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1

Introduction

David Fielding

There is an enormous variety in the currency arrangements and institutions across sub-Saharan Africa (SSA) in the early twenty-first century. This is a consequence of the different trajectories that African nations have taken since their independence from the former colonial powers (Belgium, Britain, France, Portugal and Spain) in the 1950s, 1960s and 1970s. The African nations' colonial experience has played a major role in shaping post-colonial institutions. However, there has been a great deal of divergence in the paths the different independent nations have taken. One of the most striking monetary institutions in the region is the CFA Franc Zone, a common currency area spanning most of the former French colonies of West and Central Africa. The first part of this chapter reviews the monetary history of SSA, highlighting the differences between the CFA Franc Zone and its neighbours. The second part reviews some of the more pressing policy questions facing the Franc Zone and its neighbours today, and explains how these questions are addressed in the rest of this book.

Post-colonial histories and institutions

The CFA Franc Zone

The CFA Franc Zone is a monetary system based on the institutions of the final phase of French colonialism, and encompasses most of France's former colonies. The African CFA Franc Zone is the major component of the world-wide Franc Zone, which also includes Monaco and some French overseas territories. The cornerstone of the Franc Zone is the use of currencies that the French Treasury guarantees to exchange for French Francs (now Euros) at a fixed rate.¹ In continental Africa member states are grouped into two regions, each of which has one central bank issuing a single currency – rather confusingly, both currencies are called the CFA Franc, CFAF – that is convertible with the French Franc/Euro at a fixed rate.

The Franc Zone evolved from the monetary institutions of the last phase of French colonial Africa. In 1955, five years before independence, the Metropolitan French authorities devolved the right to issue currency onto two newly created institutions: the Central Bank of Equatorial African States and Cameroon, later renamed the Bank of Central African States (*Banque des États de l'Afrique Centrale*, BEAC), and the Central Bank of West African States (*Banque Centrale des États de l'Afrique de l'Ouest*, BCEAO). These banks issued their own notes for use in French Equatorial Africa (including Cameroon) and French West Africa (including Togo). Their headquarters were originally in Paris, but later moved to Yaoundé in Cameroon and Dakar in Senegal.

(The history of acronym 'CFA' gives an interesting insight into attitudes towards political correctness in the francophone world. Its original meaning was *Colonies Françaises d'Afrique*. But after the African countries gained independence this interpretation was changed to *Communauté Financière Africaine* in the BCEAO area and *Coopération Financière en Afrique Centrale* in the BEAC area. Similarly, in New Caledonia and French Polynesia the 'CFP' mutated from *Colonies Françaises Pacifiques* into *Change Franc Pacifique*.)

After political independence (1960–62), the banks retained their function and their currencies, and the French Treasury continued to guarantee convertibility at 50 CFAF:1 FF. All of the newly independent Central African states – Cameroon, Chad, the Central African Republic (CAR), the Congo Republic and Gabon – adhered to this monetary union under the auspices of the BEAC. These were joined in 1985 by the former Spanish colony of Equatorial Guinea. In West Africa the new monetary area was smaller than the old colonial territory, because Guinea–Conakry had seceded from French control at the institution of the Fifth French Republic in 1955. Also, Togo seceded from the monetary union on gaining its independence, although it rejoined the union in 1963. The other states – Côte d'Ivoire, Dahomey (later Benin), Upper Volta (later Burkina Faso), Mali, Mauritania, Niger and Senegal – formed the Economic and Monetary Union of West Africa (*Union Économique et Monétaire Ouest-Africaine*, UEMOA) under the auspices of the BCEAO. Mali, however, was independent of UEMOA from 1962 to 1984, issuing its own CFA Franc, convertible at a rate of 100 CFAFM:1 FF. Mauritania completely seceded from the Franc Zone in 1973. The former Portuguese colony of Guinea–Bissau joined the union in 1997.²

The African CFA comprises two completely separate and independent monetary unions with two different currencies, although the two unions share many common features. The two unions constitute a complex array of contractual obligations on the part of the African states and France. Here we review those features of the Franc Zone constitutions that are likely to affect economic policy and economic performance.

The obligations fall into two categories. First, there are the constitutional principles designed to achieve the goal of complete financial integration between member states. Under this heading fall the guarantees

of convertibility between CFA and French Francs (Euros), and the fixed exchange rate. Maintenance of the principles implies a heavy obligation on the part of France, with some obligations on the part of the Franc Zone. Second, there are the administrative structures to which member states bind themselves, and which prevent (or, at least, which are designed to prevent) African states free riding on French guarantees, and on each other. These entail considerable loss of economic sovereignty on the part of the African states.

The constitutions of the central banks of the Franc Zone describe the principles and institutional structures of the union. More details are to be found in Bathia (1986) and Vizy (1989). We will concentrate below on the details of the revised Franc Zone constitutions of 1972–73, which devolved policy-making authority from the French treasury to the central banks.³ The members of the Franc Zone and France agree to act to ensure the following economic conditions:

(1) *Guaranteed convertibility*: Article 2 of the BEAC constitution states that the union is based on France's guarantee of unlimited convertibility of CFA Francs. Article 1 of the UEMOA convention stipulates that France will help member states to ensure the free convertibility of their currency. In practice, this means that the French Treasury will exchange CFA Francs for French Francs on demand. It also agrees to provide the Franc Zone central banks with as many French Francs as are needed to ensure the smooth running of the zone's financial system.

If this guarantee of convertibility were absolute, then there would be no black market for foreign exchange (forex): the official and parallel exchange rates would be the same. However, there have been exceptional short periods in which the rates have diverged somewhat. The main reason for this divergence is probably that although the French Treasury guarantees convertibility *now* at a certain exchange rate, there is a finite risk that the CFA Francs will be devalued, or that one or more countries will secede from the union. When rumours are rife, the implied risk of holding CFA Francs means that there is not full convertibility in practice. Nevertheless, the official and parallel market rates for CFA Francs have always been of the same order of magnitude, which is in itself a major achievement, compared with other African currencies.

(2) *A fixed exchange rate*: From 1948 to 1994 Article 9 of the BEAC constitution and Article 2 of the UEMOA convention stipulated a fixed rate of 50:1. The rate has been changed only once, to 100:1, in January 1994. The entry of France into the European Monetary Union (EMU) means that the rate is now defined in terms of Euros, but the current Euro rate is equivalent to 100:1 against the French Franc. The devaluation of the French Franc in August 1969 prompted the members of the Franc Zone to negotiate a system of compensation for French devaluations. Each year, the French

Treasury compensates for any loss of exchange by the two CFA central banks caused by falls in the value of the Euro–SDR rate, crediting the central banks accordingly. If the Euro appreciates the accounts are not debited, but the calculated gain by the CFA central banks is deducted from any future credits. The fixed exchange rate has meant that average inflation rates within the Franc Zone have not been significantly higher than those in France.

- (3) *Free transferability*: Article 10 of the BEAC constitution states that ‘transfers of funds between member states and France will be unrestricted’. Similarly, Article 6 of the UEMOA convention describes the ‘freedom of financial relations between France and members of the Union’. This obligation on the part of the African states is not without qualification, and the practice of member states has not always been in harmony with the principle. International capital transfers are taxed, and occasionally (especially during the run-up to the devaluation in 1993) the transferability has been suspended. Nevertheless, there is usually a reasonable degree of capital mobility across the frontiers of each of the two monetary unions.
- (4) *Harmonization of rules governing currency exchange*: Article 14 of the BEAC constitution stipulates that, ‘with the exception of modifications necessitated by local conditions ... states will try to implement the exchange policy of the Franc Zone’. Article 6 of the UEMOA convention notes that the ‘uniform regulation of the external financial relations of member states ... will be maintained in harmony with that of the French Republic’. These regulations cover such things as the remittance of salaries abroad (that is, outside the Franc Zone), foreign investment and borrowing from abroad.

The administrative structures of the Franc Zone are built around the BEAC and the BCEAO, which are the only institutions in the region granted the power to issue CFA currency. They also implement monetary policy, and finance and regulate government and private banking activity. The regulations the central banks are empowered to enact concern particular monetary aggregates. Overall control of monetary creation is sought through the close monitoring and regulation of the different components of the money stock.

In order to understand the way in which monetary policy is implemented, it is useful to consider the balance sheet of each central bank, which is of the form:

$$MON - CTE - NGD - NFA \equiv 0 \quad (1.1)$$

MON is the money base, *NFA* the net foreign assets of the central bank, *CTE* the net indebtedness of the private banking system to the central bank and *NGD* the net indebtedness of the governments of the Zone to the

central bank. The balance sheet identity applies to individual countries as well as to the Zone as a whole, the central bank accounts being disaggregated by country.

The administration of the Franc Zone is based on accounts held by the central banks in Paris, the Operations Accounts. An Operations Account deficit constitutes a net foreign liability of the African central bank, so an increase in the deficit reduces *NFA*. It acts as a 'shock absorber' when there is an increase in domestic debt (*CTE* and *NGD*). So the local interest rates set by the BCEAO and BEAC do not have to be used to respond to external imbalances, at least in the short run.

The interest rate set on Operations Accounts overdrafts is punitively high. However, there is still an *a priori* worry that the overdraft facility will lead to excessive domestic credit creation in Africa. That is, *CTE* and *NGD* will tend to rise, and *NFA* will tend to fall, leading to persistent external deficits. However, in addition to the interest rate, the central banks have a number of ways of controlling the components of their balance sheets:

- (1) Historically, a key tool for controlling CFA government debt was the '20 per cent rule'. Credits to government from the central banks (*NGD*) were limited to 20 per cent of the government's fiscal receipts for the previous year. If the government wanted to increase its expenditure, it had to increase its revenue. So there was always a link between credit creation and the budget deficit and, with government borrowing from abroad making up such a large fraction of total borrowing, between credit creation and the current account deficit. This imposed at least some fiscal discipline, and lower rates of money creation than in the rest of SSA. As part of the monetary reforms following the 1994 devaluation, net public borrowing from the BCEAO/BEAC has been further limited, so that now there is practically a '0 per cent rule'.
- (2) With respect to the private sector, the central banks pursue an active policy of adjustment of the reserve assets ratio. An increase in the ratio will force up *MON*, offsetting any increase in *CTE* or *NGD* that might worsen the external balance. In fact, reserve assets ratios set by the BCEAO vary not only from month to month but also from country to country, according to the central bank's view on variations in excess liquidity over time and across countries. The central bank also operates *accords de classement*, vetting large loan applications by private sector institutions. In recent years these policy tools seem to have been effective. At the end of 2002, BCEAO loans to government were only 19.5 per cent of *MON*,⁴ and loans to the private sector were only 1.1 per cent of *MON*. Most of the money base is covered by a positive net foreign asset position. In other words, the central bank was more or less operating a *de facto* currency board system, but with a built-in shock absorber. Similar observations are true of the BEAC.

In the past this was not always so, and in the 1980s lending to the public and private sector in Franc Zone countries – mostly to the larger ones, such as Côte d’Ivoire and Senegal, and disproportionately to their size – exceeded the size of the money base. Correspondingly, the net foreign asset position of both monetary unions was negative for long periods of time. There was considerable evidence to support the conjecture that the rules designed to limit credit creation were ineffective (Fielding 1996). But since the 1994 devaluation, which was designed to address the negative external balance of the CFA Franc Zone as a whole, the rules governing credit creation have been tightened and budgetary discipline – at the aggregate zone-wide level, at least – has been maintained.

Despite the problems faced by the CFA Franc Zone in the 1970s and 1980s, it has remained an area of relative monetary stability, with low inflation rates and moderate rates of monetary expansion. In this respect it has differed markedly from much of the rest of SSA, as we will see in the next section.

The rest of SSA

Political independence and the drive to monetary independence

Outside of the CFA Franc Zone, many of the newly independent African states chose to create their own national currencies and central banks. (The main exception was a number of former British colonies and front-line South African states.) These countries chose to distance themselves from their former political rulers in monetary terms as well as purely political terms. The group includes all the former Portuguese colonies that gained independence in the mid-1970s (Angola, the Cape Verde Islands, Mozambique, São Tomé and Príncipe, Guinea–Bissau prior to Franc Zone membership), the former Belgian colonies that gained independence in the early 1960s (Burundi, Congo DR, Rwanda), the former French colonies that opted out of the CFA (Guinea–Conakry, Madagascar) and some former British colonies (Mauritius, Nigeria, the Seychelles, Sudan). In addition, those countries that had long been independent (Ethiopia, Liberia) issued their own currency.⁵

The drive for monetary independence may have had a purely political motivation: an independent currency is a potent symbol of an independent nation. However, there was a more mundane fiscal rationale for currency devolution. The issue of base money is a source of revenue (‘seigniorage’): in effect, printing new notes is – through the inflation it creates – a tax on those who already hold currency in circulation. This extra source of revenue could be extremely valuable for newly independent states with poorly developed tax collection systems.

In the late 1960s, the international context of this monetary autonomy was the Bretton Woods system. Most industrialized countries maintained a fixed exchange rate against the US Dollar, their central banks trading foreign exchange reserves in order to offset fluctuations in the demand for

local currency. The newly independent African states participated in this system, pegging their new currencies against the US Dollar, or against some other industrialized country currency, or against a weighted basket of such currencies.

Two major factors led to the breakdown of these African currency pegs in the 1970s and 1980s. First of all, the Bretton Woods system collapsed in 1971–72, and most industrialized country currencies were floated against the Dollar. This made an individual African country's choice of currency for a peg more difficult. Pegging to the US Dollar (Franc, Escudo, Sterling) would lead to falling competitiveness in world markets when the Dollar (Franc, Escudo, Sterling) appreciated. Pegging to a weighted basket of currencies might alleviate this problem, if the weights reflected the relative importance of the different industrialized countries as trading partners. But changing trading patterns, especially after the 1973 oil price hike, complicated any such exercise.

Second, mounting budget deficits created an incentive to print more local currency than was warranted by national economic growth (and hence growth of demand for cash) under a fixed exchange rate system. Many governments squared the circle by imposing even more severe restrictions on people's ability to trade in foreign currency, while imposing a fixed exchange rate by fiat. That is, instead of maintaining a fixed peg by manipulating the local supply of foreign currency through the use of forex reserves, the authorities set a fixed rate by decree, and limited access to forex markets. Foreign currency was rationed. In any rationing system there is an incentive to trade on the black market. When foreign currency is scarce and its price is set artificially low, people will be willing to trade at a higher price on unofficial markets. The magnitude of the discrepancy is illustrated in Table 1.1, which shows the difference between official and black market exchange rates in Africa in 1985. Each number in the first column shows the percentage premium on the price of US Dollars on the black market. In many cases the official and black market rates were of completely different orders of magnitude.

The magnitude of the discrepancy reflects the magnitude of the economic inefficiency brought about by the rationing regime. Dollars trade at an exorbitantly high price on the black market when they are especially scarce, when it is almost impossible for consumers to find any currency to import what they cannot find locally, and for firms to find any currency to import essential raw material and component parts. So in the 1980s an end to foreign exchange rationing was usually top of the list of conditions attached to World Bank loans. The 1980s and 1990s saw an abandonment of fixed exchange rates across most of SSA, as shown in the remaining columns of Table 1.1. The exchange rate peg was replaced either by a free float (in which the local price of Dollars was driven entirely by the market, with no official intervention), or by an intermediate system. Intermediate systems include floating exchange

Table 1.1 Exchange rate regimes in sub-Saharan Africa, 1970–2000

	Black market premium 1985 (%)	Exchange rate regime			
		1970	1980	1990	2000
<i>Southern Africa</i>					
Angola	5415	[colony]	intermediate	intermediate	free float
Botswana	22	peg	peg	peg	peg
Congo DR	25	peg	peg	free float	free float
Lesotho	0	peg	peg	peg	peg
Madagascar	9	peg	peg	intermediate	free float
Malawi	30	peg	peg	peg	intermediate
Mauritius	0	peg	peg	peg	free float
Mozambique	4108	[colony]	intermediate	intermediate	free float
Namibia	[colony]	[colony]	[colony]	peg	peg
Seychelles	0	peg	peg	peg	peg
South Africa	0	peg	intermediate	intermediate	intermediate
Swaziland	0	peg	peg	peg	peg
Zambia	38	peg	peg	intermediate	free float
Zimbabwe	42	peg	peg	peg	intermediate
<i>East Africa</i>					
Burundi	25	peg	peg	peg	peg
Eritrea	[colony]	[colony]	[colony]	[colony]	peg
Ethiopia	122	peg	peg	peg	intermediate
Kenya	0	peg	peg	peg	intermediate
Rwanda	48	peg	peg	peg	free float
Somalia	147	peg	peg	peg	n/a
Sudan	29	peg	peg	peg	intermediate
Tanzania	259	peg	peg	intermediate	free float
Uganda	25	peg	peg	peg	free float
<i>West Africa</i>					
<i>CFA Franc Zone^a</i>	0	peg	peg	peg	peg
Cape Verde	64	[colony]	peg	peg	peg
Gambia	7	peg	peg	free float	free float
Ghana	142	peg	peg	intermediate	free float
Guinea–Conakry	1414	peg	peg	intermediate	free float
Liberia	0	peg	peg	peg	peg
Mauritania	117	peg	peg	peg	intermediate
Nigeria	270	peg	intermediate	free float	intermediate
São Tomé	238	[colony]	peg	peg	free float
Sierra Leone	48	peg	peg	free float	free float
<i>Per cent pegged</i>		100	87	63	32

Notes: ^a The BEAC and BCEAO monetary areas. The data apply also to the Comorian Franc and the Djibouti Franc.

n/a = not available.

Sources: Schuler (2004); *World Currency Yearbook*.

rate regimes in which the authorities occasionally intervene to stabilize the value of the local currency, and pegs that are frequently adjusted in line with variations in the local demand for forex. The outstanding exception to the move towards floating exchange rates was the CFA Franc Zone. A few other countries have maintained a peg, but in terms of population and GDP they are small compared with the CFA area.

Attempts at monetary union in former British colonies

In the first years of independence in the mid-1960s, many former British colonies appeared to be following the same route as the Franc Zone countries. There were three separate monetary unions issuing currency tied to the Pound Sterling: the West African Currency Board (Gambia and Sierra Leone), the East African Currency Board (Kenya, Tanzania and Uganda) and the Central African Pound area (Malawi, Zambia and the remaining colony of Southern Rhodesia⁶). A single currency circulated in each of these areas, and currency issue was backed one-for-one by the Sterling reserves of each central bank. In some respects, the monetary links between these countries and the former colonial power were less extensive than in the case of the Franc Zone. The constitutions of the Anglophone monetary areas did not specify a large proactive role for British Treasury, and there was no direct equivalent of the Operations Account. Nevertheless, it was still possible in the mid-1960s that the monetary evolution of the former British colonies would closely resemble that of the former French colonies.

However, between 1964 and 1971 all three of these currency arrangements gradually dissolved. The British government was forced to devalue the Pound against the US Dollar in 1967, and with relatively little British interest in the Sterling Zone there was not much incentive for the newly independent states to pursue a link with the Pound Sterling. Moreover, political tensions between the different African states created pressure to set up national central banks issuing a national currency. Over 1964–66, Gambia and Sierra Leone abandoned the West African Pound. The countries then issued their own national currency using a currency board arrangement based on Sterling, but this was abandoned with the collapse of the Bretton Woods system in 1971. Kenya, Tanzania and Uganda retained the East African Shilling until 1966, but then moved through a short transitional phase with national currency boards to fully independent currencies by 1968. The Central African Pound was even more short-lived, surviving only to 1964. Thereafter, the management of the national currencies of these countries differed little from that in states that had instituted national currencies at independence.

Monetary integration in Southern Africa

The one other part of Africa in which monetary integration has been sustained for any length of time is the far south. Many of the front-line states bordering South Africa retained close economic links with the country, even

when independence from Britain led to greater political divergence from the Apartheid government. Substantial labour flows across the South African border made economic independence impossible. The Rand circulated freely in Botswana, Lesotho and Swaziland, and also in Namibia, which remained under South African control until the 1990s. Over time these countries created their own central banks, which issued their own notes. But these new currencies circulated alongside the Rand, precluding any substantial degree of monetary independence. The national currencies have remained pegged against the Rand under a currency board system. There is a substantial amount of co-operation with the South African Reserve Bank, which makes payments to national governments in lieu of the seigniorage revenue earned through the issue of Rand notes that circulate outside South Africa.

With the end of Apartheid an expansion of regional economic co-operation has become politically feasible. The Southern African Development Community now incorporates the Rand Area discussed in the previous paragraph plus Angola, Congo DR, Malawi, Mauritius, Mozambique, the Seychelles, Tanzania, Zambia and Zimbabwe. However, these countries now have independent flexible exchange rate regimes,⁷ and wider monetary co-operation is as yet entirely hypothetical.

Current policy issues

The costs and benefits of monetary union membership

The financial instability that resulted from monetary independence has prompted many countries to consider a greater degree of regional monetary co-operation. As documented by Bawumia (2002), the Lomé meeting of ECOWAS heads of state in 1999 set out detailed plans for regional monetary integration among both francophone and anglophone states in West Africa. The ultimate aim envisaged in these plans was a merging of the UEMOA with a yet-to-be-created anglophone monetary union, by as early as 2004. The Gambia, Ghana, Guinea-Conakry, Nigeria and Sierra Leone agreed to create a Second Monetary Zone (SMZ) by 2003. These deadlines have slipped somewhat, and it is envisaged that the single currency will be instituted in the near future. Nevertheless, there is a stated commitment to full monetary union in the near future. The institutional characteristics of the SMZ reflect some of the existing features of the UEMOA: an independent common central bank, no monetary financing for the public sector, pooled forex reserves and a stabilization fund to cushion temporary balance of payments shocks.

There is also some movement towards monetary union in East Africa, although plans are not yet as developed as in the ECOWAS area. In March 2004 Kenya, Tanzania and Uganda ratified the treaty creating the East African Community Customs Union (EACCU). The treaty established a common

external tariff (CET) as a first step towards wider economic integration. The East African Community (EAC) treaty states that the customs union will be followed at some future date by a common market, and then by a monetary union; but the plan for a single currency is as yet less detailed than in West Africa.

In Southern Africa, the expansion of the Rand Zone to cover some or all of the other members of the South African Development Community (SADC) has also been discussed, although there is unlikely to be any formal move towards monetary integration in the near future.

Given the push towards monetary union in other parts of Africa, it is timely to review the evidence on the costs and benefits that monetary union has brought to CFA member states, and on whether monetary union elsewhere would entail similar benefits – and similar costs. In this section we will summarize existing evidence, and indicate how Part I of the book sheds new light on questions surrounding costs and benefits of monetary union.

Optimum currency area theory in Africa

The theory of optimum currency areas dates back to Mundell (1961). A monetary union is likely to bring substantial benefits to partner states in terms of lower transactions costs in international trade, and less risk for those engaged in trade. (A pegged exchange rate still entails some risk for those dealing with multiple currencies, if the peg can be adjusted.) This might promote economic growth.

Moreover, a consequence of monetary integration is that decisions about monetary policy are taken by a trans-national monetary authority. Each individual government has some influence over the policy of the central bank to which it adheres, with guaranteed seats on the board of governors of the central bank. But the power of any one government to influence central bank policy is limited. Moreover, the constitutions of each currency union put explicit bounds on the financial services that the central bank can provide to an individual government. As a consequence, the CFA central banks, for example, are credibly endowed with a degree of independence from government that would never be politically feasible within a single African state. So, potentially, the Franc Zone countries stand to gain from the benefits (in particular, low inflation) commonly associated with independent central banks that can credibly commit to low rates of monetary expansion. A credible commitment to a unilateral exchange rate peg without frequent devaluations might achieve the same results here as monetary union membership; but one might wonder how many African countries could credibly make such a commitment.

However, there are costs associated with monetary union membership. Within the Franc Zone, for example, monetary policy cannot be used to offset idiosyncratic shocks to an individual country that result in reduced economic growth, or unemployment, or external deficits. These losses may however be

mitigated by the fact that the independence of the monetary policy-maker ensures that there are no large policy reversals attending a change in government, as has been the case elsewhere in Africa, particularly in the period after the collapse of the Bretton Woods system.

In assessing the actual or potential costs, it is important to remember that what matters most (in addition to the size of the shocks) is the degree of correlation across the members of the monetary union. If two countries sharing a single currency (and a single central bank setting a single interest rate) face shocks at different times that create movements in output and employment at different times, and if factors of production cannot move costlessly across international borders, then the lack of a country-specific monetary policy instrument will entail higher short-run volatility in output and employment in at least one of the countries than there need be with monetary autonomy. If the shocks are large enough and asymmetric enough, then the costs of monetary union will outweigh the benefits. The same comments can be made about shocks to prices and the real exchange rate.

Moreover, the smooth running of a monetary union requires that rules be in place to prevent one country's government generating more debt than another's. With a single currency, a higher level of debt in one country entails a monetary expansion across the whole monetary union, the costs of which are spread across all its members. So in a monetary union the costs for any one country of expanding its own debt are unusually low. In the absence of pre-commitment to low budget deficits there may well be a 'race to the bottom', with all countries facing a temptation to create excessive debt. So the smooth running of a monetary union is likely to require that all member states have a similar budgetary position prior to the formation of the union. If the status quo embodies asymmetric budgetary positions, then there are likely to be problems. In the cases of East Africa, Southern Africa and West Africa, some attention has already been given to the likely size of these costs for individual countries (potential costs for countries outside the Franc Zone, but actual costs for those inside), and to the question of what country groupings are likely to minimize the costs.⁸

Assessing the (potential) costs of monetary union

As shown in Table 1.2, the Franc Zone encompasses a wide range of African developing economies. All of the CEMAC countries except the Central African Republic (CAR) are now petroleum exporters, although petroleum exports from Chad and Equatorial Guinea are a recent phenomenon. *Per capita* income in the three established petroleum exporters (Cameroon, Congo and Gabon) is relatively high, over the US\$2 a day mark, but in the other CEMAC countries it is less than US\$1 a day. There is a corresponding discrepancy in other social development indicators, such as infant mortality. Population sizes range from over 16 million (Cameroon) to half a million (Equatorial Guinea). In the UEMOA, there is a similar discrepancy between

Table 1.2 Franc Zone: descriptive statistics, 2002 and 2003

UEMOA countries	Burkina Faso		Côte d'Ivoire	Guinea Bissau	Mali	Niger	Senegal	Togo
	Benin	Faso						
Agriculture value added (% of GDP), 2003	36	31	28	69	36	40	17	41
Industry value added (% of GDP), 2003	14	19	21	13	27	17	21	22
Services value added (% of GDP), 2003	50	50	52	18	37	43	62	37
Imports (% of GDP), 2003	26	23	30	88	38	26	40	47
Exports (% of GDP), 2003	14	9	46	51	27	16	30	34
GNI <i>per capita</i> (current US\$), 2003	440	300	660	140	290	200	550	310
Life expectancy at birth, 2002	53	43	45	45	41	46	52	50
Infant mortality rate per thousand, 2002	93	107	116	130	122	155	79	87
Population (million), 2003	6.7	12.1	16.8	1.5	11.7	11.8	10.1	4.9

CEMAC countries	Cameroon		Chad	Congo	Equatorial Guinea	Gabon
	CAR	CAR				
Agriculture value added (% of GDP), 2003	45	61	38	6	7	9
Industry value added (% of GDP), 2003	19	25	17	61	89	67
Services value added (% of GDP), 2003	37	14	46	33	4	24
Imports (% of GDP), 2003	25	31	54	54	n/a	44
Exports (% of GDP), 2003	25	24	21	78	n/a	67
GNI <i>per capita</i> (current US\$), 2003	640	260	250	640	n/a	3,580
Life expectancy at birth, 2002	48	42	48	52	52	53
Infant mortality rate per thousand, 2002	95	115	117	81	101	63
Population (million), 2003	16.1	3.9	8.6	3.8	0.5	1.3

the two relatively developed countries with *per capita* income over US\$2 a day (Côte d'Ivoire and Senegal), and the five smaller countries with much smaller average income levels. One might wonder whether such a heterogeneous group of countries could possibly benefit from sharing a single currency. There is therefore a literature that tries to quantify the extent of macroeconomic heterogeneity among Franc Zone members, and the consequent cost of monetary union membership.

Several papers focus on the extent to which macroeconomic shocks differ between the Franc Zone economies and their neighbours, and among the Franc Zone countries themselves. These come up with several striking results, but one should note as an opening caveat that these results do depend on the prior assumptions about the structure of each economy that are necessary before information about shocks can be extracted from the available macroeconomic data. These papers are based on a formal econometric time-series analysis of macroeconomic data. Many employ the statistical framework of Blanchard and Quah (1989), but with differing assumptions about the underlying economic structure of the countries in question.

Hoffmaister, Roldós and Wickham (1998) compare the nature and sources of shocks in the Franc Zone countries – considered as a single whole – and fifteen neighbouring countries. They conclude that the Franc Zone countries are relatively less susceptible to shocks that originate within the domestic economy (for example, changes in local demand conditions), and relatively more susceptible to external shocks impacting on the price of imports and exports. If these asymmetries persisted with the creation of a wider ECOWAS monetary union, then there would be a cause for concern. The optimal monetary policy response to the domestic shocks is unlikely to be the same as the optimum monetary policy response to the external shocks, so the creation of a single central bank across the region would entail some welfare loss.

The Hoffmaister, Roldós and Wickham paper does not look explicitly at the potential differences between countries within the Franc Zone, or compare individual Franc Zone countries with their neighbours. Another paper that applies a similar, but not identical, methodology to Hoffmaister, Roldós and Wickham to individual Franc Zone countries is Fielding and Shields (2001). To a certain extent this paper's findings are consistent with those of Hoffmaister, Roldós and Wickham: for example, in terms of the relative importance of domestic shocks in countries outside the Franc Zone. In terms of the degree of homogeneity within the Franc Zone, however, the results are mixed and sensitive to the assumptions used to derive information about the size, timing and nature of the shocks. There do appear to be clusters of Franc Zone countries among which there is some homogeneity, but also some heterogeneity across the zone as a whole.⁹

Another way of assessing the size of the problem is to examine whether the degree of output volatility has actually been higher on average among the members of the Franc Zone. To our knowledge, Bleaney and Fielding (2002) is

the only paper that addresses the issue of real output volatility directly. They find that the standard deviation of real GDP growth is significantly higher in Franc Zone countries than elsewhere. On average, the standard deviation is 1.4 percentage points higher.

One paper that looks at West African macroeconomic convergence from a more general perspective (with less reliance on time-series econometrics) and that includes a view of indicators of fiscal convergence, Bénassy-Quéré and Coupet (2003). Again the results are mixed, with differing degrees of homogeneity within and beyond the Franc Zone. Bénassy-Quéré and Coupet suggest that there is an economic rationale for an alternative partitioning of the Franc Zone on economic grounds. The current partition into the BEAC and BCEAO regions has an historical basis, and does not necessarily correspond to degrees of economic similarity. On the basis of current economic structure, the suggested grouping of the countries they study is (Benin, Burkina Faso, Mali, Togo), (Côte d'Ivoire, Senegal; plus Gambia), (Cameroon, CAR, Chad), (Congo, Gabon; plus Nigeria) and (Guinea-Bissau, Niger; plus Ghana, Sierra Leone).

There is a similar group of papers reviewing the degree of macroeconomic homogeneity within the SADC region. Agbeyegbe (2002), Grandes (2003) and Khamfula and Huizinga (2004) all look at the degree of asymmetry of macroeconomic shocks in Southern Africa. The Grandes paper focuses just on countries in which the Rand already circulates widely (South Africa plus Botswana, Lesotho, Namibia and Swaziland), but the other two look at data from across the SADC. Their attention is given principally to shocks to prices and/or the real exchange rate. There is a broad consensus that the Rand Zone countries face very similar shocks, which is not surprising given the degree of labour mobility between them. There is also some evidence that the macroeconomic shocks of a further group of countries (Malawi, Mauritius and Zimbabwe) are quite similar to the Rand Zone core. However, across the whole of the SADC there is a great deal of heterogeneity, which suggests that a monetary union encompassing the whole area would lead to substantial costs.

Papers that take a broader approach to the question of whether the SADC is an optimum currency area (looking at more than the degree of asymmetry of shocks) include Jenkins and Thomas (1998) and Sparks (2002). These papers also cover indicators of fiscal convergence, such as the debt-GDP ratio, and indicators of economic structure, such as the share of exports in GDP. The broader and less formal approach produces similar results. If one looks across the whole of the SADC region today, one sees a great deal of macroeconomic heterogeneity. The immediate creation of a monetary union across the whole area is likely to impose large costs on at least some countries.

Less has been written about the potential for monetary union in East Africa, but there is a paper by Mkanda (2001) that looks at a comprehensive range of macroeconomic indicators for Kenya, Tanzania and Uganda. The evidence of

this paper is very mixed. There does appear to be a broad tendency towards alignment of real exchange rates in the three countries in the long run, with an increasing speed of convergence over the 1990s. (That is, the length of time and magnitude of real exchange rate divergences are becoming smaller.) There is also a high degree of correlation in movements of the terms of trade of the three countries. However, shocks to real GDP are not highly correlated. Also, the countries all share a similar production structure, which suggests that as yet there is limited scope for trade in the region.¹⁰ With these mixed results, the immediate formation of a monetary union would be a gamble.

*Assessing the benefits of monetary union*¹¹

A number of early studies sought to determine whether it is true that Africa's existing monetary unions in the Franc Zone promote economic growth. Studies comparing income growth rates include Devarajan and de Melo (1987) and Plane (1988a). The main obstacle to obtaining significant statistical results is the great diversity of economies both inside and outside the CFA. Devarajan and de Melo's solution is to fit an equation for the log of gross national product of seventy-four LDCs for the period, 1960–82. The equation is of the form:

$$y_{it} = b_0 + b_1D_i + b_2t + b_3D_it \quad (1.2)$$

where y_{it} is log GNP of the i th country in year t and D_i is a dummy variable for membership of the CFA. The model is estimated for eleven categories, grouping together oil importers and oil exporters, and countries with *ex ante* low and high *per capita* GNP, for SSA as well as for the whole sample. In general, aggregate growth of CFA members is significantly lower than the aggregate for the rest of the sample, but this does not take account of the possibility of more adverse climatic and geographical conditions in Africa than elsewhere. When CFA members are compared with just the rest of SSA, statistically significantly better performance by CFA members appears for the high-income countries and for the high- and low-income countries pooled, whilst there is no statistically significant difference for low-income countries alone. Comparing two sub-samples, 1960–73 and 1973–82 (before and after the move to floating exchange rates in the international economic system) reveals more information. In the first period, the one significant result for SSA is that low-income CFA members grew more slowly, whilst in the second period the one (highly) significant result is the faster growth of high-income CFA members.

This approach is open to the criticism that its treatment of the factors determining economic growth is rather crude, allowing for no quantification of the effects of natural resources and geography on growth. Plane (1988a) tries to avoid this criticism by beginning with a general model of economic growth for sixty-one LDCs for the period, 1962–81, and for two

sub-periods. (The partition is between 1970 and 1971.) The dependent variable in the cross-country regression is the average rate of growth of GNP over the period. Significant explanatory variables include *ex ante* population and population growth rate, a dummy for aridity of climate, variation in terms of trade, *ex ante per capita* GNP, the proportion of mineral extraction output in GDP, infant mortality rate and the proportion of the population with primary education. Plane then tests whether the cross-country residual is dependent on Franc Zone membership. Although the weighted average of residuals for the Franc Zone is positive, and the residual for Africa outside the Franc Zone negative, the difference is not significant.¹²

The evidence for a link between long-term growth and Franc Zone membership is therefore rather weak. However, another aspect of monetary union in Africa is the degree of central bank independence that it entails. Here, there is much stronger evidence. A number of papers using slightly different methodologies have consistently found Franc Zone membership to be associated with lower average rates of inflation, *ceteris paribus*. These papers include Plane (1988b), Elbadawi and Majd (1996) and Bleaney and Fielding (2002). The last of these makes a comparison between flexible exchange rate countries, countries with unilateral pegs and the Franc Zone. Controlling for other economic characteristics, it turns out that a unilateral peg does work as a nominal anchor, at least to some extent. Countries with unilateral pegs have experienced significantly lower average inflation rates. However, the effect is not as large as for the Franc Zone countries: average inflation rates in the Franc Zone are around 9 percentage points lower than for other pegged exchange rate countries. A natural interpretation of these results is that the central bank independence delivered by monetary integration lowers inflationary expectations more than a simple unilateral peg, which can always be revoked in the future.

One potential benefit of monetary union that has not received much attention in studies of Africa is the stimulus it might provide to wider economic integration – for example, by reducing the barriers to trade between member states. We will return to this question later.

What this book contributes to the optimum currency area analysis of the CFA Franc Zone

We have seen that papers dealing with the degree of macroeconomic heterogeneity among a group of African countries either took a relatively formal approach, focusing mainly on the characteristics of macroeconomic shocks in individual countries, or a less formal but broader approach. We have also seen that attempts to measure the potential benefits of Franc Zone membership have taken a variety of forms, with some robust conclusions with respect to inflation, but otherwise no conclusive results.

The chapters in Part I of this book advance this literature in several directions. Chapter 2 takes a broad approach to assessing the degree of

macroeconomic heterogeneity among the UEMOA countries, and looks at the extent of their divergence in terms of many different nominal convergence criteria (that is, criteria relating to stated policy objectives, such as budget deficits and external debt, rather than measures of underlying structural heterogeneity). These criteria are the ones explicitly mentioned in the UEMOA 'convergence pact' instituted after the 1994 devaluation: the BCEAO now monitors these criteria. But this chapter takes a more formal approach to assessing nominal convergence than previous papers focusing on these criteria. In each case, the degree of convergence is measured within a consistent econometric framework. A striking result of the analysis is that there is markedly less convergence in those factors (such as budget deficits) relating to the policies of individual governments. Although we noted above that aggregate borrowing does not now lead to excessive monetary expansion, it appears that the aggregate measure masks considerable divergence in the situation of individual countries.

Chapter 3 relates to the existing literature on optimum currency area theory and macroeconomic shocks. One worry with existing work is that the econometric methodology relies on some strong, assumptions about the structure of African economies. Many papers rely on the econometric identification structure of Blanchard and Quah (1989), but they make different assumptions about the structure of the economy in the long run. For example, some papers are based on the assumption that output is independent of prices in the long run, but not vice versa (a vertical long run aggregate supply curve); and others are based on the assumption that prices are independent of output in the long run, but not vice versa (fixed exchange rates in small open economies with purchasing power parity, PPP). This is a consequence of the dearth of reliable high-frequency macroeconomic data in many CFA countries. Chapter 3 represents a new way of tackling the data problem. It analyses the data in as wide a range of CFA countries as possible, but employing measures of macroeconomic heterogeneity that do not rely on any theoretical identifying restrictions. The results relate to simple measures of macroeconomic heterogeneity, and the chapter uncovers groups of countries exhibiting some macroeconomic homogeneity. These groups are not completely orthogonal to the existing UEMOA–CEMAC grouping, but neither is the existing grouping necessarily a first-best outcome.

The first two chapters in Part I focus exclusively on CFA countries. Chapter 4 widens the geographical horizon by making a comparison of the macroeconomic characteristics of the CFA countries with those of their neighbours. It looks at the similarity between macroeconomic shocks on the Franc Zone and shocks on neighbouring countries. The approach to modelling shocks is formal (using time-series analysis), and the comparison between Franc Zone and non-Franc Zone countries is qualitative. The aim of the chapter is to see whether anything can be said about the sources of shocks to output and prices in different African countries. Does the 'hard'

fixed peg of the Franc Zone mean that macroeconomic shocks there have a different explanation from shocks in countries with more flexible exchange rate regimes?

Wider policy questions

The conduct of monetary and exchange rate policy

Since the interesting times surrounding the 1994 devaluation, the CFA Franc Zone has enjoyed a period of relative monetary tranquillity. The external balances of the most indebted CFA members have improved somewhat, and there has been no discussion of any second devaluation, or of a de-linking of the CFA currencies from the Euro. The two central banks have re-oriented monetary policy, motivated by a desire to emulate what is seen as best practice in the Organization for Economic Co-operation and Development (OECD). The interest rate (alongside the reserve assets ratio and some credit controls) is considered as the prime monetary policy instrument. Central bank communiqués inform the public about monthly decisions on the value of the policy instruments, providing some rationale for the decisions. In this context, it is timely to assess the conduct of monetary and exchange rate policy in the Franc Zone.

If the BCEAO and BEAC are indeed operating in the fashion of an OECD central bank, then it ought to be possible to analyse their policies in the way that OECD central bank policies are analysed. With the exception of South Africa (Aron and Muellbauer 2002), Africa has received very little attention in the literature on monetary policy rules. So the first two chapters of Part II of the book analyse the use of BCEAO monetary policy instruments over the last decade. Chapter 5 focuses on the reserve assets ratio and chapter 6 on the interest rate. These chapters ask questions about the degree of consistency and transparency in the conduct of monetary policy. For example, can interest rate-setting in the UEMOA be described in terms of a Taylor Rule? Do changes in reserve asset requirements (which vary across member states) systematically reflect country-specific macroeconomic fluctuations, and do they promote or hinder nominal convergence?

Monetary policy, exchange rates and poverty

The final Part III of this book is designed to fill a gap in the existing literature by analysing the impact of monetary policy and institutions on the incidence of poverty in the CFA. The analysis of the relevant macro-micro linkages has received very little attention to date. Chapter 7 provides a broad view of the link between exchange rate institutions and poverty by performing a cross-country analysis in the style of the papers reviewed (pp. 16–17), but with an emphasis on changes in income distribution as well as changes in average income levels.

Chapters 8 and 9 focus on CFA countries, examining the transmission mechanisms that link changes in exchange rate or monetary policy to changes in the incidence of poverty. Chapter 8 analyses the channels through which the 1994 devaluation affected poverty in Côte d'Ivoire and Niger. Existing wisdom suggested that the devaluation would alleviate poverty, because it would generate a real exchange rate depreciation (an increase in the relative price of internationally traded goods), and most of the poor were small farmers engaged in the production of traded goods. However, it turns out that the picture is much more complex than this. Many of the urban middle classes in service sector employment, who lost most from the devaluation, used their income to finance informal sector activities employing workers from very poor households. The devaluation was associated with a contraction of this sector, which hurt the poor. Finally, chapter 9 analyses the monetary transmission mechanism in the UEMOA from a pro-poor perspective. In the short term, changes in monetary policy instruments can have an asymmetric impact on the prices of different commodities, not all of which adjust at the same rate. Within a monetary union, it can also have a geographically asymmetric impact on prices. So, in general, the brunt of monetary policy changes could be borne by the rich or by the poor, depending on whose consumption basket experienced the most price volatility in the wake of a monetary policy intervention. It turns out that the groups most likely to bear the brunt of such changes are the poor in a sub-set of the UEMOA countries.

Notes

1. Because convertibility has always been the responsibility of the French Treasury, and not the Banque de France, France's membership of EMU had very minimal institutional consequences for the Franc Zone.
2. In a parallel organization in Southern Africa, the island states of Madagascar and Comoros shared a central bank issuing yet another CFA Franc, although Madagascar seceded from the Franc Zone in 1973. So Comoros is now a semi-detached member of the African CFA Franc Zone, issuing a unique currency (the Comorian Franc) that is linked to the French Franc/Euro in the same way as the CFA currencies of continental Africa. The former French colony of Djibouti in the Horn of Africa also maintains a currency board linked to the Euro.
3. See de la Fournière (1973) for an account of the Franc Zone before the 1973 reforms.
4. These figures are net of IMF loans, which are channelled to individual governments via the central bank.
5. In Liberia, the monetary authority issues only coins, and the US Dollar circulates freely.
6. Now Zimbabwe.
7. Except the Seychelles, which maintains a basket peg.
8. There is a mainstream theoretical literature on the impact of central bank independence/fixed exchange rates focusing on the trade-off between higher output volatility and lower average inflation rates. See for example Rogoff (1985) and Cukierman, Leiderman and Spiegel (2003).

9. An earlier but more conceptually restrictive study by Horváth and Grabowski (1997) finds limited scope for integration among African countries, which – according to the methodology applied in this paper – typically face similar demand shocks but dissimilar supply shocks.
10. That is, there is little scope for inter-industry trade and the issue is not directly addressed.
11. This section focuses on the impact of Franc Zone membership on economic performance. We do not consider the impact of Rand Zone membership. Monetary policy in the Rand Zone is driven by a central bank (the South African Reserve Bank, SARB) that is certainly not independent of political influence, and does not have a particularly good track record with respect to the control of inflation.
12. Other studies of the impact of the Franc Zone on long-run growth include Devarajan and de Melo (1991) and Elbadawi and Majd (1996). The conclusions of these papers are similarly mixed.

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