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Africa Puts Forward its Eco

European monetary union has contributed to projects for monetary union being relaunched in other parts of the world. The most advanced is without any doubt that of the "second" west African monetary union, which binds together five non members countries of the West African Economic and Monetary Union (WAEMU), though the second union is ultimately set to merge with the WAEMU. In 2002, the project for the second union led to the creation of a West African Monetary Zone (WAMZ), and the monetary unification of these five countries is scheduled for 1st July 2005. However, the process of convergence is far from being completed and the union might well be postponed. These problems raise questions about the feasibility of the project and the monetary borders of the region. For each country the costs and benefits are analysed with respect to criteria defined by the theory of optimal currency areas. A summary analysis classifying the countries according to their economic proximity is put forward. This suggests that the WAEMU is a relatively homogenous group, which is not the case for the countries of the WAMZ, whose members thus do not have much interest in rapid monetary unification.

A Second West African Monetary Union?

On 20 April 2000, in Accra, Ghana, six countries (Gambia, Ghana, Guinea, Liberia[1], Nigeria and Sierra Leone) announced their intention to create a new monetary union in West Africa, alongside the existing West African Economic and Monetary Union. The project plans a future merger of this second monetary union with the WAEMU, so that the ultimate borders of the monetary union will be those of the Economic Community of West African States (ECOWAS). Under this scenario, the WAEMU, would ultimately abandon the CFA franc, which is presently pegged to the euro, in favour of a new regional currency – the eco[2] – whose exchange regime against the euro and the dollar has not yet been specified. This ambitious project is part of an even more ambitious plan to create a single African currency, first set out in 1963 by the Organisation of African Unity, and then by the African Economic Community.[3]

The Accra declaration was coming with several convergence criteria relating mainly to inflation, foreign exchange reserves and public finances. A monetary institute – the WAMI[4] – was also set up to organise the multilateral supervision of the convergence process and to prepare for monetary union. The West African Monetary Zone (WAMZ) was established in April 2002, with each country committing itself to maintain its exchange rate within a range of ±15% against the dollar. However, at the end of 2002, they recognised that convergence was insufficient. They agreed to postpone monetary union until 1st July 2005[5] and updated the convergence criteria: including "primary" macroeconomic criteria and "secondary", more structural criteria (see Table 1).[6]

According to this new plan, the WAMI was to publish an assessment of each country's performance in respecting the convergence criteria during the month of April 2005, and

1. Liberia has not participated in the following phases, due to damage caused by its civil war. It is neither a member of the WAMI nor of the WAMZ (see *infra*).
2. In January 2003, the Convergence Council of the Zone selected the name for the new currency from a list of 1200 propositions submitted in a public competition. See the West African Monetary Institute, "Questions and Answers on the West African Monetary Zone", <www.wami-imao.org>.
3. This objective should be achieved in six successive stages, ending in 2028 with the merger of the regional monetary unions created in the preceding stages. See P. Masson & C. Pattillo (2005), *The Monetary Geography of Africa*, Brookings Institution Press, chapter 9.
4. The West African Monetary Institute.
5. See *WAMI News*, <www.wami-imao.org>.
6. See WAMI, "Questions and Answers on the West African Monetary Zone", *op. cit.*.

Table 1 – Country performance relative to the convergence criteria of the WAMZ, in 2004

(green figures indicate criteria respected)

	Criteria	Gambia	Ghana	Guinea	Nigeria	Sierra Leone
Primary criteria principaux						
Inflation (consumer prices)	Max 5%	14.5	10.8	16.6	15.8	12.4
Budget balance (excluding grants) (% GDP)	Min -4%	-5.7	-5.5	-4.0	6.7	-17.7
Forex reserves (months of imports)	Min 3 month	5.5	3.9	1.2	6.6	2.0
Monetisation (% of tax receipts of preceding year)*	Max 10%	4.9	22.1	13.3	-51.7	0.3
Secondary criteria						
Tax receipts (% of GDP)	Min 20%	16.1	21.3	8.5	17.7	12.2
Public investment (% of expenditure)	Min 20%	40	32	35	21	31
Public salaries (% of expenditure)	Max 35%	20	29	21	31	21
Real interest rate (Treasury bonds) (%)	Min 0%	14.0**	4.6	2.5	3.3	14.0
Change in real exchange rate 2004-III/2003-III (%)	« stable »	7.6	3.5	12.2***	-3.2	-7.7

* Change in Government net debt towards central bank between end 2003 and end 2004/Tax revenues in 2003.

** End 2003. *** Bilateral exchange rate *versus* $.

Note: IMF estimates, which may differ from national data.

Sources: IMF, *Sub-Saharan Africa Regional Economic Outlook*, october 2004. *International Financial Statistics*, February 2005. Consultations in the context of Article IV.

monetary unification was to go ahead on the 1st July 2005 for those countries deemed ready. The others would join later. Logically, the WAMI should once again recommend postponement of monetary union.[7] Indeed, in 2004, each country in the zone experienced double-digit inflation, while budget deficit was running above 4% of GDP, except in Nigeria and Guinea (Table 1).[8] At the same time, foreign exchange reserves were lacking in two out of five countries, while budget deficits were also being excessively monetised in two countries. The ratio of government receipts to GDP was insufficient in every country except Ghana, even if other structural criteria (the breakdown of public spending, and real interest rates) were better respected.

Even if the 1st July deadline is postponed, it nevertheless brings the issue of monetary regionalism back on the agenda, and in particular the issue of the monetary borders of Sub-Saharan Africa. Answering this question draws on the theory of optimal monetary zones. The theory was first developed by Robert Mundell,[9] and seeks to define criteria by which monetary unions should be concluded. However, this question also relates to the issue of central bank credibility with respect to political authority. It matters particularly in this part of the world, where central banks are not often independent.

The Costs and Benefits of Waiting

For every member state, a monetary union yields savings on all trade and financial transactions between the members of the union. But it comes at the cost of the loss of an instrument of economic policy - the exchange rate - which allows countries to react individually to shocks. The benefits in terms of lower transaction costs increase with the size of the monetary union. But the costs incurred through the loss of a monetary policy instrument also increase with the size of the union. Theoretically an optimal monetary zone therefore exists, which provides the best trade-off between costs and benefits.

The low level of intra-regional trade in Sub-Saharan Africa (see Table 2) limits the scale of the benefits which may accrue from a monetary union, though such a union tends to raise the volume of trade itself,[10] and even if informal trade is to be taken into account. For most countries, the European Union is by far the most important trade partner. This explains why the region would benefit most in terms of reduced transaction costs from adopting the euro (and not the eco) as a currency, or at least from strongly linking its

Table 2 – Geographic distribution of trade in West Africa, 2002 (in %)

	Exports	Imports
CAEMU	100	100
CAEMU	11.0	10.1
European Union	35.1	40.4
Rest of world	53.9	49.5
WAEMU	100	100
WAEMU	12.7	8.9
WAMZ	7.6	9.7
European Union	45.1	42.8
Rest of world	34.6	38.6
WAMZ	100	100
WAMZ	3.6	4.6
WAEMU	4.2	3.4
European Union	28.0	42.2
Rest of world	64.2	49.8

Source: P. Masson & C. Pattillo (2005), *op. cit.*, p 98.

7. In May 2005, i.e. after this Lettre du CEPII had already been published in French, the heads of state and government decided to postpone monetary unification until 1st December 2009.
8. On the basis of national sources, Gambia's deficit was only 3.75% of GDP in 2004, which brings the number of countries meeting the criterion to three.
9. R. Mundell (1961), "A Theory of Optimum Currency Areas", *American Economic Review*, Vol 53, pp 657-65.
10. In a well-known but controversial article, A.K. Rose estimates that monetary unions triple trade flows ("One Money, One Market: Estimating the Effect of Common Currencies on Trade", *Economic Policy*, Vol 15, No 30, April 2000. For Sub-Saharan Africa, P. Masson and C. Pattillo (2005) *op. cit.* do indeed find that, *ceteris paribus*, trade tends to be more important within the WAEMU and between WAEMU and France, but that this is not the case for the countries of the Central African Economic and Monetary Union (CAEMU) which also belongs to the CFA franc zone.

currency to the euro, which 18 African countries already do *via* the CFA franc. However, there is little likelihood that the French government would extend its guarantee of CFA franc convertibility to new countries, and especially to English-speaking countries such as Nigeria. The members of the WAEMU would have little incentive, *a priori*, to scrap the CFA franc for a currency whose credibility has to be built up still. In contrast, Nigeria, with 94% of its exports in hydrocarbons, is likely to favour little a common currency pegged to the euro, which risks aggravating the instability of its oil earnings when expressed in local currency.

Compared to these limited benefits in trade, the macroeconomic costs are important. Indeed, the countries in the region are generally specialised in the production of a small number of raw materials, which vary from country to country (Table 3). As a result, they all experience large terms of trade shocks, which are different to their neighbours. The loss of the exchange rate as a policy instrument is thus detrimental. The project for monetary union does indeed provide for the creation of a fund aimed at helping member states cushion unfavourable, temporary shocks. But this fund is limited in size, especially for a big country like Nigeria.

Table 3 – Main exports by members of the WAEMU and the WAMZ in 2003

	Products whose share of total exports is at least 10%
WAEMU	
Benin	coton (59%), nuts (11%)
Burkina Faso	coton (64%)
Côte d'Ivoire	cacao (61%)
Guinea Bissau	nuts (85%)
Mali	cotton (85%)
Niger	uranium (54%), livestock (20%)
Senegal	refined petroleum (16%), phosphorus products (12%)
Togo	cement (29%), cotton (13%)
ZMOA	
Gambia	peanuts (17%)
Guinea	aluminum (60%)
Ghana	cacao (52%)
Nigeria	hydrocarbons (94%)
Sierra Leone	diamonds (58%), coffee (22%)

Source: United Nations, Comtrade database, <www.intracen.org>.

The theory of optimal currency areas stresses that labour mobility can partly substitute for national monetary policies when Member States are subjected to asymmetric shocks, and such mobility has traditionally been high in Sub-Saharan Africa. However, it is made more difficult by bureaucratic regulation and military conflict.

However, all such reasoning concerning the loss of a policy instrument assumes that the problems of central bank credibility have been solved. But the use of a monetary instrument with the aim of stabilisation may lead to inflationary pressure, if the central bank is not independent from government and if it does not have a clear mission aimed at price stability. Incentives for the central bank to stimulate economic activity by creating money is anticipated by markets and thus raise the latters' inflation expectations. Higher inflation, in turn leads to an effective rise in the rate of inflation via wage-price feedback, even if the central bank seeks to control the temptation to inflate. These problems are especially acute in developing countries, due to difficulties with structural deficits and the ensuing risks of their monetisation. This means that countries with low anti-inflationary credibility (those with the greatest budget deficit problems) have the greatest interest in joining a monetary union. On this basis, P. Masson and C. Pattillo (2005) show that members of the WAEMU have no macroeconomic interest in entering a monetary union with WAMZ countries. The former have lower fiscal needs (the spread between public spending and a norm constructed on the basis of a model) compared to Nigeria, Ghana and Sierra Leone. In contrast, these three WAMZ countries would all benefit from a monetary union which includes all of the ECOWAS countries. The weight of Nigeria within this group would, by definition, make a monetary union consistent with its needs, while such a union would also enhance Nigeria's monetary credibility. The benefits for Ghana and Sierra Leone in terms of credibility would outweigh the costs in terms of adjustments to shocks. For Gambia, the monetary union would be relatively neutral. Lastly, Guinea would lose out, though according to Masson and Pattillo, it is the only country which WAEMU members have an interest in including in their own monetary union.

Finally, the choice of a foreign exchange rate regime by developing countries is strongly influenced by the "fear of floating".[11] the instability of a national currency *vis-à-vis* international currencies (and especially the dollar) is costly because commodity exports are priced in international currencies and external debts are also denominated in foreign currencies. As a result, a monetary zone may develop on the basis of converging interests in having a stable currency with respect to a particular foreign currency.

Drawing Together the Arguments

In order to draw together these various arguments in the case of Sub-Saharan Africa, A. Bénassy-Quéré and M. Coupet[12] have performed cluster analysis, which allows countries to be grouped sequentially according to their economic proximity. The latter is defined on the basis of: the level of openness, the correlation of the business cycle with the euro area, the share of the primary sector in GDP, the share of the European

11. This expression was coined by G.A. Calvo & C.M. Reinhart (2000), "Fear of Floating", NBER *Working Paper*, No 7993.
12. A. Bénassy-Quéré & M. Coupet (2005), "On the adequacy of monetary arrangements in Sub-Saharan Africa", *The World Economy*, vol. 28, n° 3, March.

Union in total exports, the export share of the leading exported product and of crude oil, and lastly the ratio of debt service payments to exports.

All these variables are calculated on average, for the period 1986-1999. The sample covers seventeen countries: four countries in the WAMZ, eight countries of the WAEMU and five countries of the Central African Economic and Monetary Union (CAEMU), included as the WAEMU in the franc zone.[13]

This analysis allows five, relatively homogenous groups of countries to be identified:

- Group 1: Benin, Burkino-Faso, Mali, Togo that are characterised by a relatively low dependency on the European market and by moderate debt service payments;
- Group 2 : Côte d'Ivoire, Gambia and Senegal, for which the primary sector is less important and exports are more diversified;
- Group 3: Ghana, Guinea Bissau, Niger and Sierra Leone for which the primary sector is, in contrast, especially important and which have high debt service payments;
- Group 4: Congo, Gabon and Nigeria, which are oil exporters with a high level of openness and whose business cycle is strongly correlated the euro area's;
- Groupe 5: Cameroon, the Central African Republic and Chad whose dependency on European markets is particularly strong.

In terms of foreign exchange regimes, "fear of floating" is likely to be a particular concern for the three last groups, either because of debt servicing, or because of the weight of primary products that are exported in foreign currency. The countries best placed to move to a single, independent currency would therefore seem to belong to the first two groups. The cluster analysis also indicates that these two groups are actually quite close.

Overall, if membership of these groups and membership of monetary unions are crossed (see Figure), it may be noticed that six of the WAEMU countries (excluding Guinea Bissau and Niger) actually make up a fairly homogenous set. In contrast, the four countries belonging to the WAMZ are spread across three different groups.

Figure – Distribution of the three monetary unions members according to their economic proximity*

		ECOWAS	
	CFA franc zone		
	CAEMU	WAEMU	WAMZ
Group 1		Benin Burkina Faso Mali Togo	
Group 2		Côte d'Ivoire Senegal	Gambia
Group 3		Guinea Bissau Niger	Ghana Sierra Leone
Group 4	Congo Gabon		Nigeria
Group 5	Cameroon Central African Chad		

* The groups by economic proximity are defined in the text above.
Source: A. Bénassy-Quéré & M. Coupet (2005), *op. cit.*.

According to Cohen[14] (2003), the sustainability of a monetary union depends either on the existence of a "locally dominant country" (a leader), or on the existence of "a genuine sense of community", taking the form of "a developed set of institutional connections and reflects". Nigeria accounts for 40% of ECOWAS' GDP and so could play such a lead role. However, the analysis here tends to suggest that a monetary union may be constructed more on the basis of the WAEMU, which in turn may ultimately be joined by certain "small" WAMZ countries, if the institutional and cultural obstacles are overcome.

Overall, economic analysis provides little support for a rapid move to monetary unification within the WAMZ. As the convergence criteria are not fulfiled for the moment, there is little chance of the timetable for union being respected.

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13. Guinea (WAMZ) and Equatorial Guinea (CAEMU) are not included in the sample because of a lack of data.
14. B. Cohen (2003), "Are Monetary Unions Inevitable?", *International Studies Perspectives,* vol. 8, n° 3.

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