foreign exchange losses have, of course, been negligible in the past because, outside the operations account (which is in French Francs), the central banks do not hold foreign currency<sup>11</sup>. They could potentially be large after a devaluation. The position is different for the two central banks, largely as a consequence of differing conventions on who bears the foreign exchange risk of IMF loans. In UMOA, the central bank is in principle responsible, and consequently faced significant losses immediately after a devaluation. In practice, it appears that BCEAO was able to get the member governments to support the losses. In BEAC the risk is passed on to governments, who would automatically bear the losses. The appropriate principle in this area is that the government bear the risk of the IMF purchases it made and such losses have to be budgeted for. That is, governments will need to have a larger primary surplus (or smaller deficit) to finance the larger liability as a consequence of these losses. The approach in BEAC has the advantage of making country-specific obligations both transparent and automatic.

Banking system losses, which have been steadily rising in the zone during the 1980's, form the second potential source of quasi-fiscal deficits. The losses flow from three factors: a worsening enterprise portfolio in the wake of the recession and the declining competitiveness of some firms; the rise of arrears—directly to the banks or to enterprises, especially from governments (notably in Côte d'Ivoire); and the weakening deposit base as capital flowed out in the expectation of a devaluation. As noted above, there has already been a tendency to deal with these losses by effectively passing them on in part to the central bank. In Cote d'Ivoire and Senegal, the governments absorbed the banks' bad debts, giving them government paper in return. In Côte d'Ivoire, the banks refinanced this government paper with BCEAO, at an interest rate of 3 percent. The net result is that BCEAO's income position could turn negative. The situation calls for a careful assessment of the central banks' capital position with a view towards solving their income problem, possibly by recapitalization.

#### *How will these be affected by the devaluation?*

Direct transmission of inflationary accelerations across states has been weak in the past, but there is the continuing and possibly worsening problem of supranational quasi-fiscal deficits. Both could be affected by the devaluation.

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<sup>10</sup> The issues discussed in this sub-section are precisely the same as those being considered in the context of a full economic union of the UMOA and BEAC Zone states. While harmonization of fiscal policies will be necessary for the economic union, the point made here is that it is essential even before that—to ensure the success of a devaluation.

<sup>11</sup> All CFA members are required to have at least 65 percent of their foreign assets in French Francs in the Operations Account with the French Treasury. Most hold more than this, although there is some evidence that Cameroon put a large part of its oil surplus in US assets.

In the aftermath of the devaluation, all the countries are experiencing the same initial price shock, and a temporary but large divergence from French inflation. The anchor of French inflation is temporarily gone—for both the monetary authorities and the public. Everyone expects short-run inflation to be substantially above the past. There may be a propensity to look at the initial change in the exchange rate as a yardstick to adjust domestic prices. There may also be a tendency for the smaller countries to look to the core CFA countries in each Union for leadership in setting wages and prices. Under these conditions it is imperative to find an alternative anchor for the movement of nontraded goods prices. The best candidate is changes in civil service wages. Of course, beyond the short (or very short) run, it is important that the CFA countries move back to a situation where the French Franc is the nominal anchor in the system.

The impact on quasi-fiscal deficits would be mixed. On the foreign exchange side, it depends largely on who holds the liability for public loans (notably IMF purchases). As to financial sector losses (that will potentially be transmitted to the central banks) the situation is unclear. Some commercial banks have significant foreign exposure, but its value is unclear. With Ivorian external commercial debt trading at less than 10 percent of face value in the secondary market, it appears that market valuations of this exposure have already adjusted downwards substantially. Indeed, some recent studies indicate that for commercial enterprises in UMOA, foreign exchange assets exceed liabilities. Enterprise profitability will change depending on the activities of firms—producers of tradeables will do much better, importers and producers of nontradeables will suffer. It will also depend on the overall state of the economy. Finally, liquidity will depend crucially on whether capital returns. This strengthens the case noted above for exercising caution in any takeover of financial sector problems by the central bank.

## Solutions

### *(i) To the macroeconomic coordination problem*

The question of how to achieve macroeconomic coordination in a federal system is not unique to the CFA zone. There are parallels to the debate on maintaining discipline in the fifty U.S. states as well as among the potential members of the European Monetary Union. In general, there are three possible mechanisms for imposing discipline:

- market-based - in which the market imposes discipline through increasing the cost of borrowing for profligate states;
- rule-based - such as a balanced-budget requirement, or a ceiling on the deficit-to-GDP ratio;
- discretionary - where macroeconomic performance is monitored by an independent or supranational body.

The second and third depend on the administrative imposition of some sanction, such as a fine or a quantitative limit on borrowing. The U.S. method is largely based on the market, supplemented in some states by self-imposed rules. The evidence indicates that the fiscal position does influence the cost of borrowing, so the market imposes some discipline (Box 1). The "Maastricht" approach, as proposed for a future European Monetary Union, involves a blend of all three. Rules are set, but a supranational body has some discretion in agreeing on transition steps and deciding when sanctions are imposed. Discipline is expected to be imposed both by reduced access to public funds (e.g. from the European Investment Bank) and from the anticipated consequences on borrowing costs for a state which is out of compliance (Box 2).

### Box 1. Preserving the Union, circa 1776: Fiscal Discipline Among U.S. States

The United States is a currency union of fifty federal states, each of which conducts its own fiscal policy. How is fiscal discipline among the member states maintained, especially since there are no federally-imposed borrowing limits on the states? For one thing, state governments cannot borrow from the central bank. For another, since U.S. states enjoy immunity from bankruptcy courts, the default premium on state bonds rises with the size of the state's fiscal deficit. The rising cost of borrowing provides the incentive to correct irresponsible fiscal behavior. Thanks to the depth of the U.S. capital market, this market-based fiscal discipline appears to have worked quite well. Several U.S. states have voluntarily imposed their own statutory limits on their deficits. The Moody's Ratings for the top three and bottom three states in December 1989 reflects their per capita debt at the time:

Top Three	Rating	Debt per capita
California	Aaa	\$851
North Carolina	Aaa	420
Virginia	Aaa	751
Bottom Three	Rating	
Puerto Rico	Baa1	—
Massachusetts	Baa1	2348
Louisiana	Baa1	2554

Sources: Goldstein and Woglom [1991]; U.S. Department of Commerce [1991].

Recent econometric evidence (Goldstein and Woglom [1991]) confirms the notion that states with "tighter" fiscal policies enjoy lower borrowing costs: states which were one standard deviation tighter than the sample mean paid roughly 15-20 basis points less on their general obligation bonds. Finally, states which set constitutional limits on their debt paid about 5 basis points less than states that did not.

For the CFA zone, a market-based system is essentially irrelevant in the near future. Capital markets in the zone are thin and, with a history of arrears-financing, governments are both unusually interest-rate insensitive and unlikely to face a hard internal credit constraint. The two CFA monetary unions now operate a blend of a rule-based and discretionary system, as discussed above, but this has had major loopholes in the past. The underlying approach however should be maintained. Apart from the market element, the Maastricht model is therefore directly applicable to the CFA zone.

Improving discipline should involve two areas of change: in the rules and in the sanctions. The rules need to be modified in two ways.

First, there is a need to broaden the coverage from central-bank finance (i.e., the 20 percent rule) to all sources of borrowing. While the Yamassoukro reforms of 1989-90 did this in large part for UMOA (by controlling public enterprise and crop credit), the problems with arrears indicate that there is still room for further tightening. It is recommended that, while the 20 percent rule be kept (see below) it should be supplemented by a rule based on overall fiscal performance, as in the Maastricht proposal. A rule has the enormous advantage of being transparent and non-negotiable. Despite all the problems of differing starting points and special conditions, it is recommended that this be the core of the system. While the details of the rule will have to await further analysis of the fiscal patterns in the CFA zone, the approach

## Box 2. Preserving the European Monetary Union: The Maastricht Treaty

The 1991 Treaty of Maastricht provides the clearest statement to date of how fiscal discipline will be maintained in the forthcoming European Monetary Union (EMU). The treaty calls for a mix of rule- and discretion-based methods of preserving fiscal harmony. It prescribes a system of "multilateral surveillance" based on the analogy with the unilateral surveillance practiced by the International Monetary Fund. Specifically, the Maastricht Treaty postulates the following procedures:

- (a) No financing of public sector deficits by the Central European Bank (or their national chapters). That is, there is no compulsory purchases of government securities by the Central Bank, so there is no pressure for monetary expansion.
- (b) Avoidance of excessive fiscal deficits, where "excessive" is defined as: (i) a deficit/GDP ratio greater than 3 percent; and (ii) a public debt/GDP ratio greater than 60 percent.

When a member state violates one of the criteria, the governing Council of the European Monetary Union addresses its recommendations (based on a report to the Monetary Committee which considers any special circumstances facing the country in question) to the state in confidence. If the state does not execute the recommendations, the Council can make its recommendations public. If the state still does not respond, the Council makes specific recommendations, including a timetable for deficit-reduction, and a detailed report on adjustment measures to be undertaken. If these recommendations are not respected, the Council will:

- require the state to inform its creditors about its current situation whenever it tries to issue bonds;
- invite the European Investment Bank to cease lending to the country;
- require the country to deposit a sum of money with the European Community;
- impose appropriate sanctions.

The treaty concludes by noting that member states faced with sanctions cannot justify their excessive deficits on procedural, juridical or institutional grounds. Thus, while discretion is allowed at the early stages of a deficit problem, the Treaty explicitly increases the reliance on rules for dealing with recalcitrant member states.

described below provides a starting point. The rule would be that each state should satisfy all three of the following:

- a primary fiscal surplus;
- positive savings, to ensure there is no borrowing for current spending;
- an overall deficit target, such as Maastricht's 3 percent of GDP, to ensure an investment boom does not become a source of indiscipline.

In each of these, the definition of the fiscal deficit should be the broadest possible, i.e., inclusive of those public enterprises whose debts are implicitly or explicitly guaranteed by the state. Furthermore, for countries receiving concessional loans which are earmarked for public investment, the definition of public expenditure should be *exclusive* of this investment (although the investment should be scrutinized independently). The third target will require projection of nominal GDP. These projections should be consistent with those used by the central banks in their monetary programming exercises. Since few

countries have projected inflation above out turns, the risks of this becoming a source of indiscipline are low. Finally, as in Maastricht, there may be a case for allowing a transition period to the agreed ceilings.

Second, it is recommended that the 20 percent rule be kept, in view of the macroeconomic significance of central bank borrowing<sup>12</sup>.

In addition to the 20 percent rule, mechanisms need to be introduced to ensure compliance with the other rules. In particular, foreign borrowing by profligate governments needs to be curtailed. The international donor community can play a role in instilling discipline in this arena. For instance, there could develop regional sources of import finance which are jointly administered by the central bank and an international agency. It would also be desirable to provide disincentives to arrears financing, something which currently has zero financial cost to the governments (at least for domestic arrears). Reduced eligibility to central bank financing in line with any arrears would be a way of providing this discipline.

Needless to say, designing new rules for the zone is easier than enforcing them, especially given the track record of existing rules. Some form of sanctions for non-compliance, as in the Maastricht treaty, will be necessary, although the details will have to await further study. In addition, in an analogous vein to Maastricht, access to credit from international financial institutions could be made conditional on the rules being obeyed.

To carry out this role institutional strengthening of the two central banks should be provided, with technical assistance and training playing an important role.

#### *(ii) To the insulation problem*

It was concluded above that the principal threat of inflation transmission within the zone lay in the internationalization of fiscal and financial problems, though with the acceleration of short-run inflation there is a greater risk of direct transmission of inflation.

The main solution to this problem is to prevent the occurrence of quasi-fiscal deficits of the central banks caused by country difficulties. This implies reversing the recent practice of having portfolio problems of country financial systems being financed, in part, by the central banks (as in BCEAO for Senegal and Côte d'Ivoire). The central banks should remain strong, independent and income-earning institutions—this might require recapitalization—and the problems of the financial sectors in individual countries should be dealt with by budgetary action within each country under schemes supervised by the central banks. Any other sources of quasi-fiscal deficits, such as foreign exchange losses, should similarly be dealt with by budgetary allocations.

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<sup>12</sup> The rule may turn out to be overly restrictive in the first year because of the post-devaluation inflation surge. Since the rule constrains borrowing to 20 percent of the previous year's receipts, it may prove to be difficult to maintain the same level of real government spending in the first year after the devaluation. However, it should be noted that most estimates indicate that government revenues will rise (in real terms) after the devaluation, so that maintaining the same level of government borrowing from the central bank may not be necessary. In any event, relaxing the 20 percent rule even for one year will require changing the statutes of the central banks, something which is clearly undesirable, especially since it may not be necessary. The best strategy is for the monetary authorities to be aware of the possibly restrictive nature of this rule in the first year, and take appropriate decisions on a case-by-case basis.

There is also a need for a rule on the financing of existing and new quasi-fiscal deficits. The proposed principle is straightforward: budget finance should be provided to take over such deficits in accordance with their original source. Thus foreign exchange liabilities due to foreign borrowing would be allocated according to the source (i.e. the debtor country), and losses due to portfolio problems in the financial sector in accordance with their country of origin. Where losses exceed what can be allocated in this manner, there are two possibilities: in accordance with GDP, or using proportions obtained from identifiable factors.

While financing of quasi-fiscal deficits is important, it is equally important to avoid these kinds of losses in the future. To the extent that the losses stem from problems in the financial sector—themselves a result of the economic recession of the 1980's—the growth and improved competitiveness from the devaluation should lower the chances of recurrence. To the extent they arise from fiscal indiscipline among member governments, the approach suggested here—of relying on rules rather than discretion, and of plugging as many loopholes as possible—is a step in the right direction.

### *(iii) To the risks of exit*

The proposed reforms involve a tightening of discipline in the CFA zone. There is a risk that, for countries unable to comply with the requirements, exit will be a seductive option, permitting them to shift to a laxer fiscal regime. There are two ways in which the incentives can be devised to discourage exit. First, and in the long run most important, are the gains from price stability and full convertibility conferred by the zone. But this will have to be earned again in the aftermath of the devaluation. Second, and of particular importance for the transitional period, international resources should be linked to good performance in the zone, so that countries which suffer from indiscipline cannot do better outside. While they may be able to achieve temporary gains by resort to an inflation tax, they will quickly end up with both high inflation and slow growth. In other words, countries that feel constrained by their membership in the union should be made to realize that they will face much the same constraints if they left the union. There will also continue to be strong political pressures to maintain the two unions, but this should come from the member governments. Finally, it should be reiterated that the strongest incentive not to exit will come from the success of the devaluation.

### **Conclusion**

Since it is highly desirable for the membership of the two monetary unions to be preserved, it was appropriate for the countries to undergo, jointly, a sharp devaluation. Gains from internal trade are small but membership of the unions brings one powerful attribute that is unrelated to economic structure or mobility of goods and factors: macroeconomic discipline. This discipline is intimately bound up with the credibility of the CFA zone. However irrational it may seem to have held on to an overvalued currency in the 1980s, the discipline provided by the institutions of the zone remains a valuable asset. Breaking up the zone makes it less credible. So all have an interest in staying in the union, and in maintaining the new link to the French Franc.

This paper has looked at federalist aspects of macroeconomic management after a devaluation: how to maintain macroeconomic discipline in a monetary union; how to prevent mismanagement in one state spilling over to another; and how to use the institutions of the zone to make the devaluation a success.

Our conclusions can be summarized as follows:

- Inflation performance has been substantially better than that of most developing countries in the past, but the mechanisms of macroeconomic discipline have been inadequate, especially with respect to fiscal discipline. The recent crisis has its roots in failures in fiscal discipline as well as the constraints to restoring competitiveness because of the fixed parity.
- Transmission of inflation across states has not been a problem in the past, but it could be more of one in the future with the common nominal shock, the temporary loss of the French Franc as an anchor, and the rising importance of supranational quasi-fiscal deficits.
- It is appropriate to continue to rely on a mixture of rules and discretion, and not on the market, at least for the medium term. The 20 percent rule has proved to be inadequate in the past, and should be supplemented by annual targets on overall fiscal performance (including deficit to GDP ceilings, a primary surplus and no borrowing to finance current spending).
- Sanctions on states should be imposed through reduced access to borrowing. Central bank and at least some foreign borrowing should be conditional on meeting the annually agreed targets.
- There is a need to strengthen the central banks' hands in imposing these sanctions, possibly through channeling a portion of foreign credit going to the zone through these institutions, and additionally through technical assistance.
- Insulation can be effected through ensuring that quasi-fiscal deficits are explicitly financed by country budgets, reversing the recent trend to internationalize them through financing part of the national bank's portfolio problems by BCEAO.
- There should be an early assessment of the current size of the quasi-fiscal deficit (and hence the future earnings position) of the two central banks and this put on the budgets of the various national governments, with allocation based on the original source of the problem. If necessary additional measures should be undertaken to secure a strong capital base of the central banks.
- Exit from the zone is best discouraged by securing the credibility of the zone. This will have to be supplemented by ensuring that those that exit because of macroeconomic problems do not have easier access to international sources of finance.

### References

- Boccara, Bruno and Shantayanan Devarajan, "Determinants of Inflation in the Franc Zone in Africa," World Bank Policy Research Working Paper No. 1197, 1993.
- Boughton, James, "The CFA Franc Zone: Currency Union and Monetary Standard," Working Paper No. WP/91/133, International Monetary Fund, 1991.
- Devarajan, Shantayanan and Jaime de Melo, "Membership in the CFA Zone: Odyssean Journey or Trojan Horse?" In Chibber, Ajay and Stanley Fischer, eds., Economic Reform in Sub-Saharan Africa, World Bank, 1992.
- Goldstein, Morris and Geoffrey Wiglom, "Market-Based Fiscal Discipline in Monetary Unions: Evidence from the U.S. Municipal Bond Market, Working Paper, International Monetary Fund, 1991.
- Honohan, Patrick, "Price and Monetary Convergence in Currency Unions," Working Paper No. 390, World Bank, 1990.
- Kiguel, Miguel, "A Note on the Devaluation Experiences of Low Inflation Countries", processed, World Bank, 1992.
- Medhora, Rohinton, "The West African Monetary Union: Institutional Arrangements and the Link with France," Canadian Journal of Development Studies, 1992.

**Table 1. External Financing of Government Expenditures (billion CFAF)  
(and as proportion of total government expenditure %)**

	Burkina Faso	Côte d'Ivoire	Niger
1976	0.8 (-4.0)	31.8 (14.0)	5.8 (16.4)
1977	2.3 (7.6)	52.4 (13.8)	6.3 (14.8)
1978	2.5 (7.6)	82.0 (16.4)	9.9 (17.0)
1979	1.0 (2.5)	99.3 (16.5)	14.3 (20.2)
1980	-	113.2 (18.5)	21.6 (21.9)
1981	4.3 (9.0)	169.6 (27.3)	-
1982	3.5 (6.1)	190.6 (29.8)	-
1983	4.5 (8.4)	143.4 (22.5)	-
1984	5.4 (9.9)	193.0 (29.3)	-
1985	-	-	-
1986	-	81.7 (15.4)	57.7 (39.5)
1987	-	66.5 (12.1)	55.2 (38.4)
1988	-	207.2 (23.5)	-

Notes: 1. Data for Benin, Mali, Senegal and Togo not available.

2. [ - ] implies not available.

Source: BCEAO. Rapport Annuel, various.

**Table 2. Government Net Borrowing: Foreign and Domestic  
(billion CFAF)**

	Benin	Burkina Faso	Côte d'Ivoire	Mali	Niger	Senegal	Togo
1976	-	-	-		5.8	-	-
	-	-	-		4.4	-	-
1977	0.89	-	-		6.3	-	31.4
	-0.43	-	-		2.9	-	8.9
1978	1.80	-	-		9.9	-	55.4
	2.07	-	-		4.3	-	5.7
1979	2.46	-	134.7		14.3	-	23.2
	0.15	-	33.6		1.0	-	-1.3
1980	-	1.31	139.6		21.6	-16.9	4.2
	-	-0.13	107.4		8.3	10.6	-0.05
1981	-	2.90	-		-	6.47	6.6
	-	4.55	-		-	23.5	7.4
1982	-	4.03	-		-	26.08	3.1
	-	4.29	-		-	49.6	5.4
1983	-	2.05	-		-	41.7	5.6
	-	0.76	-		-	15.9	17.3
1984	-	3.35	-	32.5	-	40.6	-
	-	4.31	-	2.5	-	23.9	-
1985	-	-1.67	-	2.8	-	-	2.8
	-	-1.46	-	3.3	-	-	3.3

Notes: 1. In each year, first row is for foreign borrowing, second row for domestic borrowing.

2. [ - ] implies data not available.

3. Domestic borrowing does not include arrears by government nor public-enterprise borrowing.

Source: International Monetary Fund. International Financial Statistics.

**Table 3. Net BCEAO Lending to Government and Refinancing of Agricultural Credit  
(billion CFAF)**

Government	Benin	Burkina Faso	Côte d'Ivoire	Mali	Niger	Senegal	Togo
1975	0.70	0	5.4		2.0	0	0
1976	0	0	6.2		1.0	-4.9	0.
1977	0.9	1.1	-6.9		0.7	1.0	3.
1978	0.5	2.0	-7.9		3.2	-2.3	8.
1979	0.3	2.0	20.1		3.3	-12.6	8.9
1980	3.0	2.0	45.7		6.8	-3.4	9.
1981	2.4	3.4	64.0		8.5	14.2	11.
1982	5.5	7.5	68.8		11.9	43.8	10.
1983	8.2	8.0	61.0		10.6	37.7	10.
1984	9.1	8.2	44.6	7.7	7.6	41.7	6.6
1985	11.1	9.4	109.6	9.9	8.8	34.3	13.6
1986	11.6	10.8	118.2	14.3	12.9	39.9	14.
1987	14.2	13.5	123.7	21.2	12.9	39.8	16.7
1988	14.9	17.3	125.2	26.3	12.9	39.9	17.8
1989	15.2	18.0	181.0	34.2	13.0	21.2	16.7
<b>Agriculture</b>							
1984	0	0	63.2	2.3	3.9	4.6	0
1985	0	0.2	79.0	3.6	2.0	8.5	0
1986	1.0	2.4	82.6	6.1	6.2	20.2	0.4
1987	5.6	5.2	130.3	5.4	9.9	42.1	0.2
1988	8.7	2.4	158.1	0	7.4	64.4	1.0
1989	2.3	2.2	135.9	0	5.3	46.2	0.9

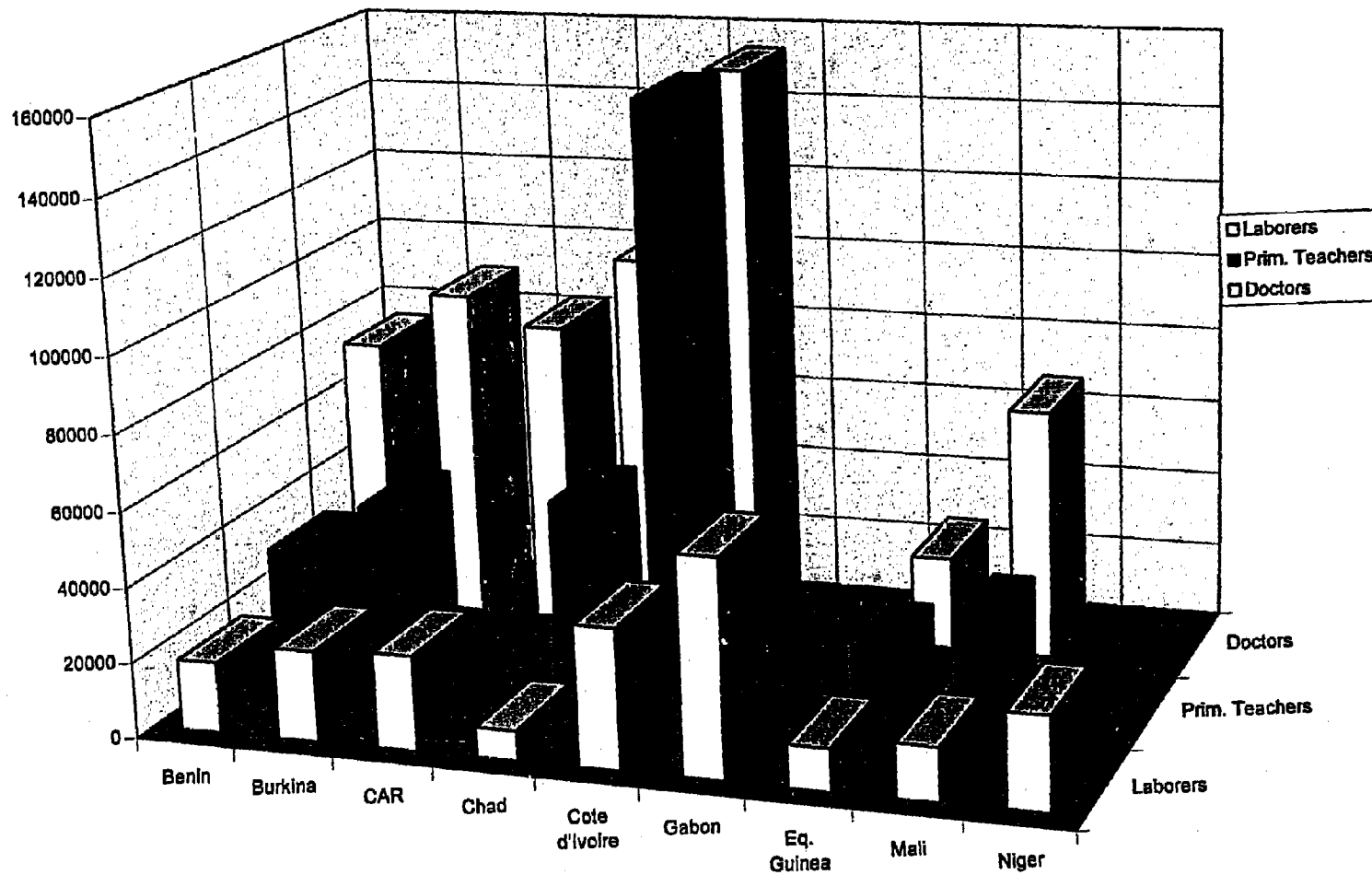
*Note:* 1. Figures for net lending to the agricultural sector are available only for 1984 and after.

*Source:* BCEAO Rapport Annuel and Notes d'Information et Statistiques.

**Table 4. Real wage increases in selected CFA countries, 1985-90**  
(in percent per annum)

	<b>Laborers</b>	<b>Primary school teachers</b>
<b>Benin</b>	<b>4</b>	<b>-3</b>
<b>Burkina Faso</b>	<b>4</b>	<b>1</b>
<b>Chad</b>	<b>1</b>	<b>6</b>
<b>Côte d'Ivoire</b>	<b>0</b>	<b>14</b>
<b>Mali</b>	<b>-1</b>	<b>-8</b>

Figure 1  
Wages in the CFA Zone  
(1990 CFAF/month)



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