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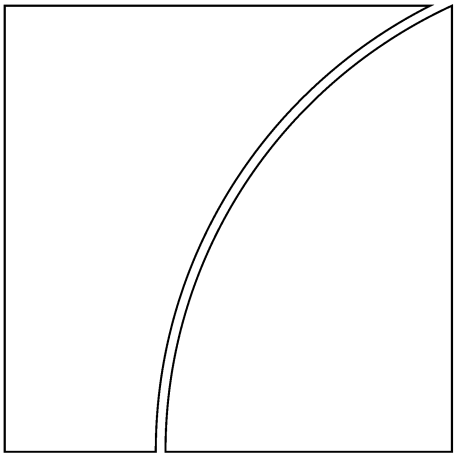

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Regional currency areas and the use of foreign currencies

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Bank for International Settlements
Press & Communications
CH-4002 Basel, Switzerland

E-mail: publications@bis.org

Fax: +41 61 280 9100 and +41 61 280 8100

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Other regions

Notations used in this volume

e	estimated
lhs, rhs	left-hand scale, right-hand scale
billion	thousand million
…	not available
.	not applicable
$	US dollar unless specified otherwise

Differences in totals are due to rounding

Participants in the meeting

Bahrain Monetary Agency	Khalid Abdulla Al-Bassam Deputy Governor
Central Bank of Bosnia and Herzegovina	Dragan Kovačević Vice Governor, Research Department
Bank of Botswana	Oduetse Andrew Motshidisi Deputy Governor
	Kealeboga S Masalila Principal Economist, Research Department
Bulgarian National Bank	Kalin Hristov Policy Adviser
Bank of the States of Central Africa	André Mfoula Edjomo Directeur des Relations Financières Extérieures
Croatian National Bank	Boris Vujčić Deputy Governor
European Central Bank	Christian Thimann Head of Division, International & European Relations
	Adalbert Winkler Economist
Bank of France	Marc-Olivier Strauss-Kahn Director General, Directorate General Economics and International Relations
Bank of Ghana	Lionel Van Lare Dosoo Deputy Governor
West African Monetary Institute (WAMI)	Michael Olufemi Ojo Director General
	Peter Johnson Obaseki Policy Adviser
Central Bank of Lesotho	Tabo Foulo Deputy Governor
Central Bank of Malaysia	Ooi Sang Kuang Deputy Governor
	Sukhdave Singh Senior Manager, Monetary and Financial Policy Department
Central Bank of Malta	David Pullicino Deputy Governor
Qatar Central Bank	Fahad Faisal Al-Thani Deputy Governor
Saudi Arabian Monetary Agency	Muhammad Al-Jasser Vice Governor
	Abdulrahman Al-Hamidy Director General, Research and Statistics Department

South African Reserve Bank	Lambertus van Zyl Adviser to the Governor
Central Bank of the United Arab Emirates	Mohammed Ali Bin Zayed Al Falasi Deputy Governor
Board of Governors of the Federal Reserve System	David Howard Deputy Director, Division of International Finance
Brookings Institution	Paul Robert Masson Senior Adviser, Visiting Fellow, Economic Studies
BIS	William R White (co-Chairman) Economic Adviser Head of the Monetary and Economic Department
	Mario Giovanoli (co-Chairman) General Counsel
	Gunter D Baer Secretary General
	Philip Turner Head of Secretariat Group
	James H Freis, Jr Senior Counsel
	John Hawkins Senior Economist

Introduction

John Hawkins and Paul Masson[1]

The recent introduction of the euro and projects for monetary union in other parts of the world make the replacement of national currencies (either by a foreign currency or by a new, multilateral currency issued by a regional central bank) a topical issue. Related regimes are the tight linkage of the national currency through a currency board and the official or unofficial use of foreign currency - often referred to as "dollarisation". While these various monetary regimes differ in a number of respects, they have the common feature that they virtually eliminate the possibility of an independent monetary policy. Issues arising include the preconditions required for making these arrangements work, the institutions that need to accompany them, and the extent to which they harm the smooth functioning of the economy (for instance, by eliminating monetary policy flexibility and lender of last resort facilities).

Many of these issues were considered by a small group of senior central bankers at the BIS during a two-day meeting in September 2002. The first day focused on economic issues and the second on legal and practical issues. This electronic volume contains edited versions of most of the papers prepared for the meeting and the papers contributed by BIS staff and the participants. All the papers will be included in the subsequent published version.

The main economic issues discussed at the meeting were the following. First, and logically prior, is whether abandonment of an independent monetary policy is desirable. Do the benefits of enhanced credibility, predictability and stability of the macroeconomic framework exceed the costs associated with the inability to tailor monetary policy to the circumstances facing a particular country? This question has stimulated active debate since the early 1960s, with the optimum currency area literature suggesting the following criteria for successfully forgoing a national currency: labour mobility, existence of fiscal transfers, symmetry of shocks and a diversified industrial structure. Unfortunately, these criteria are not very good predictors of actual currency regimes, suggesting that political and institutional factors are also important in explaining currency use. This is especially the case for regional currency areas (RCAs), which are often accompanied by, or the culmination of, other regional integration initiatives. On the other side of the debate, it needs to be recognised that the theoretical advantages of monetary policy flexibility are often not attained, as monetary policy has in a number of countries been misused. In this context, RCAs, currency boards, and use of foreign currencies can be viewed as beneficial precisely because they remove the possibility of exercising monetary flexibility in a harmful fashion.

The discussion emphasised, however, that such monetary arrangements were not a panacea that would guarantee credibility and stability. They could in fact break down if fiscal policy were not disciplined or if the economy did not exhibit sufficient flexibility. This explained the attention given to the limits on fiscal deficits in the euro zone, both as preconditions to entry and as an integral part of the ongoing surveillance embodied in the Stability and Growth Pact. The experience of Argentina shows that even the straitjacket of the currency board does not necessarily discipline fiscal policy, ensure wage/price flexibility or guarantee credibility. Some participants pointed to official use of a foreign currency as a regime preferable to a currency board, at least with regard to credibility. But there are costs, in particular a loss of seigniorage and the impossibility of making a step change in the value of the currency to re-establish competitiveness.

A second important question, assuming that the first has been answered in the affirmative, is which of the regimes would be most suitable for a given country. As already noted, an RCA is most likely to emerge when there is already a strong sense of regional solidarity and other institutional

[1] This volume has greatly benefited from the cooperation and comments of the central banks represented at the meeting. Thanks also go to Lizzie Locke, Monica Mauron and Karina Tarling for secretarial assistance, to Arwen Hopkins, Nigel Hulbert, Tom Minic and colleagues in the Monetary and Economic Department of the BIS for editorial suggestions and to Jan Eastwood and Liliana Morandini for production assistance. The opinions expressed in this introduction are those of the authors and not necessarily shared by the Brookings Institution or the Bank for International Settlements.

manifestations of it. In the European Union's case, monetary union was the culmination of these other economic initiatives. There was much debate about whether this model is the only one, with a rough consensus emerging that it need not be (for instance, the CFA franc zone has been in existence for more than 50 years, much of that period without other significant elements of integration), but that to be successful and permanent, those other elements (customs union, macroeconomic coordination, harmonisation of taxes, removal of barriers to factor mobility, etc) needed at least to be constructed in parallel. While it was difficult to make a precise list of minimum requirements, in the absence of some of the other elements it was very possible that a negative shock would imperil the union by making it no longer attractive for one or several countries to remain in it.

A currency board or unilateral use of a foreign currency was more likely to be the response to a severe problem of lack of monetary policy credibility, effective monetary institutions, or both. These two regimes also have the advantage that they can be put in place quickly. Several of the economies with such regimes had adopted them during crises. Though the conditions that had made such regimes necessary might disappear, exit strategies were typically not contemplated for fear of harming the credibility of the commitment.

A third important question concerns the necessity to put constraints on other policies, in particular fiscal policy. It is generally accepted that in RCAs uncoordinated fiscal policies may have adverse spillover effects. For example, overexpansionary deficits that lead to unsustainable debt accumulation in one country can lead to higher interest rates or exchange rate overvaluation in other members of the union. In regional currency areas, this issue has generally been addressed through procedures for regional surveillance, with the European Union's Stability and Growth Pact being a prime example. The two African CFA franc zones have instituted similar procedures, although the definition of convergence criteria and the scope for sanctions differ.

While the advisability of such mechanisms is clear, there is ample scope for discussion concerning their modalities. Issues include whether to correct fiscal deficits for cyclical conditions, whether to exclude certain categories of spending or revenue, and how to ensure the achievement of convergence, eg through the threat of sanctions. As in other policy design, there exist trade-offs between the credibility and transparency of simple and uniformly applied rules and the flexibility that accompanies discretion to allow for each country's unique circumstances.

There are a large number of legal, practical and institutional issues that are associated with the introduction of a shared regional currency or the adoption of a foreign currency. Rather than being exhaustive, the conference focused on just three broad topics. The first topic concerned the rights and responsibilities of the issuing country when another country wishes to use its currency. It was generally agreed that there was no need to seek the permission of the issuing country when using its currency, although there were practical aspects that made its cooperation desirable, such as shipping banknotes and help with prevention of counterfeiting. As described in the country papers in this volume, major currency issuers had different responses to the use of their currency. In no case did they agree to share decision-making with respect to monetary policy, however, unlike the situation of RCAs.

The second question discussed was the appropriate legal and institutional structure for regional currency areas and for countries with a currency board. Again, there did not seem to be a single model. The European case involved a rich tapestry of supranational institutions, treaties and cooperation. Other currency areas were less advanced in this respect. Most felt that the timetable for monetary union needed to allow for extensive collaboration on monetary and other matters and for durable convergence of their economies.

As for currency boards, they differed in the extent to which their operations were specified either in the country's constitution or in its laws. The more constrained and difficult to change, presumably the more credible would be the currency board. In some economies, nevertheless, important changes could be made directly by the monetary authority.

Another legal issue in this area was the importance of legal tender legislation in ensuring the use of the domestic currency. It was pointed out that such legislation applied to just a small proportion of actual payments, since most of them were no longer made in notes and coin, but instead involved a transfer of bank deposits. In practice, currency boards often perversely encouraged the denomination of assets and liabilities in the foreign currency, and this could produce disastrous results for the financial system if the peg were abandoned.

The third major legal and practical area discussed was the payment system. A country using another country's currency would ultimately need access to that currency's payment system. Although there was an example of a system for clearing dollar payments outside the United States (in Hong Kong), if payments did not completely net out, access to the US clearing would be necessary. This could lead to problems of finality of settlement if the United States had embargoed the country initiating the payment.

In addition to the paper provided by the BIS, which is largely summarised in the discussion above, the volume also includes the following papers, prepared by officials at national and regional institutions, which are grouped together geographically.

The paper by Strauss-Kahn emphasises that monetary union in Europe was pursued not in isolation, but as part of a much broader process of regional integration with a number of dimensions. This experience suggests that other regions may need also to invest in building institutions, regional cooperation and surveillance, and achieve a measure of convergence before proceeding to the ultimate step of monetary union.

The next set of papers concerns the situation of European countries that are close to, or at least are aiming for, EU accession. Accession countries have had a variety of exchange rate regimes over the past decade and, moreover, these have evolved over time. The papers refer to Bosnia and Herzegovina, Bulgaria, Croatia and Malta; the first two of these countries currently peg to the euro via a currency board arrangement, Croatia keeps its currency fairly stable against the euro using a quasi-currency board and Malta pegs to a basket of currencies with a heavy euro weight. These arrangements are consistent with the requirements of the ERM 2 as long as fluctuations against the euro remain within 15% of a central parity. Given extensive unoffical use of the euro in these economies, the outright adoption of the euro might appear to be an attractive option, for instance in Croatia, but this would not be consistent with the market test required for EMU membership.

The countries of the Gulf Cooperation Council have undertaken an ambitious project for regional integration, described in the papers by Al-Bassam, Al-Falasi, Al-Jasser and Al-Thani. A customs union and a common peg to the US dollar are due to be established in 2003, leading to a full monetary union and common currency in 2010. The countries of the region view the project as making a significant contribution to lowering transaction costs and stimulating regional non-oil trade, financial integration, and the credibility of macroeconomic policies.

The Common Monetary Area - or former rand zone based around South Africa - is an interesting case, since it has been in operation since the early years of the 20th century. The papers prepared by Foulo, Motshidisi and van Zyl give interesting perspectives on that experience. Although it involves the adoption of the rand by some neighbouring countries (Botswana no longer participates) rather than a more symmetric RCA arrangement, it is based on a treaty that provides for sharing of seigniorage by South Africa. Countries differ in the extent to which they give legal tender status to the rand (Lesotho does so, but Swaziland does not).

West Africa has a project to create a second monetary zone to complement the existing West African CFA franc zone, and to merge the two subsequently. The papers by Ebi and Ojo give details of that project, which involves a brief preparatory stage with an exchange rate mechanism for the participating countries limiting the fluctuations of their currencies against the US dollar. The timetable in principle aims at establishing monetary union among the countries of the second monetary zone during 2003 but the Ojo paper details some of the problems member countries have had in achieving convergence, which is to be a precondition for proceeding.

The final paper, by Howard, notes that the United States does not discourage other countries from adopting the dollar as their currency. The United States is willing to assist in addressing some of the practical problems. However, the US authorities will not extend lender of last resort facilities or bank supervision to other countries using its currency, nor take into account their economic conditions when setting monetary policy.

Economic aspects of regional currency areas and the use of foreign currencies

John Hawkins and Paul Masson[1]

1. Introduction

In recent years, there has been a significant revival of interest in arrangements that limit a country's freedom to determine its own exchange rate. Writers such as Beddoes (1999) and Rogoff (2002) go so far as to suggest that the world is heading towards just two or three major currency regions in the long term. In any event, the number of distinct and independent currencies probably peaked in the late 1990s.[2] The birth of the euro represents a major change to what Cohen (1998) calls the "geography of money". Other regional currency areas (RCAs) are under consideration and there are prospects of other countries following Ecuador in unilaterally adopting a foreign currency.

The move to form currency areas has accompanied initiatives (or been seen as a means) to strengthen regional integration, and has thus had an important political as well as economic component. The purely economic benefits of a common currency are still subject to intense debate. However, it has been argued that there are good reasons why especially smaller countries exhibit what Calvo and Reinhart (2002) have dubbed a "fear of floating". The post-war Bretton Woods system addressed these concerns with a system of pegged exchange rates, but the system was predicated on the existence of capital controls. As industrial countries removed capital controls, speculative pressures developed that swamped the attempts of governments to defend parities, and the pegged exchange rate system was abandoned in 1973. Despite this, many developing countries retained pegged rates (formally or informally) long after the major economies moved to floating rate regimes. Events in recent years have shown that fixed-but-adjustable pegs in emerging economies are also vulnerable to speculative attacks and may no longer be credible. Currency boards, common currencies, and the unilateral adoption of another currency are sometimes presented as the only viable alternatives to floating, helping to explain the current interest in these policy regimes.[3] This paper discusses the economic issues that arise with such arrangements, as well as some similar issues arising when a foreign currency unofficially supplements the national currency.

Section 2 of this paper examines motives for abandoning an independent national currency, including the various factors considered in the optimum currency areas literature. It also examines how far a common currency fosters the development of local financial markets. Section 3 considers and contrasts three alternative regimes: regional currency areas, currency boards, and the adoption of a foreign currency. (Supporting material is provided in Annexes A, B and C respectively.) A brief conclusion follows.

2. Why do sovereign nations forgo an independent currency?

Often the decision to forgo an independent currency has political economy aspects, as mentioned above. The move from a national to a regional currency can help to cement closer political

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[1] The authors' opinions are not necessarily shared by the BIS or the Brookings Institution. They thank Palle Andersen, Corrinne Ho, Arwen Hopkins, Marc Klau, Kitty Lai, Dubravko Mihaljek, Kurt Schuler, Philip Turner, Bill White, Brett Winton and participants at the meeting for comments and Marc Klau and Michela Scatigna for preparing some of the tables.

[2] This 20th century peak occurred after the establishment of new currencies by the former republics of the USSR and Yugoslavia and before the introduction of the euro. In earlier times there were many more currencies; Einaudi (2002) suggests around 2,000 currencies existed in Europe in the 16th century and Toniolo et al (2003) that in the middle of the 19th century there were over 270 types of legal tender coins just in the Italian peninsula.

[3] However, Masson (2000) and Bubula and Ötker-Robe (2002) do not find strong evidence supporting the elimination of intermediate regimes in favour of the two poles of free floating or hard pegs, as implied by the "hollowing out" hypothesis.

collaboration. This is especially evident in Europe, where the creation of the euro area culminated a 50-year period of policy coordination and the creation of supranational institutions. The creation of a regional currency is also viewed as an important symbol of increasing regional cooperation in Africa, the Middle East and Asia.

Handing over control of monetary policy to a regional or foreign central bank not under the sway of (or at least less influenced by) any individual government may be an indirect way of gaining the benefits of central bank independence. A lack of such independence is often regarded as a prime reason for the poor performance of monetary policies in many emerging economies. Furthermore, the criteria set for joining or remaining in an RCA may prompt more or faster economic reforms. Regional surveillance procedures may apply "peer pressure" on governments to undertake needed structural reforms, in areas where interest groups make change difficult.[4] On the other hand, there is a risk that unilaterally adopting another currency is seen as an *alternative* to harder but more beneficial reforms.

The purely economic case for keeping or rejecting an independent currency and monetary policy is contentious. On the one hand, a partially or completely flexible exchange rate - for all but very small economies - can speed adjustment to changing conditions and can insulate the economy from temporary external shocks (such as commodity price swings, changes in sentiment in international capital markets and so on). Table 1 suggests that floating exchange rates in commodity-exporting countries often tend to reduce the local currency volatility of export prices, relative to their volatility had the country pegged to the US dollar.

Table 1

Floating exchange rate regimes: volatility of export prices[1]

	In domestic currency	**In US dollar terms**
Australia[2]	6.5	9.4
Canada	4.6	4.1
Chile[2,3]	10.2	18.0
Mexico	4.1	15.0
New Zealand[2]	12.7	9.8
Norway	24.3	11.9
South Africa[2]	12.0	17.2
United Kingdom	4.1	5.9

[1] Standard deviation of monthly unit value indices, seasonally adjusted, over 1995-2002. [2] Quarterly data. [3] 1997-2002.

Source: IMF, *International Financial Statistics*.

On the other hand, the benefits and costs of a common currency in facilitating international transactions, both in trade and capital markets, have long been discussed. This literature is surveyed in Box A. In very open economies, a rigid link to a credible currency should also anchor inflation and inflationary expectations.

[4] Von Hagen and Mundschenk (2002) opine that within the European Union peer pressure has had more effect on large than on smaller countries.

Box A

Currency fluctuations and trade

For many years, the econometric literature struggled to find much effect of currency fluctuations on trade: see Brookes et al (2000) and McKenzie (1999) for surveys. Many articles find the effect insignificant and very few find it large. This is in contrast to survey evidence from firms where they often cite it as a deterrent. This apparent lack of impact is sometimes attributed to the availability of hedging instruments, although Wei (1999) casts some doubt on this. Furthermore, in practice, hedging is generally only effective for short-term exposures. For periods over a year, markets tend to be thinner and more expensive, although they may be gradually filling out: see Goldstein and Turner (2003). Furthermore, firms risk hedging future cash flows that do not eventuate, thereby unwittingly taking on a foreign exchange exposure. Using options rather than futures may avoid this problem but can seem very expensive. Taxation and accounting rules may also make long-term hedging unattractive: see Brookes et al (2000). Hedging is also likely to be harder or more costly for smaller firms.

However, some more recent studies suggest that being in a single currency area is likely to encourage trade (perhaps over and above the elimination of currency fluctuations that a pegged rate would bring). McCallum (1995) finds that, after controlling for other relevant factors, trade between two Canadian provinces is 20 times larger than between a province and a US state. As Canada and the United States are similar culturally, linguistically and economically (notwithstanding some differences in taxes, laws, and to some extent language), a significant proportion of the difference would seem to reflect the different currencies.

Rose (2002), Frankel and Rose (2002) and Rose and Engel (2002) report on studies suggesting two countries with a common currency on average have triple or more the bilateral trade; the effect is much stronger than with just a fixed exchange rate. Of course, this does not imply causality; perhaps countries that trade a lot are more likely to adopt a common currency. Tenreyro and Barro's (2003) study addresses this endogeneity issue but still finds that currency unions strongly increase trade. A time series study by Glick and Rose (2002) finds a smaller but still large effect; in countries leaving currency unions bilateral trade halved. Rose's results have also been questioned as owing too much to very small, and so possibly unrepresentative, economies where there is not only currency union with a large country but also preferential tariffs, legal similarities, etc.[5] Earlier work by Elbadawi (1997) concluded that the two African monetary unions exhibited very different effects on trade, after controlling for the "gravity model" determinants: in West Africa, monetary union seems to have stimulated trade in the early 1980s, but contracted it in the second half of the decade. In Central Africa, effects on trade were basically neutral. Ireland's abandonment of its monetary union with the United Kingdom in 1979 is also an interesting test: it appeared not to have any harmful effects; see Robson and Laidler (2002) and Thom and Walsh (2002).

There is also evidence that in the previous "golden age of globalisation", 1870-1913, countries on the gold standard traded more with each other than with countries not on the standard (after allowing for other relevant factors): see Flandreau and Maurel (2001). López-Córdova and Meissner (2001) report that countries with common currencies had even greater bilateral trade.

The optimum currency areas literature

Discussion of the appropriate geographic area for a common currency goes back at least to John Stuart Mill (1848, p 176). He trenchantly wrote "so much of barbarism, however, still remains in the transactions of most civilised nations that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbours, a peculiar currency of their own".

This desire for transactional simplicity, which pushed to its logical conclusion would imply a single currency for the whole world, needs to be put in a macroeconomic context. Mill and most other 19th century economists thought in terms of a world in which prices and wages were completely flexible. In such a world, adjustment to the real exchange rate is possible without any change in the nominal exchange rate.

In a world of nominal rigidities, however, this simple conclusion does not hold. In this case, transactional simplicity needs to be balanced against the desirability of conducting an independent monetary policy for stabilisation purposes. Analysis of this trade-off led to a large literature on optimum currency areas.

[5] When Nitsch (2002) and Kenen (2002) adopt what they view as better econometric procedures, they get smaller but still large trade effects from currency union; Persson (2001) gets much smaller, possibly insignificant, effects whereas Pakko and Wall (2001) and Klein (2002) claim there is no impact at all. See also Smith (2002).

The seminal theoretical work on optimum currency areas was that of Mundell (1961), who emphasised factor mobility: an optimum currency area is an area where factors are highly mobile internally but relatively immobile in moving outside the area. The degree of labour mobility has often entered the policy debate. For instance, it has been noted that labour mobility is much more limited within Europe, indeed even within individual European countries, than in the United States. But promoting labour mobility within the European Union has been an important objective of policy, and has culminated in the right of EU citizens to work in any EU country. Despite poor transport, labour mobility may be rather high within the African RCAs, aided by initiatives such as regional passports: see the paper by Strauss-Kahn in this volume.

The subsequent literature has generally focused on the similarity of shocks and business cycles, trade links or similarities, wage and price flexibility and the extent of risk-sharing, especially through fiscal transfers: see Kang and Wang (2002) and Mongelli (2002) for recent summaries. Annex A includes a summary of the many empirical studies of whether groups of economies form optimum currency areas based on these criteria.

Similarity of shocks and business cycles

Economies subject to similar shocks should want similar monetary policy settings so that there should be fewer conflicts arising over the common monetary policy stance. Less often mentioned is the *size* of shocks. If shocks are quite small, it should not matter much if they are not very highly correlated among economies sharing a currency; Table 2 shows this implies western Europe is better suited to a common currency than some other areas. As the paper by Pullicino and Demarco in this volume notes, economies with similar industrial structures or similar trading partners (particularly if the partners are each other) would be likely to experience similar shocks. An alternative view is that it is better for countries with dissimilar business cycles to hold their reserves jointly so that when one country experiences outflows the others experience inflows: see Mundell (1973). This is an argument for the pooling of reserves rather than for a common currency; the two are in principle separable.

Looking at output correlations is a useful first step in thinking about optimum currency arrangements. The highest output correlation in Table 2 is not between any countries sharing a currency, but between Canada and the United States. The small western European economies in the euro area are also significantly correlated with western Europe as a whole. The Latin American countries are correlated among themselves but not with the rest of the world. The same is true for the Gulf economies. There are also some reasonably high correlations within Asia, but these are probably resulting from essentially one observation; the 1997-98 crisis. The African countries tend to have idiosyncratic shocks and show low correlations both with other regions and with each other.

As well as differences in shocks, there are differences in how monetary policy affects the real economy. Factors such as extent of home (and direct equity and government bond) ownership; the extent to which it is funded by floating rather than fixed rate loans; the amount of consumer indebtedness; the dominance of, and competitiveness within, the domestic banking system; and the development of the corporate bond market may all alter the response of economies to interest rate fluctuations. If these differences are large, even if countries using the same currency face similar output gaps, they may initially require different interest rate adjustments to remove them. However, as the paper by Strauss-Kahn in this volume points out, the formation of an RCA may itself alter these factors.

Table 2

Output correlations and volatility, 1976-2001

	Correlation of annual growth in real GDP with					Volatility[1]
	Western Europe	United States	Japan	Other Asia	Latin America	
Hong Kong SAR	–0.06	0.27	0.47	–0.24	0.53	4.1
Indonesia	–0.28	–0.04	0.51	0.02	0.31	3.1
Korea	0.05	0.27	0.48	–0.05	–0.10	3.7
Malaysia	–0.24	0.03	0.40	–0.13	0.19	3.1
Singapore	–0.12	0.11	0.31	–0.02	0.17	3.1
Thailand	–0.34	0.03	0.65	0.04	0.03	2.4
Argentina	–0.27	0.06	–0.23	0.13	0.43	6.2
Brazil	0.07	0.23	0.12	–0.01	0.78	3.6
Mexico	0.21	0.11	0.22	–0.27	0.54	3.4
Peru	0.14	0.04	–0.29	0.13	0.58	5.3
Saudi Arabia	0.48	0.16	0.32	–0.52	0.49	4.8
Botswana	0.62	0.25	0.56	–0.28	0.06	5.1
Cameroon	0.51	0.11	–0.04	–0.09	0.04	3.3
Ghana	–0.54	0.33	–0.07	0.53	0.05	2.4
Nigeria	–0.17	–0.09	0.24	–0.20	0.25	5.2
South Africa	0.42	0.16	0.14	–0.10	0.34	2.2
Small western Europeans[2]	0.76	0.20	0.31	–0.39	0.23	0.9
Canada	0.69	0.83	0.06	0.12	0.31	2.1

[1] Average absolute change of annual percentage changes in real GDP. [2] Simple average of correlations for Austria, Belgium, the Netherlands and Portugal.

Sources: BIS estimates, based mostly on Maddison (2001) and IMF, *World Economic Outlook*.

Trade patterns

The higher the levels of trade between countries, the more closely output movements are likely to be correlated. Similar patterns of trade with third parties or a similar industrial composition of trade can have a comparable effect. Such similarities make it more likely that a shock to one country will lead to, or occur simultaneously with, a shock to the others. Trade patterns are summarised in Table 3.[6] It is rare for countries to have as large a share of their trade with a (potential) anchor currency as do the euro area members with each other.

[6] The proportions of trade with the euro area and the United States shown in Table 3 are lower than the proportion of trade with countries using their currency or stable against it. For example, if the euro-using area is defined to also include Estonia and Lithuania, then the share of Latvia's exports to it rises from 31% to 44%.

Table 3

Destination of exports (origin of imports) as percentage of total; 2000

Economy (regime)		Euro area	USA	Japan	Other Asia	Africa	Middle East
Bosnia	(CyB)	**65 (44)**	2 (2)	0 (0)	1 (0)	0 (0)	2 (0)
Bulgaria	(CyB)	**52 (45)**	4 (3)	0 (1)	2 (3)	1 (1)	3 (1)
Croatia	(Float)	55 (56)	2 (3)	0 (2)	0 (4)	5 (1)	1 (4)
Latvia	(Float)	31 (39)	4 (2)	0 (0)	0 (2)	2 (0)	1 (0)
Malta	(Peg)	33 (60)	27 (11)	4 (2)	18 (20)	1 (0)	3 (2)
Ukraine	(Float)	16 (21)	5 (3)	0 (1)	11 (3)	3 (1)	6 (1)
Argentina	(Float)	17 (24)	11 (20)	2 (3)	11 (10)	3 (1)	4 (1)
Bolivia	(C Peg)	21 (12)	16 (17)	3 (2)	2 (2)	0 (0)	0 (0)
Brazil	(Float)	27 (27)	24 (23)	4 (5)	7 (10)	2 (5)	3 (3)
Ecuador	(OU)	14 (13)	**40 (28)**	4 (6)	7 (8)	0 (1)	1 (1)
El Salvador	(OU)	5 (14)	**60 (42)**	1 (2)	0 (8)	0 (0)	1 (0)
Mexico	(Float)	3 (9)	89 (73)	1 (4)	1 (8)	0 (0)	0 (0)
Panama	(OU)	22 (5)	**46 (33)**	2 (6)	3 (5)	0 (0)	0 (0)
Ghana	(Float)	43 (41)	11 (7)	2 (1)	3 (13)	24 (29)	1 (1)
Nigeria	(Float)	25 (44)	44 (9)	1 (4)	11 (27)	9 (5)	0 (1)
South Africa	(Float)	39 (43)	11 (17)	6 (8)	11 (17)	19 (4)	4 (6)
Bahrain	(Peg)	5 (25)	**4 (13)**	3 (4)	19 (15)	2 (1)	7 (34)
Qatar	(Peg)	1 (36)	**3 (10)**	45 (11)	32 (18)	1 (0)	6 (17)
Saudi Arabia	(Peg)	18 (33)	**17 (21)**	17 (9)	33 (18)	3 (2)	7 (7)
UAE	(Peg)	30 (31)	**2 (6)**	33 (7)	33 (33)	2 (1)	13 (14)
Hong Kong SAR	(CyB)	15 (9)	**23 (7)**	6 (12)	47 (68)	1 (0)	1 (1)
Korea	(Float)	14 (10)	22 (18)	12 (20)	35 (24)	2 (2)	4 (16)
Malaysia	(Peg)	14 (11)	**21 (17)**	13 (21)	44 (42)	1 (0)	2 (2)
Belgium	(RCA)	**75 (68)**	6 (8)	1 (3)	5 (7)	2 (3)	3 (2)
France	(RCA)	**66 (65)**	9 (7)	2 (2)	5 (6)	5 (4)	3 (3)
Canada	(Float)	4 (10)	87 (64)	2 (5)	3 (9)	0 (1)	0 (1)

Note: Area to which currency is fixed (if any) is shown in bold. CyB: Currency board. OU: Official use of another currency. C Peg: Crawling peg.

Source: IMF, *Direction of Trade Statistics*.

However, some central European countries come close, and for them the euro is an obvious anchor. The situation in the Americas is less clear. The United States accounts for a large proportion of trade in Ecuador and El Salvador, which have recently adopted the dollar, but for an even larger share in Canada and Mexico, which prefer to float. Despite its extensive use of the US dollar, Argentina trades more with the European Union than with the United States, as does Brazil. The European Union is the largest trading partner for most African and Middle Eastern countries. Asian trade is more diverse, with intraregional trade quite important. Hong Kong SAR's trade with the US is relatively small but its link to the dollar also stabilises its exchange rate with mainland China, its dominant trading partner. It is rare for Japan to be a dominant trading partner (other than buying a lot of oil from Qatar) so it may not be

surprising that no country uses the yen as an anchor. The "gravity model" of trade, which does quite well at explaining trade patterns, implies that trade between two economies is proportional to the product of their GDPs: see Rose (2002). This implies that small poor economies will not trade much with each other, and helps explain why there is relatively little trade within the African and eastern Caribbean RCAs.

The terms of trade are also relevant to the choice of exchange rate regime. Based on this criterion, it would not be desirable for Canada to adopt the US dollar despite its large trade with the United States as Canada is a commodity-exporter while the United States is a commodity importer. Table 4 provides some data on correlations between economies' terms of trade. It suggests the Gulf States would be well suited to forming an RCA between themselves but it is not obvious they should link to either the dollar or the euro. Argentina, Bolivia, Brazil and Ecuador all face similar terms of trade fluctuations, but these are nothing like those experienced by the United States. No country has terms of trade moving closely with those of Japan, providing another reason why there is no yen bloc.

Table 4

Correlation[1] of terms of trade with those of:

Countries		Euro area	USA	Japan	Other	
Argentina	(Float)[2]	–0.5	–0.5	–0.4	0.5	(Brazil)
Bolivia	(Peg)	–0.1	0.0	–0.0	0.6	(Brazil)
Brazil	(Float)	0.3	0.2	–0.1	0.5	(Argentina)
Ecuador	(OU)	–0.8	**–0.9**	–0.5	–0.3	(Brazil)
El Salvador	(OU)	0.7	**0.7**	0.2	–0.6	(Mexico)
Mexico	(Float)	–0.7	–0.8	–0.1	–0.2	(Brazil)
Panama	(OU)	0.3	**0.4**	–0.7	–0.7	(Mexico)
South Africa	(Float)	0.6	0.5	0.2		
Kuwait	(Peg)	–0.9	**–1.0**	–0.3	1.0	(Saudi Arabia)
Qatar	(Peg)	–0.9	**–0.9**	–0.4	0.9	(Saudi Arabia)
Saudi Arabia	(Peg)	–0.9	**–0.9**	–0.4		
UAE	(Peg)	–0.9	**–0.9**	–0.4	1.0	(Saudi Arabia)
Hong Kong	(CyB)	0.2	**0.4**	–0.6	0.8	(China)
Korea	(Float)	0.6	0.5	0.6	–0.3	(China)
Malaysia	(Peg)	–0.1	**0.0**	–0.8	0.3	(China)
Belgium	(RCA)	**0.8**	0.7	0.3	–0.2	(Switzerland)
France	(RCA)	**0.7**	0.6	0.6	–0.3	(Switzerland)
Canada	(Float)	–0.8	–0.9	–0.3	0.5	(Australia)
Australia	(Float)	–0.8	–0.4	–0.6	–0.7	(Korea)
New Zealand	(Float)	–0.4	–0.1	0.0	0.5	(Australia)

Note: Area to which currency is fixed (if any) is shown in bold. OU: Official use of another currency. CyB: Currency board.

[1] Calculated over the period 1995-2002. [2] Currency board until early 2002.

Sources: Datastream; national sources.

Firms inside an RCA can obviously invoice in their (common) domestic currency when trading with other members of the RCA. But by being part of a larger currency area, they are more able to invoice in the domestic currency when exporting to (and to a lesser extent, importing from) other countries too. This reduces the risk facing exporters, another benefit of a common currency.

Fiscal transfers

Fiscal transfers across countries in an RCA could cushion them from asymmetric shocks. Income transfers from countries less affected by a particular shock could make up for losses of income and help keep labour and capital employed. There is much less scope for this within most RCAs, such as the euro area, than within federations such as the United States or Canada: see Bayoumi and Masson (1995). In particular, transfers across countries within Europe (which are in any case small) do not explicitly aim to provide offsets for differential shocks. In assessing the extent of fiscal transfers, it is necessary to distinguish the stabilisation (transfers in different directions in different years) and redistributive (transfers in similar directions over time) roles of fiscal policy. Redistribution seems less essential for the success of a monetary union than stabilisation, and the latter can in principle be performed by national governments.

Since monetary policy is unable to respond to shocks hitting individual members, a monetary union may require greater national fiscal flexibility. But this may conflict with fiscal rules. In the past, EU countries seem to have been as successful in using national fiscal policies to carry out stabilisation as their (subnational) North American counterparts; see Bayoumi and Masson (1995). But the ultimate effect of the Stability and Growth Pact on fiscal flexibility in the euro area is still a matter of some debate.

Other considerations

Several other factors with a bearing on optimum currency areas are worth noting. It is often argued that it would be easier for countries sharing a currency to agree on goals (such as inflation targets; see below) if they are similar in their stages of development.[7] In most RCAs, per capita GDP in the richest country has exceeded that in the poorest by at most a factor of three. This would not be the case with some proposed RCAs, particularly in Asia (Table 5). It has also not been the case with the adoption of foreign currencies; because small poor economies would not gain much advantage from adopting the currency of another undeveloped country, they tend to adopt an international currency issued by a major industrial country. The paper by Foulo in this volume for instance argues that it is desirable for the link currency itself to be relatively stable against third currencies. Finally, if the different national currencies are already circulating within countries contemplating union, this will facilitate the introduction of a single currency. This was the case with the Scandinavian Currency Union. Euros are circulating in some of the countries aspiring to join the euro area and dollars are widely used in Latin America.

A final point to highlight from the optimum currency area literature is that the criteria are to some extent endogenous. Joining an RCA or adopting a foreign currency may itself alter the characteristics of an economy, a point made in Mundell's original article. For instance, it is likely to increase trade with countries using that currency, and so increase the correlation between their economic performances.[8] In this way a country that appears to fail optimum currency area criteria before joining may satisfy them once it is inside. Such endogeneity has some bearing on the debate between those arguing that economies should meet convergence criteria before joining an RCA and those who argue this is less important as convergence will follow from joining: see Mundell (1993).

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[7] It would also make it easier to agree on practical aspects such as the denomination at which coins give way to notes.

[8] A possible counterargument presented by Krugman (1991) is that forming an RCA may lead countries to specialise more in particular industries, making them more vulnerable to idiosyncratic shocks and so less like an optimum currency area. The greater geographic concentration of industry in the United States than in Europe is cited in support. Rose and Engel (2002) find that after controlling for size, members of currency unions are no more specialised than those economies with their own currencies. However, Tenreyro and Barro (2003) find that currency unions decrease the co-movement of output, providing support for the specialisation hypothesis.

Table 5

Ratio of highest to lowest per capita incomes

RCA	Year	(Highest/lowest members)	
Regional currency areas			
Scandinavian Currency Union	1870	(Denmark/Norway)	1.4
Scandinavian Currency Union	1913	(Denmark/Norway)	1.6
Latin Monetary Union[1]	1870	(Belgium/Greece)	3.0
Latin Monetary Union[1]	1913	(Switzerland/Greece)	2.7
Central Africa	1950	(Gabon/Chad)	6.2
Central Africa	2000	(Gabon/Chad)	6.2
West Africa	1950	(Benin/Mali)	2.2
West Africa	2000	(Côte d'Ivoire/Guinea-Bissau)	2.1
Eastern Caribbean	2000	(St Kitts and Nevis/St Vincent and the Grenadines)	2.1
Euro area	2000	(Belgium[2]/Greece)	1.6
Hypothetical regional currency areas			
Expanded euro area	2000	(Belgium[2]/Bulgaria)	4.9
North America	2000	(USA/Mexico)	3.9
Mercosur four	2000	(Argentina/Paraguay)	2.7
Arabian Gulf	2000	(Qatar/Oman)	3.5[3]
Andean Community	2000	(Colombia/Ecuador)	2.1
Caribbean (CARICOM)	2000	(Bahamas/Haiti)	11.2
East Africa	2000	(Uganda/Tanzania)	2.3
West Africa (ECOWAS)	2000	(Guinea/Sierra Leone)	4.0
Southeast Asia[4]	2000	(Malaysia/Indonesia)	2.9
ASEAN	2000	(Singapore/Cambodia)	17.3
East Asia[5]	2000	(Hong Kong SAR/Indonesia)	9.0
Currency boards			
Linked to euro	2000	(euro area/Bosnia-Herzegovina)	4.5
Linked to US dollar	2000	(United States/Djibouti)	13.0
Official use of foreign currencies			
Users of US dollar	2000	(United States/Ecuador)	11.7

[1] Data are not available for Bulgaria. [2] Strictly speaking, the highest income is in the very small member state of Luxembourg, whose average income is 2.6 times that of Greece and 8.1 times that of Bulgaria. [3] Not on a PPP basis. [4] Indonesia, Malaysia, the Philippines and Thailand. [5] China, Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand.

Sources: Mostly based on data in Maddison (2001), van Beek et al (2000) and World Bank, *World Bank Atlas 2002*.

Development of financial markets

The creation of an RCA may spur the development of local financial markets. The paper by Al-Jasser in this volume cites as a benefit of forming an RCA among GCC countries that it is expected to integrate and deepen financial markets. Yam (1999) commented that, as a long-term possibility, an

RCA in Asia "would create larger and more liquid markets that are less susceptible to manipulation". The Eastern Caribbean Central Bank aspires to create a "single financial space" within the region. In principle, a currency area could help overcome some of the disadvantages to countries in having "small" financial systems: see Bossone and Lee (2002). The capital market for the RCA could be larger and more liquid than in the individual country. There could be greater opportunities for banks to exploit economies of scale.

How significant such gains are in practice is open to doubt, unless a common currency is also accompanied by other initiatives. It is true that entering an RCA might be expected to lead to banks with a more geographically and industrially diversified portfolio. However, the development of an integrated banking system depends on many factors other than the use of a common currency. For instance, van Beek et al (2000) find that domestic financial institutions in the Eastern Caribbean Currency Union often restrict their activities to their home country. This tendency is reinforced by restrictions on foreign ownership (even by companies from other member countries), different tax arrangements for non-members and prohibitions on residents' purchase of foreign currency securities or real estate abroad. Even in Europe, few of the bank mergers since currency union have been cross-border. In Africa, neither of the long-standing RCAs are very financially integrated: interbank markets are rudimentary and money transfers across borders take a long time. Indeed, Monga and Tchatchouang (1996) criticise the monetary union, and in particular the peg to the French franc, for having delayed financial development within these RCAs (by in effect routing transactions through Paris). The evidence for this is not straightforward: see the paper by Straus-Kahn in this volume. Notably, the level of financial development of the members seems to be comparable to that of their neighbours.

Similar considerations apply in the creation of deeper and more integrated capital markets. Larger markets tend to be more liquid and to attract foreign investors. A larger financial market will have more scope for specialised financial institutions. It also allows institutions to diversify credit risk without incurring foreign exchange risk. But a common currency by itself is no guarantee that such markets will develop. Divergent market practices, different legal, tax and regulatory regimes, capital controls and some countries' wish to foster "their" financial market can all stand in the way of the necessary convergence. For example, the western African countries have a regional stock exchange, but in fact few companies are listed and transactions are few. The central African countries have a project to establish a regional stock market in Libreville, Gabon, but the Cameroonian authorities, with the region's largest economy, have chosen to proceed with their own stock exchange, in Douala. Given the small number of actual and potential transactions, competition between the two exchanges is likely to hinder the establishment of a true regional financial market.

Even Europe, which has made enormous progress, is still actively engaged in developing standard contracts and a more homogeneous trading structure. This was not created overnight along with the creation of a common currency. The Lamfalussy Group has examined ways of moving towards a more integrated financial market within the euro area. The advent of the euro appears to have led investors in fixed income markets to focus more on the characteristics of individual borrowers than the nationality of the issuer: see Barth et al (2002), Galati and Tsatsaronis (2001) and McCauley and White (1997). Similarly, prices in European equity markets increasingly reflect risk factors specific to industrial sectors rather than individual countries. Borrowers have benefited from easier access to a larger investor base. Stockmarkets have become more concentrated (for example, in the context of Euronext). But markets to some extent remain segmented because of national differences. For example, diverging market practices, arising partly from differing legal and taxation frameworks, are impeding development of pan-European collateral arrangements in money markets. Rivalries and regulatory incompatibilities continue to impede creation of a pan-European equity trading platform.

A final note of caution is that the adoption of a common currency (linked, for example, to the dollar) will not necessarily mean that domestic interest rates fall to common currency (eg dollar) levels. While a firm commitment to use another currency, or fix rigidly to it, would virtually eliminate currency risk, it would not eliminate national credit risk. Credit risk premia appeared to fall in western Europe following the advent of the euro, and this might be expected elsewhere. One reason is less risk of a large devaluation forcing default on entities with currency mismatches. Credit risk premia could also fall if it were thought that other members of an RCA would provide support to prevent a default. However, it is possible that credit risk might even increase, as the country would no longer have the option of preventing default by issuing its own money.

3. Choosing between different rigid currency regimes

Countries that give up an independent currency choose from broadly three types of policy:

- ***Regional currency area***. There have been only a few cases of *independent* countries forming an RCA, or retaining one after gaining independence. (The adoption of a common currency has mostly resulted from political integration such as the unification of Italy in the 1860s and the adoption of the constitution in the United States in 1789.) The most prominent RCA is the euro area; other current examples are the two CFA zones in Africa and the Eastern Caribbean Currency Area. Previous examples included the Latin Monetary Union and the Scandinavian Currency Union before the First World War. Annex A discusses these RCAs and the characteristics of their members. A number of governments in Africa and the Middle East have announced plans to form regional currency areas and the idea has also been discussed in other parts of the world; these are also described in Annex A.
- ***Currency board.*** This idea enjoyed something of a revival in the 1980s and 1990s with the (re-)adoption of a currency board by Hong Kong (in 1983) and Argentina (1991) and subsequently by four eastern European countries (see Tables 7 and 8).
- ***Official use of a foreign currency.*** There have been many cases where a small country (unilaterally) adopted the currency of a larger country, usually the US dollar or the euro, for its own use. Most examples are very small open countries, such as Kiribati and Nauru (see Table 9). More recently some medium-sized economies such as Ecuador and El Salvador have adopted the US dollar and the idea has been seriously discussed for larger economies such as Argentina.

Although the choice between these options will be influenced by economic issues (for example the desirability or otherwise of retaining a degree of monetary independence), it often turns on political considerations. For example, RCAs are often part of regional integration initiatives with the creation of a regional monetary agency part of a process of building area-wide institutions. Often it is a matter of relative sizes; similar sized economies such as France and Germany are more likely to create a new regional currency issued by a supranational central bank, but a very large economy is unlikely to modify its currency arrangements to suit a very small economy. This can lead small economies to use currency boards or unilaterally adopt another currency. Of these two options, generally only currency boards allow the retention of seigniorage.[9] However, unless currency crises are very infrequent, the cost of lost seigniorage (see Annex C) is much less than the expected costs of currency crises. Simply adopting another currency solves the problem of monetary policy credibility by eliminating the need for a central bank. Bulgaria, Estonia and Lithuania are using a currency board as an interim measure in the transition to an RCA although other countries in the same position are floating or pegging: see the paper by Hristov and Zaimov in this volume and European Central Bank (2002).

In some countries (see Table 10), lack of confidence in the domestic currency has led to an ***unofficial use of foreign currencies***, often referred to as "currency substitution" or "de facto dollarisation". Throughout history the currency of a major power has been used widely outside its borders when that currency has a reputation for holding its value.[10] Its use is particularly likely where the domestic currency has a poor history, such as in much of eastern Europe and Latin America. The authorities

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[9] It may be possible to persuade the issuing central bank to share seigniorage with countries adopting the currency. South Africa shares seigniorage with the other rand-using countries; see Bogetić (2000) and the paper by van Zyl in this volume. US Treasury Secretary Larry Summers testified in 1999 that it would not be appropriate for the US authorities " to provide access to the Federal Reserve Discount Window, or adjust bank supervisory responsibilities or the procedures or orientation of US monetary policy in light of another country deciding to adopt the dollar" (cited in Kenen (2000)). This stance, sometimes called the "three no's", has been reiterated by other US officials (see eg the comments by Truman on page 153 of this volume), including those from the Federal Reserve. But Summers did not rule out sharing seigniorage. A bill put before the US Senate in early 2000 by Senator Mack would have provided for this, but despite being approved by the Senate Banking Committee it did not progress further. See the paper by Howard in this volume, Mack (2000) and Schuler (2000).

[10] The Athenian "owls" circulated widely during the fourth century BC. The Emperor Constantine introduced the solidus, which was in wide use from England to India until Byzantium fell to the crusaders in 1204. The Muslim dinar was also used in many countries from around 700 to 1000 AD. The florin of Florence, ducato of Venice and Spanish "pieces of eight" were widely used in the middle ages. The Dutch trading empire saw its silver liondaler circulate widely in the 17th century. Following Britain's lead in the industrial revolution, the pound became a leading international currency and in the 20th century its role was taken over by the US dollar. See Dwyer and Lothian (2002) and Einaudi (2002).

may acquiesce in this process, encourage it by giving the foreign currency "legal tender" status, or discourage it to various degrees.

Regional currency areas

Nominal anchor for monetary policy

A new common currency can either float or be fixed against a major international currency. The advantage of a floating currency is that it allows a degree of flexibility in dealing with, for example, cyclical divergence between the RCA and the rest of the world. At present, the only floating regional currency issued by a supranational central bank is the euro.[11]

An RCA with a floating exchange rate has to choose a policy anchor. As the act of forming an RCA is likely to alter the demand for money, relying solely on a monetary aggregate is unlikely to be desirable, at least initially. More plausible is a (formal or informal) inflation target. The European Central Bank has a policy framework with price stability as the primary objective (annual change in the harmonised index of consumer prices of 0-2% in the medium term) and use of a reference value for M3 growth. Choosing an inflation target is easier if the RCA members are at similar stages of development, have well developed financial markets (permitting the effective use of indirect monetary policy instruments) and have harmonised inflation indices,[12] as in the euro area. Choosing an inflation target for an RCA that contained both advanced and rapidly growing developing countries would be more difficult because relative prices are changing more sharply, given the Balassa-Samuelson effect (the tendency for the relative price of services to rise more quickly in poorer fast-growing economies). See Table 5 for examples of where this could prove a problem.

If the decision is made to fix the new currency, then an anchor currency or basket of currencies must be selected. Choosing a basket of currencies corresponding to trade weights would stabilise the nominal effective exchange rate. Although this has a strong appeal (it would prevent essentially arbitrary changes in the effective exchange rate due to changes in the cross rates of major currencies), there are powerful counterarguments. One is that the public grasp the idea of a link with a single currency more easily than a link to some more abstract weighted average. Nevertheless, it has been suggested that Asian developing economies peg to a common basket of dollar, yen and euro, perhaps as an interim measure towards a common Asian currency: see for example Ito and Ogawa (2000) and Kim and Ryou (2001).

Most regional currency areas have tied themselves to a single major currency. This choice depends in part on trade flows, but is also influenced by the current dominance of the dollar in international trade, finance, and in the pricing of commodities. The Gulf States plan as a transition measure that all members will peg to the dollar within agreed margins. The paper by Al-Jasser in this volume explains that the dollar was chosen because it is the intervention currency, reserves are mostly held in dollars and the existing currencies have been (more or less) pegged to the dollar. Yet, as the Gulf States trade more with the euro area than with the United States, they could have instead chosen to gradually shift their reserves into euros. No decision has yet been made about whether the new Gulf currency will float or be fixed.

There are different ways by which the regional monetary authority could maintain a fixed link with a major currency. One option is simply to give it the mandate (and the reserves!) to do so. The problem with this, however, is that such a new authority could lack credibility and, in the presence of high capital mobility, the link could be the object of speculative attacks. To address this, the regional monetary authority in the eastern Caribbean operates like a currency board. In the CFA franc zones, it is the French Treasury that ultimately guarantees the peg to euro by allowing in principle unlimited overdrafts. Moreover, the arrangement triggers policy measures by the central bank and member countries if the central bank's reserves fall below 20% of its sight liabilities, providing an extra guarantee.

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[11] The rand has a regional role in the Common Monetary Area, but is issued by South Africa's central bank, and responsibility for monetary policy is not shared with the other (much smaller) countries of the CMA.

[12] Asante and Walton (2002) discuss the process of harmonising statistics in the proposed West African currency union.

Need for policy discipline

Some of the expectations about what the adoption of a common currency can achieve may be unrealistic. For example, Table 5 shows it has not led to convergence in per capita incomes within the RCAs. A more general risk is that countries may become complacent about the external constraint - they may expect capital inflows to increase permanently. The nature of the external constraint may change with the adoption of a common currency, but it does not disappear. Countries that adopt an ambitious exchange rate target (for example, pegging to the euro) need to be quite sure that they can implement the macroeconomic stabilisation policies such ambitious targets require. If they are not able to do so, they may be led to impose payments restrictions in order to defend the exchange rate regime. In the past, many countries sought to defend exchange rate pegs by introducing (or tightening) restrictions on currency convertibility and rationing foreign exchange. These restrictions impede trade, distort prices, and encourage parallel currency markets. In the context of a single currency with limits on central bank financing, governments may find themselves unable to limit spending to match available financing, and be forced instead to incur arrears to employees, suppliers, and creditors. Arrears also have a corrosive effect on the economy's efficiency.

Rules for joining and belonging to a regional currency area

Countries admitted to an RCA have to meet some rules. For example, rules may be needed to limit the actions of any local central bank that remains operational. In particular, any monetary financing of fiscal deficits should be limited, although this is not always respected. In the existing monetary unions in Africa (the CFA zones), for instance, monetary financing of deficits is not prohibited, but is limited by statute to 20% of a country's previous year's fiscal revenues. In practice the ceilings have been occasionally breached, and the ceilings were also generous enough to allow several of the larger countries to accumulate excessive indebtedness. In the late 1980s and early 1990s, governments managed to obtain central bank credit indirectly through borrowing from commercial banks that were under their control, which then refinanced themselves at the central bank: see Stasavage (1997). Both zones have approved in principle reforms that would prevent their central banks from any direct financing of government deficits, as in the euro area, but the timetable for their introduction is uncertain. The reforms need to be accompanied by the development of alternative financing sources for governments (in particular, regional bond and treasury bill markets), and involve regulatory and institutional changes.

Other rules relate to macroeconomic performance. For instance, countries are often required to meet "convergence criteria", both as an initial qualification for joining and as an ongoing membership rule.[13] There are several general reasons for such requirements. Meeting such criteria demonstrates the firmness of a country's commitment and establishes initial conditions that are less likely to produce problems should negative shocks subsequently occur: see Masson (1996). Further, the ability to satisfy convergence criteria is an indication that the political commitment may be durable. In addition, the more similar the countries' initial macroeconomic situations, the less likely are their interests to subsequently diverge. The rules sometimes cover inflation; both the current inflation rate and the extent to which markets believe inflation will continue to be kept under control in the future. The latter is captured by setting criteria referring to long-term bond yields and exchange rates; if markets believe inflation is only temporarily low, bond yields will stay high and the exchange rate may well weaken.

Criteria that are based on the ability to keep a country's exchange rate within margins can easily be justified as a training ground for the monetary union's permanently fixed parities. If countries are not flexible or committed enough to maintain these parities, this throws doubt on their ability to adapt to a common monetary policy. In Europe, the ERM served this role, but free capital movements and the attempt to maintain narrow margins while ruling out realignments, even when convergence of inflation and commitment to monetary union had not yet been demonstrated, led to the crises of 1992-93. With wider margins (plus or minus 15%), the system proved robust, and a similar system is to be applied to the EU accession countries, in the form of the ERM 2. In Africa, the WAMI is helping put in place an exchange rate mechanism that will require countries going to the monetary union to keep their currencies within 15% of central parities calculated relative to the US dollar.

[13] These should be measured using consistent definitions; Eurostat has played an important role in producing independent and harmonised data for the euro area.

Fiscal rules are among the most important and controversial criteria. One view is that no fiscal rule is needed other than the prohibition of the monetary financing of deficits. Countries within an RCA that run large fiscal deficits will thus be forced to issue bonds. The knowledge that such borrowing will increase debt servicing costs and may well lower their sovereign credit ratings will be a strong deterrent to large deficits. Market discipline can work even within an RCA - provided there are no bailouts. The counterview to this, however, is that a lack of market discipline in one country may harm other members. Such deficits and debt servicing burdens could put pressure on the central bank to lower interest rates and could reduce the resistance to inflation (as inflation lowers the real value of nominal debts). The credibility of the RCA's central bank would be undermined, and all would suffer from higher interest rates.

Table 6

Convergence criteria in regional currency areas

	Inflation	Fiscal criteria (% to GDP)			Other
		Deficit	Debt	Govt revenue	
Current RCAs					
Euro area *entry*	<1.5% above lowest 3	<3%	<60%		Participation in ERM 2 without tension for at least two years. Long-term bond yields within 2% of the average of those in the three economies with lowest inflation
ongoing		<3%[1]			
West Africa (WAEMU)	<3%	0[2]	<70%	>17%	No payment arrears, current account deficit <3% of GDP; public wage bill no more than 35% of revenues
Central Africa (CAEMC)	<3%	0[2]	<70%	>17%	No payment arrears, current account deficit <3% of GDP; public wage bill no more than 35% of revenues
Proposed RCAs					
West Africa (ECOWAS)	<5%	<4%			Reserves > 6 months' imports, no payment arrears, central bank financing limited to 10% of tax revenues[3]
Arabian Gulf (GCC)	To be set	To be set			
Andean Community	<10%	<4%	<50%		
Caribbean (CARICOM)					Steady exchange rate for 3 years, foreign reserves> 3 months' imports, external debt service/ exports <15%

[1] With structural component in balance. [2] Excluding grants and externally financed investment. [3] See page 148 of this volume for a full list of secondary criteria.

It is probably fair to argue that this counterview has prevailed in the policy debate. Most RCAs have incorporated various forms of fiscal criteria (see Table 6). But there has been much debate about the precise specification of such rules. Among the more important issues that have been raised are:

- *Is there a need for a rule on **both** deficits **and** debt?* Some have argued that a rule on the level of the debt/GDP ratio is most appropriate, allowing countries to decide within that ceiling when to run fiscal deficits. But deficit limits may be useful in slowing the growth of debt before the debt limit is reached.
- *Should the ceiling for deficits vary with the cycle?* There is a good logical case for fixing criteria in terms of cyclically-adjusted deficits but this would require an accepted authority to

calculate such a measure. An alternative way of introducing some fiscal flexibility would be to suspend the rules in the event of a large recession (as in the euro area), or apply limits to the *average* deficit over the business cycle. But there are trade-offs between flexibility and the credibility that comes from simpler rules.

- *Should distinctions be drawn between different categories of public expenditure?* It has been variously argued that public infrastructure investment, or education, or defence spending should not be limited by the rules in the Stability and Growth Pact of the euro area. In the two CFA franc zones, the fiscal deficit measure selected excludes grants and foreign-financed public investment expenditure. This is to avoid grant revenues, which tend to be outside the control of the host country and may be temporary, leading to an unduly rosy picture of the deficit, and because these grants are often linked to particular social or infrastructure spending.

Given the inevitability of doubts about any specific fiscal rules, very rigid enforcement may not prove practicable. Yet limits of some kind are probably needed if an RCA is to be credible with the markets. Enforcing such limits is likely to present a delicate political challenge. The European Union has gone furthest in establishing sanctions on governments that do not respect the ceiling on fiscal deficits: see Von Hagen and Mundschenk (2002). The Stability and Growth Pact allows for a gradation of sanctions leading to the imposition of fines on governments for excessive deficits. How far these provisions would "bite" if a major country were significantly to overshoot the targets remains to be seen. Sanctions in the CFA franc zones have yet to be applied, but could include denial of access to financing by the central bank or regional development bank. It may in any case be difficult ex post to enforce monetary sanctions that in principle were agreed ex ante, because it would be politically unpalatable to make countries already facing fiscal deficits pay large fines. More credible might be the suspension of participation in the decision-making bodies of the RCA: see Masson and Pattillo (2002).

The operation of modern day currency boards

With a currency board, all currency is automatically guaranteed to be fully backed by a reserve currency at a fixed rate and the monetary authorities are obliged to redeem their liabilities at this rate. The potential for arbitrage generally limits any divergence from this rate in transactions throughout the economy. Such full backing should remove any incentive for a "run" from the currency. If the bulk of transactions balances are held with banks, however, a simple focus on currency is less relevant.

Currency boards were very common in colonial administrations, but became less popular after World War II. Many newly independent countries were keen to have central banks and independent currencies to symbolise their nationhood in the same way as a flag or a seat at the UN. It also reflected a prevailing view that currency boards inhibited national development by directing savings abroad and preventing "fine-tuning" of macroeconomic policies. Some governments hoped central banks could provide "cheaper" means of funding expenditure, or a less politically visible means than taxation. The paper by Ojo in this volume cites "the scarcity of foreign exchange, the need to finance priority projects and make room for some growth" as reasons why the proposed second monetary zone in western African has eschewed a currency board.

Currency boards had a revival in the 1990s as having a stable monetary anchor became regarded as more important than being able to use monetary policy for counter cyclical policy. Currency boards were viewed as a good way of obtaining stability in some transition economies with little experience of central banking and little confidence in institutions: the paper by Kovačević in this volume, for example, refers to the triple transition Bosnia and Herzegovina were facing; from war to peace, from command-economy to free market and from province to independent country. There has been discussion about introducing currency boards in eastern Europe, Iraq, Kazakhstan, the Kyrgyz Republic, Liberia, Palestine and Somalia, and they had been considered in Ecuador, El Salvador and East Timor before it was decided to adopt the US dollar. Some writers have even recommended the system for large economies such as Brazil, Indonesia, Mexico, Russia and Ukraine.

Under a broad definition encompassing both orthodox currency boards and what writers such as Schuler (1999) have termed "currency board-like" systems, there are about 20 currency boards in operation today (see Table 7). Many of these are like the traditional colonial currency boards, operating in very small economies with limited financial systems (eg Faroe Islands, St Helena). They are essentially of only numismatic interest (like the fully backed banknotes issued by some Scottish and Northern Irish banks). The more interesting examples are the "modern day currency boards" operating in Bosnia, Bulgaria, Estonia, Hong Kong SAR and Lithuania, and formerly in Argentina.

Currency boards mostly operate in small open economies; only Hong Kong SAR has a GDP exceeding $50 billion.

Table 7

Currency boards

	Year adopted	Anchor currency	Population[1] in '000 persons	Real GDP $ bn[1]	Imports as a % of GDP[2]	Imports: % from anchor country[2]	Issuer	Sole legal tender
Bahamas	1916	US dollar	303	5	75	44	CB	
Bermuda	1915	US dollar	63	1		11	MA	
Bosnia & Herzegovina	1997	Euro[3]	4,000	20	70[1]	41	CB	Yes
Brunei	1967	Singapore $	338	7		34	CyB	No
Bulgaria	1997	Euro[3]	8,200	45	63	45	CB	Yes
Cayman Islands	1972	US dollar	35	<1			MA	Yes
Djibouti	1949	US dollar	632	1		3[1]	CB	
Eastern Caribbean[4]	1950	US dollar	600	4	72	39[1]	CB	
Estonia	1992	Euro[3]	1,400	13	94	39	CB	
Faroe Islands	1949	Danish krone	45	<1		49[1]	ComB	
Falkland Islands	1899	UK pound	3	<1			Govt	
Gibraltar	1927	UK pound	30	<1			Govt	No
Guernsey	1945	UK pound		<1			Govt	No
Hong Kong	1983	US dollar	6,800	174	136	7	3ComB	Yes
Isle of Man	1961	UK pound	75	<1			Govt	No
Jersey	1963	UK pound	87	<1			Govt	No
Lesotho	1980	S African rand	2,000	5	100	80[1]	CB	No
Lithuania	1994	Euro[5]	3,700	26	56	35	CB	
Macau	1983	Hong Kong $	438	8	62	14	2ComB	
Namibia	1993	S African rand	1,800	11	53	81[1]	CB	No
St Helena	1917	UK pound	7	<1			Govt	

Note: CB = central bank, CyB = currency board, MA = monetary authority, ComB = commercial bank(s).

[1] 2000. [2] 2001. [3] Prior to the creation of the euro, the Deutsche mark was the anchor currency. [4] The Eastern Caribbean Central Bank is the monetary authority for Anguilla, Antigua & Barbuda, Dominica, Grenada, Montserrat, St Kitts & Nevis, St Lucia and St Vincent & the Grenadines. [5] Prior to February 2002, the US dollar was the anchor currency.

Source: Hawkins (2003b).

A risk related to the operation of currency boards is complacency about currency mismatches: see Goldstein and Turner (2003). In particular, it is hard for authorities pledging to uphold a fixed exchange rate simultaneously to tell banks not to be exposed to the risk of its abandonment. The Argentine debacle stands as a clear warning about this. Both the private and the public sectors in that country built up massive foreign currency denominated debt, but did not have the ability to generate foreign currency earnings to service such debts. No monetary arrangement can or should disguise prudential mismatches of that kind.

Extent of backing

A classical currency board has 100% backing for currency. In a modern day currency board the backing rule is often extended to cover all monetary liabilities (the monetary base). This is very different from the position in major economies where reserves are often equivalent to less than half the currency issue (see Table B1 in Annex B).

A currency board cannot and does not guarantee that the broad money supply (which includes currency and all bank deposits) is matched by foreign reserves. If the banking system were *required* to do this it could not make any loans. Nevertheless, foreign currency liquidity safeguards must be built into the banking system to ensure the payment system continues to operate even in the face of a run on bank deposits. This is why the Argentine "convertibility plan" imposed quite demanding requirements on banks (Table 8), such as requiring them to maintain deposits with foreign banks held abroad. The watering down of these prudential measures (for example allowing banks to deposit a smaller fraction of reserves abroad and to use government bonds to satisfy the requirement) in early 2001 undermined the credibility of the whole system. In the end, bank deposits were frozen and the payment system ceased to function.

Currency boards and central banking

Some purists, such as Friedman (1993), Hanke (2002) and Schwartz (1992), argue that currency boards should have no liabilities other than the currency, hold no domestic currency assets and take on no "central banking" functions. In practice, some currency boards impose reserve requirements on banks (Table 8) and others accept other deposits from them. Engaging in these sorts of operations and providing some limited lender of last resort facilities are not inconsistent with a currency board so long as the full backing of the currency is not brought into question (ie so long as loans only involve "excess" reserves and do not lead to any discretionary expansion of the monetary base without foreign currency backing).

Table 8

Some characteristics of modern-day currency boards

	Bosnia	**Bulgaria**	**Estonia**	**Hong Kong**	**Lithuania**	**Argentina (until early 2002)**
Current anchor currency	Euro	Euro	Euro	US dollar	Euro	US dollar
Inception	1997	1997	1992	1983	1994	1991
Liabilities backed	Monetary base	Monetary base	Currency	Monetary base	Currency	Monetary base
Reserve ratio	10-15%	8%	3% & 10%	None	8%	20%
Base	All liabilities	All deposits	Wide range		Deposits <1 year	All deposits
Maintenance	10 days	1 month	1 month		1 month	1 month
Remunerated	Yes	No	Yes		No	Yes[1]
Lender of last resort	No	Yes	Yes	Yes	Yes	Yes

[1] Insofar as the requirement could be met with assets held abroad.

Source: Ho (2002).

Historically, many currency boards operated in rudimentary colonial economies where domestic banking was little developed and capital flows small. Under these circumstances, there was a very close relationship between the trade balance and monetary expansion. The transmission mechanism should have been like the classic Hume price-specie flow. If prices in the domestic economy started to rise faster, this would lead to a loss of competitiveness, exports would slow, reducing reserves and the money supply, dampening activity and reversing the initial price rise. All this should have happened without any policy action.

This simple result carries over to more sophisticated financial systems only under restrictive assumptions. In modern economies, there is not a one-to-one correspondence between international reserves and either currency or base money (although it is higher than in other economies); see Table B2 in Annex B. One reason is that currency boards may hold excess reserves as an "investment portfolio" in addition to those backing the currency which do move one-to-one. The relationship of reserves with broad money is weaker still.

Traditional forms of currency board did not involve an interbank money market. In the Falkland Islands, there is only one bank. In many British colonies the banks present were all branches of British banks that could settle between themselves in London. Modern day currency boards operate in sophisticated financial markets where the authorities are concerned about excess volatility in financial markets. Allowing volatile capital flows to automatically affect domestic money markets could result in very volatile interest rates. This is one reason why modern day currency boards may conduct some form of open market transactions. In Hong Kong SAR short-term interest rate volatility is now comparable to that in non-currency board economies, but in Estonia and Lithuania it is significantly higher, as it previously was in Argentina (Table B3). In some cases these relationships have changed over time. For example, the September 1998 reforms in Hong Kong,[14] designed to make their system less susceptible to capital outflows, especially speculative outflows (see HKMA (1998) and Yue (2001)), appear to have reduced volatility in short-term interest rates but also lessened the correlation between international reserves and base money. In Argentina, a series of changes and foreshadowed changes, and the issue of pseudo-currencies by provincial governments, during 2001 were associated with both a marked reduction in the correlation between reserves and currency and an increase in volatility in financial markets (Tables B2 and B3).

Use of foreign currencies

Use of a foreign currency is probably a natural reaction in a small country closely linked through trade and finance to a large neighbour - be it the dollar, euro or the South African rand (Table 9). The controversial policy issues, however, concern different situations. The first is whether large countries with a record of deficient monetary policy should embrace a foreign currency. The second is the converse: should countries faced with substantial unofficial use of foreign currency seek to reverse that situation?

Use of foreign currency as a policy choice

Use of a foreign currency appears attractive because it creates a stable measure of value to govern trade and finance and reduces transactions costs. However, it deprives the country of the main monetary policy weapon to deal with recession.[15] Unless there are capital controls, interest rates have to follow those in the anchor currency regardless of whether the using country is facing the same economic conditions. The authorities cannot stimulate domestic demand and improve competitiveness by a depreciation of the nominal exchange rate. The only alternative is lower domestic costs and prices. This can only work if the domestic economy is sufficiently flexible. Hong Kong perhaps enjoys such flexibility; many other economies do not. Apart from loss of seigniorage, the main economic difference from a currency board is that adoption of a foreign currency is much harder to reverse. This may have credibility benefits but if the initial conversion rate turns out to be have been inappropriate, the economy will suffer. One benefit over a currency board is that currency mismatches are eliminated: see Goldstein and Turner (2003).

One particular problem with forgoing an independent currency would arise if the national central bank, unable to print money, were no longer able to provide an unlimited lender of last resort facility in the classic Bagehot (1873) sense. Insurance (public or private) could assist banks hit by bank-specific problems in an economy using another currency. But systemic shocks would be harder to handle because all banks would be affected at the same time. Limited emergency liquidity assistance could be provided by easing reserve requirements in times of stress, thus providing banks with liquidity. Use of excess foreign reserves or direct budgetary payments by governments may also be possible.

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[14] In particular, the introduction of a discount window assuring availability of end-day liquidity.

[15] Changing required reserve ratios and quantitative controls remain as potential means of affecting interest rates and credit.

Table 9

Countries and territories officially using the currency of another country

	Currency used	Foreign currency adopted	Real GDP[1] (2000)	Population '000 (2000)	Comment
Andorra	Euro[2]	1278	1	67	President of France and the bishop of Urgel (Spain) are heads of state
Belarus	Russian rouble	Due 2004	76	10,000	
Channel Islands	UK pound	1797		140	
Cook Islands	NZ dollar	1965	<1	20	Since independence in 1965, has been in free association with New Zealand; own coins
East Timor	US dollar	2002	<1	800	
Ecuador	US dollar	2000	37	12,600	
El Salvador	US dollar	2001	28	6,300	
Guatemala	US dollar	2001	43	11,400	US dollar made legal tender but domestic currency also circulates
Kiribati	Australian dollar	1979	<1	91	Own coins circulate
Kosovo	Euro				
Lesotho	Rand	1974	5	2,000	
Liechtenstein	Swiss franc	1921	<1	32	
Marshall Islands	US dollar	1979	<1	52	Since 1986 in free association with US
Micronesia	US dollar	1986	<1	118	Prior to independence, UN trust territory under US administration
Monaco	Euro[3]	1865	<1	32	
Montenegro	Euro	1999	4	700	Part of former Yugoslavia
Namibia	Rand	1992	11	1,800	
Nauru	Australian dollar	1968	<1	11	UN trust territory administered by Australia before independence
Niue	NZ dollar	1974	<1	2	Formerly part of New Zealand
North Cyprus	Turkish lira	1974	<1	190	
Palau	US dollar	1981	<1	19	In free association with the United States, who had administered UN trust territory prior to independence
Panama	US dollar	1904	16	2,900	Own coins circulate
San Marino	Euro[4]	1897	<1	27	Own coins circulate
Swaziland	Rand	1974	5	1,000	
Tuvalu	Australian dollar	1978	<1	11	
Vatican City	Euro[4]	1929	<1	1	Own coins circulate

[1] In purchasing power terms; billions of US dollars. [2] Prior to the creation of the euro, both the French franc and Spanish peseta were legal tender. [3] Prior to the creation of the euro, the French franc was legal tender. [4] Prior to the creation of the euro, the Italian lira was legal tender.

Sources: Edwards and Magendzo (2002); Levy-Yeyati and Sturzenegger (2002); Schuler (2000); IMF, *International Financial Statistics*; *Direction of Trade Statistics*; World Bank, *World Development Indicators*; SBS *World Guide*, 10th edition, 2002.

Some see virtue in the absence of a lender of last resort, arguing it would force private sector banks to be more prudent. In the case of banking systems dominated by international banks, the responsibility of providing emergency liquidity assistance would lie with the parent bank.[16] Moreover, it could be argued that authorities with no scope for independent monetary policy action will be more careful in the design of prudential policies to ensure the health of the banking system. Yue (2001) argues that such policies also tend to contribute to macroeconomic stabilisation.

Econometric studies have been mixed. While it seems that countries adopting a foreign currency have had lower inflation than those with their own currency, it is not clear whether fiscal policy has been more disciplined or whether economic growth has been faster or slower: see for example Schuler (1996) and Edwards and Magendzo (2003). Panama, which has long used the US dollar, is the only independent Latin American country to offer long-term fixed rate mortgages, but interest rates there are higher than in Chile, which has a floating exchange rate.

Unofficial use of foreign currency

Citizens in some emerging economies make extensive domestic use of foreign currencies (see Table 10). There may be some advantages from this: in economies where citizens lack confidence in the domestic currency, economic activity is helped by the use of foreign currency. Hayek (1976) argued that, as with other products, competition between currencies improves their quality, a line of argument that was espoused by the UK government in discussions on a European currency in the late 1980s and early 1990s. Attempts to prohibit the use of foreign currency may do more harm than good. Nevertheless, there may be several complications for the operation of monetary policy.

Econometric studies show that macroeconomic performance tends to be worse in countries with extensive unofficial use of foreign currency. For instance, Gomis-Porqueras et al (2000) conclude that countries with a high unofficial use of foreign currency tend to experience greater macroeconomic volatility and are more prone to banking crises. But this is not necessarily causal as generally foreign currencies are more widely used in countries that are poorly managed in general. Similarly, exchange rate pass-through is significantly higher in those emerging economies with high unofficial use of foreign currencies (specifically as bank deposits); see Honohan and Shi (2001). But the high pass-through may be due to the history of high inflation in these countries (see Table 10). A further problem is that exchange rate depreciation could itself lead to a further fall in use of the domestic currency: see Kraft (2002) for some empirical work on this for Croatia.

Nevertheless, monetary control is likely to be weaker in economies where there is substantial use of foreign currency. Central banks can generally control interest rates on interbank transactions in the local currency, which are a major influence on interest rates charged by banks on loans in domestic currency. But the interest rates charged by banks on loans denominated in foreign currency depend in principle on foreign interest rates.

But there is still scope for the central bank to drive a wedge between foreign currency interest rates in the domestic market and those prevailing internationally. For instance, some countries use reserve requirements on foreign currency deposits and the interest rate paid on these reserves as supplementary instruments where necessary to support monetary policy.

Successful macroeconomic stabilisation can be expected to lead to a decline in the unofficial use of foreign currencies. But this process takes time, as regaining credibility may be protracted. Peru's hyperinflation was brought under control following reforms in 1990 and inflation has been held under 15% since 1995 and under 5% since 1999. Yet around 80% of private sector bank deposits are still denominated in foreign currency. Indeed, there may be "network effects" such that once societies adapt to using a foreign currency, they may not switch back at all.[17]

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[16] How far such responsibility would extend in practice is an open question. Losses in Argentina, for instance, were larger than foreign banks' direct equity participations in Argentina. The decision on whether to pump in additional funds depends on foreign banks' perceptions about their prospects in that jurisdiction.

[17] See Feige et al (2000), Gomis-Porqueras et al (2000), Temprano Arroyo (2002) and for the Croatian experience Kraft (2002). Honohan and Shi (2001) cite a Latin American expression that depositors must choose between eating (higher interest rate) and sleeping (protection against devaluation).

Table 10

Some countries with widespread unofficial use of foreign currencies

	Currency used	Real GDP $US bn (2000)	Domestic currency as % of GDP (2001)	Foreign currency deposits as % of total (2000)	Deposits with offshore banks as % to domestic bank deposits	Imports as % to GDP (2001)	% of imports from country whose currency is used (2000)	Inflation (average annual rate 1990-2000)
Argentina	US dollar	446	3	60	28	10	20	5
Bolivia	US dollar	20	5	90	7	24	17	9
Bosnia	Euro	20	6[1]	55	24	49[2]	41	2
Bulgaria	Euro	45	9[2]	52[3]	10	63	41	103
Cambodia	US$, Thai baht			93	12	46[2]	18	25
Colombia	US dollar	256	5	Prohibited	33	21	34	21
Croatia	Euro	34	5	72[1]	9	53	51	86
Georgia	US dollar	13		78	0	24[2]	10	388
Haiti	US dollar	12	8		12	34	54	20
Laos	Thai baht	8	1	72[3]	8	18[2]	59	27
Latvia	US dollar	17	10	74[3]	15	57	2	49
Lesotho	S African rand	5			15	87	80	10
Macau	HK dollar		4	52	7	62	15	4
Macedonia	Euro	10	4[1]	53	21	56[1]	35	79
Nepal	Indian rupee	32	13		6	32	33	8
Nicaragua	US dollar	11	6[2]	70	40	81[2]	24	34
Paraguay	US dollar	24	5	60	27	36	16	13
Peru	US dollar	120	3	49	20	17	30	27
Russia	US dollar	1166	6	49	14	24	8	162
Turkey	US dollar	459	3[2]	52	13	31[2]	7	76
Ukraine	US dollar	183	8[1]	28	14	45[2]	3	271
Uruguay	US dollar	30	3	80	38	20	8	31
Venezuela	US dollar	139	2[2]	Prohibited	119	16[2]	36	46

[1] 1999. [2] 2000. [3] 1998.

Sources: Arteta (2002); Baliño et al (1999); Honohan and Shi (2001); Kovanen (2002); Padoa-Schioppa (2002); IMF, *International Financial Statistics*, *Direction of Trade Statistics*; World Bank, *World Bank Atlas 2002*; BIS.

Some countries try to encourage use of domestic currency deposits by levying lower reserve requirements on them, which may be passed on to depositors in the form of more attractive interest rates. Some countries, such as Canada, Czech Republic, Korea, Nigeria, Poland and Switzerland, exclude foreign currency deposits from the coverage of their deposit insurance schemes. Bolivia, Brazil, Israel and Nigeria have allowed banks to offer dollar-indexed deposits and Brazil inflation-indexed deposits, both of which may be attractive alternatives to foreign currency deposits (the danger with dollar-indexed debt of course is that such debt can become too large to service if the exchange rate collapses in a crisis). In Egypt, liberalising restrictions on domestic interest rates led to a marked fall in the proportion of foreign currency deposits. More direct attempts to prevent the use of foreign currencies (such as the steep fines or even gaol terms Ukraine imposed for domestic use of US dollars in 1996) are likely to drive depositors offshore. Permitting foreign currency deposits may allow

domestic banks to retain deposits when some depositors lose confidence in the domestic currency and allow banks to more easily match foreign currency loans. Forced conversions into domestic currency (particularly if at an artificial exchange rate) are also likely to damage confidence in the domestic financial system. This was the experience of Bolivia and Mexico in 1982 and Peru in 1985.

4. Conclusion

Increasing capital mobility and weak financial systems have caused many emerging market countries to search for regimes that deliver both exchange rate stability and relatively immunity to speculative attack. Prominent candidates are regional currency arrangements, currency boards, and the unilateral adoption of a foreign currency. In addition, the informal use of a foreign currency may have some of the same implications, namely by limiting the possibility to use domestic monetary policy effectively.

These regimes differ in several respects. Regional currency areas are often associated with broader political objectives, rather than purely economic ones, though some estimates suggest that sharing a common currency can give a large boost to trade and output. The use of convergence criteria as qualifications for entry and on an ongoing basis is justified in part by the concern that political will needs to be demonstrated. Convergence criteria also serve the purpose of preventing fiscal policy from interfering with the conduct and credibility of monetary policy.

The unilateral adoption of a foreign currency, or its close cousin, the currency board, has the advantage of producing an immediate gain in credibility from the use of an established, and presumably stable, currency. The cost is the loss in flexibility that results, since it is likely to mean loss of influence over monetary policy. Currency boards are themselves not immune from crisis, which explains the interest in outright adoption of a foreign currency, despite the associated loss of seigniorage.

Annex A:
Regional currency areas

Some examples of where three or more independent countries use or used a common currency are:

European Monetary Union (1999-): Austria, Belgium, Finland, France, Germany, Greece (joined in 2001), Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain adopted a single currency, the euro, in 1999, although euro notes and coins were only introduced in 2002. See the paper by Strauss-Kahn in this volume.

Eastern Caribbean Currency Area (1950-): Anguilla (UK territory, joined 1987), Antigua & Barbuda, Dominica, Grenada (joined 1968), Montserrat (UK territory), St Kitts & Nevis, St Lucia and St Vincent & the Grenadines. Some former members left the area to establish their own currencies; Trinidad & Tobago in 1962, Guyana in 1965 and Barbados in 1972. The Eastern Caribbean dollar is pegged to the US dollar (prior to 1976 it had been pegged to sterling), but the United States is not a party to the agreement. The Eastern Caribbean Central Bank (ECCB) was established in 1983 to replace the Eastern Caribbean Currency Authority, which in turn had been the successor to the British Caribbean Currency Board. The ECCB operates as a quasi-central bank, but retains some currency board features; it maintains a minimum foreign exchange cover of 60% (70% before 1975 and 100% before 1965), although in practice the cover has usually exceeded 95%. The ECCA economies are all small, with a combined population of about half a million. See van Beek et al (2000) and Hendrickson et al (2002) for further information.

Central African Economic and Monetary Community, CAEMC (1945-): Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea (joined 1985) and Gabon. Their common central bank is the Bank of the States of Central Africa and the common currency is the franc de la coopération financière en Afrique centrale. Originally created as a colonial currency in 1945, it was retained after independence. It has been pegged to the French franc, and now the euro, throughout this period, but was devalued by half in 1994. At least 65% of central bank reserves are held with the French treasury, which guarantees its convertibility into euros. Equatorial Guinea is the only member that is not a former French colony.

West African Economic and Monetary Union, WAEMU (1945-): Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau (joined in 1997), Mali (left in 1962 but rejoined in 1984), Niger, Senegal and Togo. (São Tomé & Príncipe may be joining soon.) Their common central bank is the Central Bank of West African States and their common currency is the franc de la communauté financière d'Afrique. Originally created as a colonial currency in 1945, it was retained after independence. At least 65% of central bank reserves are held with the French treasury, which guarantees its convertibility into euros. It has been pegged to the French franc, and now the euro, for this period, but was devalued by half in 1994. Both the central African and west African currencies are commonly called the "CFA franc" but are not legal tender in the other region, In theory they could have different values but in practice they have always been the same. See Banny (2002) for further information.

East African Currency Board (1963-72): Kenya, Tanzania and Uganda operated a joint currency board after they gained their independence in 1961-63, essentially continuing colonial currency arrangements that had been in place since 1919. Gradually it was allowed to operate more like a central bank and in time it fell apart. By 1977 all three countries had exchange controls relating to each other's currencies. See Cohen (1998, p73) for more information.

Latin Monetary Union (1865-1914): Belgium, Bulgaria, France, Greece (joined in 1868), Italy and Switzerland formed a monetary union, initially for a 15-year period, but subsequently renewed.[18] It provided for the circulation of gold and silver coins (at a fixed parity) throughout the union by all members, identical in size and weight but with national designs, and acceptable as legal tender. The union ended with World War I. See Bordo and Jonung (1999), de Cecco (1992), Einaudi (2002) and Henriksen and Kærgård (1995) for further discussion. Flandreau and Maurel (2001) are sceptical on whether this union added anything to the gold standard arrangements.

[18] In 1865, France proposed extending the union to include Britain and the United States, which would likely have ended up with most of the world as members. Despite some enthusiasm at a conference, the idea faded for lack of sustained political support. See Cohen (1998, pp 69-70).

Scandinavian Currency Union (1873-1913): Denmark, Norway (joined in 1875) and Sweden formed a monetary union when they adopted the gold standard (but note that the latter two were also in a political union until 1905) and a common unit, the krona. But they continued to issue their own notes and coins. At the outbreak of World War I they all abandoned both the gold standard and the currency union. See Bergman (1999) for further information.

German and Austro-Prussian Monetary Unions (1838-1867): Baden, Bavaria, Frankfurt, Hesse, Nassau Saxe-Meiningen (joined later), Schwarzburg-Rudolstadt (joined later) and Württemberg agreed on a monetary union with the northern states adopting the thaler and the southern states the florin with a fixed rate of exchange. All states agreed to issue silver coins in proportion to their population which were legal tender throughout the union. The 1857 treaty between Austria and the German member states fixed the exchange rate between the Austrian currency and the German currencies and members agreed to withdraw non-convertible notes. After the Battle of Sadowa, Bismarck issued a decree dissolving the union and its formal dissolution occurred through a treaty signed in 1867. See de Cecco (1992) for more details.

Earlier European monetary unions (1379-1814): Monetary unions such as the Hanseatic Monetary League and the Monetary Federation of the Rhine were negotiated when money was essentially coinage and its value was determined by the value of its gold or silver content. The monetary unions largely consisted of standardising the coins. See Einaudi (2002).

Proposed regional currency areas

There are a number of proposed future RCAs. Some are now the declared aim of governments while others are academic conjectures. The following are those most discussed, and the subject of Table 5.

Greater Europe: Many eastern European countries are keen to join the European Union and the euro area. There are 13 official applicant countries; Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic, Slovenia and Turkey. Ten of these are likely to join the EU in 2004 and will then be expected to participate in the ERM 2 for at least two years in order to achieve convergence criteria before joining the euro area.

Africa: The Economic Community of West African States (ECOWAS), which includes the eight members of the West African Economic and Monetary Union (see above) plus The Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone, declared their intention to form a broader monetary union by signing the Accra Declaration in April 2000. This had been stated as a goal of ECOWAS since its formation in 1975 and is intended to accompany a broader integration process. It has gained impetus since the election of a more sympathetic government in Nigeria, the largest of the ECOWAS economies. The first step was to have been monetary union among five non-WAEMU countries (Liberia is not participating) by January 2003 and to this end they pledged to limit fiscal deficits and co-ordinate macroeconomic policies. A West African Monetary Institute (WAMI) was established in 2000 as a precursor to a regional central bank. The current plan is for a monetary union of all the ECOWAS countries in 2004. See the papers by Ebi and Ojo in this volume, Addison (2002), Asante and Masson (2001), Debrun et al (2002), Masson and Pattillo (2001) and Ukpong (2002) for further discussion.

In 1999 Kenya, Tanzania and Uganda signed a treaty forming an economic bloc and laying grounds for a monetary union, which would be essentially reviving their former currency union. See Guillaume and Stasavage (2000) and Mkenda (2001).

Alesina et al (2002) report that 11 members of the Southern African Development Community are debating whether to form a monetary union, possibly centred on the rand. See also the paper by van Zyl in this volume.

The African Union (successor to the Organisation of African Unity) has recently reaffirmed the aim of a common African currency, perhaps by 2021, although there appear to be few tangible steps taken towards implementing it; see the paper by Ojo in this volume and Ogunkola (2002).

Arabian Gulf: The Gulf Cooperation Council, comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates was founded in 1981 and one of its initial goals was to move towards a common currency. The successful launch of the euro invigorated these aspirations and the Council announced in early 2002 a customs union by 2003 (brought forward from 2005) and a plan for a common currency by 2010. A new currency, possibly to be called the Gulf dinar, will be established.

As an interim step, all member currencies will be pegged to the US dollar. A committee of central bank governors, and a technical committee of central bankers, is working on the project. All the countries currently have de facto or de jure pegs to the US dollar (or baskets in which the dollar has a very high weight) and oil or related products account for 70-80% of revenue in all of them. See the papers by Al-Bassam, Al Falasi, Al-Jasser and Al-Hamidy, and Al-Thani in this volume, Fasano and Iqbal (2002) Jadresic (2002) and Laabas and Limam (2002) for further information.

Latin America: The Mercosur countries (Argentina, Brazil, Paraguay, Uruguay, with Bolivia and Chile as associate members). In 1997, Argentina's then president Carlos Menem proposed such a currency union in the indefinite future. At their presidential summit in 2002, the idea of a "Monetary Institute of Mercosur" as an embryonic central bank was informally discussed. With Argentina and Brazil having been forced off their exchange rate pegs in the last couple of years, the idea may gain more support. See Eichengreen (1998) and Fratianni and Hauskrecht (2002) for academic support for the idea that an RCA would support the push for deeper integration within Mercosur, and Belke and Gros (2002) for a further discussion.

The Andean Community (Bolivia, Colombia, Ecuador, Peru and Venezuela) signed an agreement in 1969 calling for "harmonisation of exchange rate, monetary, financial and fiscal policies", and set some convergence criteria (see Table 6) but no firms plan for establishing an RCA. See Scandizzo (2002) and Temprano Arroyo (2002).

The Central American Common Market countries (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) have as a medium-term goal a monetary union, but some members have recently adopted the US dollar.

Caribbean: CARICOM agreed in 1992 that its eight members which are currently not part of the ECCB area (Bahamas, Barbados, Belize, Guyana, Haiti, Jamaica, Suriname and Trinidad & Tobago) should join it to form a Caribbean-wide single currency, but it has not been implemented. See Worrell (2003).

North America: Canada, Mexico and the United States are members of the trade group NAFTA. Given the high proportion of Canada and Mexico's trade with the United States, a NAFTA dollar or "Amero" has been proposed by some Canadian academics such as Grubel (1999). See also Beine and Coulombe (2002) and Robson and Laidler (2002).

Asia: In December 1998, ASEAN (Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam) leaders endorsed a project to study the feasibility of a common ASEAN currency and a task force of central bank officials led by Bank Negara Malaysia was established in August 2000; see the note by Ooi and Singh in this volume. The head of the Hong Kong Monetary Authority raised the possibility of a wider common Asian currency in Yam (1999), albeit in the distant future. The idea has also been discussed by academics such as Kim and Ryou (2001) and in a paper commissioned from Bayoumi and Mauro (1999). One factor favouring an RCA in Asia is that the countries have diversified trading partners so there is no obvious candidate currency to which to link. Kang and Wang (2002) provide a recent overview.

South Pacific: Hargreaves and McDermott (1999), Brash (2000), Grimes and Holmes (2000) and Coleman (2001) provide a discussion of suggestions for Australia and New Zealand to adopt an "Anzac dollar". The latter studies note that half the New Zealand public and the majority of NZ business leaders support a monetary union. New Zealand Prime Minister Helen Clark regards the idea as worth considering. However, given that the Australian economy is seven times as large as that of New Zealand, it may be more realistic to think in terms of New Zealand adopting the Australian dollar. The topic of a currency union is little discussed in Australia and the advantages there would probably not outweigh the costs of introducing a new currency. The five small Pacific nations currently using either the Australian or NZ dollars could also join, as could Fiji, Papua New Guinea, the Solomon Islands and Vanuatu, for whom Australia is the largest trading partner.

Table A1

Members of regional currency areas

	Population in thousands (2000)	Real GDP $ bn (2000)	Currency used	Imports as % of GDP (2001)	% of imports from (exports to) fellow members (2000)
Anguilla	12	<1	EC dollar		
Antigua & Barbuda	68	1	EC dollar	86[1]	
Austria	8,110	214	Euro	53	64 (58)
Belgium	10,252	282	Euro	81	57 (62)
Benin	6,272	6	CFA franc (W)	34[1]	9 (4)
Burkina Faso	11,274	11	CFA franc (W)	28	31 (6)
Cameroon	14,876	24	CFA franc (C)	18[1]	1 (4)
Central African Rep.	3,717	4	CFA franc (C)	14[1]	18 (1)
Chad	7,694	7	CFA franc (C)	13[1]	18 (2)
Congo, Republic	3,018	2	CFA franc (C)	61	3 (0)
Côte d'Ivoire	16,013	24	CFA franc (W)	33	0 (19)
Dominica	73	1	EC dollar	66[1]	4 (17)
Equatorial Guinea	457	3	CFA franc (C)	21[1]	5 (1)
Finland	5,177	127	Euro	32	34 (34)
France	58,892	1,438	Euro	26	54 (49)
Gabon	1,230	7	CFA franc (C)	28[1]	2 (0)
Germany	82,150	2,047	Euro	33	41 (40)
Greece	10,560	178	Euro	33	49 (34)
Grenada	98	1	EC dollar	85[1]	2 (15)
Guinea-Bissau	1,199	1	CFA franc (W)	39[2]	16 (0)
Ireland	3,794	97	Euro	80	20 (37)
Italy	57,690	1,354	Euro	27	48 (46)
Luxembourg	438	20	Euro	133	79 (74)
Mali	10,840	8	CFA franc (W)	34	22 (3)
Montserrat	13	<1	EC dollar		
Netherlands	15,919	412	Euro	60	39 (64)
Niger	10,832	8	CFA franc (W)	15[1]	21 (4)
Portugal	10,008	170	Euro	41	66 (66)
St Kitts & Nevis	41	<1	EC dollar	90[1]	3 (0)
St Lucia	156	1	EC dollar	71[1]	3 (5)
St Vincent & Grenadines	115	1	EC dollar	58[1]	2 (14)
Sénégal	9,530	14	CFA franc (W)	35[1]	0 (13)
Spain	39,465	760	Euro	31	55 (59)
Togo	4,527	6	CFA franc (W)	44[1]	9 (18)

Note: (W) West African Economic and Monetary Union; (C) Central African Economic and Monetary Community.

[1] 2000.

Sources: IMF, *International Financial Statistics*, *Direction of Trade Statistics*; World Bank, *World Bank Atlas 2001*.

Applied literature on optimum currency areas (OCAs)

Goodhart's (1995) much-cited comment that "the theory of optimum currency areas has relatively little predictive power. Virtually all independent sovereign states have separate currencies, and changes in sovereign status lead rapidly to accompanying adjustments in monetary autonomy" has not deterred a large number of economists from assessing which economies form OCAs.

Bayoumi and Eichengreen (1994) used a structural vector autoregression approach and concluded that there were three plausible sets of candidates for monetary unification. One was in Europe (Austria, Belgium, Denmark, France, Germany, the Netherlands and perhaps Switzerland), one in northeast Asia (Japan, Korea and Taiwan) and one in southeast Asia (Hong Kong SAR, Indonesia, Malaysia, Singapore and possibly Thailand), but none in the Americas.

A study using similar techniques reported in Alesina and Barro (2001) concludes "there seems to be a fairly clear dollar area involving Canada, Mexico, most of Central America, and parts of South America. The Philippines, Hong Kong and Singapore also belong [to the dollar zone]. The euro area includes all of Western Europe and most of Africa. There does not seem to be a yen area beyond Japan, except perhaps for Indonesia".

Europe

A number of studies find that western Europe does not meet the OCA criteria as closely as do the US states or groups of states. This is particularly true for labour mobility, unsurprisingly given that the United States has (more or less) a single language. Studies such as Bayoumi and Eichengreen (1994) also show that shocks are more highly correlated within the United States. However, a more disaggregated study by Bayoumi and Prasad (1995) suggests that the relative importance of aggregate, industry-specific and region-specific shocks is similar in the United States and Europe.

Masson (1999) suggests central European countries' industrial structure does not imply obvious problems of asymmetric shocks in forming a currency union with western Europe. Fidrmuc and Korhonen (2001) conclude that Estonia, Hungary and Latvia have faced supply shocks similar to those of the euro area and Estonia, Hungary and Poland similar demand shocks. It is likely that the shocks are becoming more similar as the economies complete the transition phase and have increasing trade and investment links with western Europe.

Arabian Gulf

Alkholifey (2002) reports that, unsurprisingly as they as are all highly oil-based, the correlations of output growth between the Gulf economies are high. For the same reason, their total trade with each other is very small, although as Jadresic (2002) notes, they buy large shares of non-oil exports from each other. Despite their common language, labour mobility among the Gulf states is relatively low. He notes that capital movements between the Gulf states are still restricted by regulation, lack of transparency and the absence of mutual listings in each other's markets.

Laabas and Limam (2002) find that the real exchange rates of the Gulf economies are closely related and note the political resolve as favouring an RCA. While intraregional trade is currently low and business cycles not that correlated, this may change following adoption of an RCA.

Asia

Wyplosz (2001) argues that, as Asian intraregional trade is already surprisingly high as a proportion of total trade, currency union may have less of a trade-enhancing effect in Asia. Defining shocks as residuals from time series models of real GDP, he finds they are much less correlated within Asia than within Europe (although there is a correlated subgroup of Korea, Malaysia and Thailand).

Eichengreen and Bayoumi (1999) point to the much wider variation in the economic and financial conditions in Asia than was the case in western Europe. Some Asian financial markets are very open while others remain highly regulated and closed. Their empirical work suggests that "on standard optimum currency area grounds, the economies of east Asia would seem to be more or less as plausible candidates for internationally harmonised monetary policies as the members of the European Union. While they do not satisfy all the standard OCA criteria, nor does Europe."

Bayoumi et al (2000) look at the ASEAN countries, note the high intraregional trade and find "underlying (aggregate supply) disturbances are relatively highly correlated across certain ASEAN countries, but the correlations are typically lower than they were in Europe ... the speed of adjustment is much faster in ASEAN, presumably reflecting the region's more flexible labour markets ... [and] the transmission mechanism of monetary policy is only slightly more diverse within ASEAN than in the euro area". They conclude "overall, on the economic front ... ASEAN today is less suitable for a regional monetary arrangement than the euro area was before the Maastricht Treaty, but the differences are not large". But politically, there is a lot further to go.

Baek and Song (2002) note that intraregional trade is as high within east Asia as within western Europe. While manufactured goods are a similarly high proportion of exports in most Asian economies (not Brunei, Myanmar and Vietnam), there are significant differences in the type of manufactured exports, with Japan and Korea large exporters of heavy machinery but China and Indonesia exporting lower-value products. Using the approach of Eichengreen and Bayoumi (1999), they find significantly correlated supply disturbances within Hong Kong, Indonesia, Japan, Korea, Malaysia and Thailand (and marginally so with Taiwan), suggesting these economies could form an OCA. Broadly the same group of economies have correlated demand shocks also. However, both the demand and supply shocks have been larger in Asia than in Europe. Choi (2002), while generally supportive of Asian currency union in the long term, warns that labour mobility in most of Asia is much lower than in western Europe and that China and Japan face asymmetric shocks. For the subgroup of ASEAN countries, though, Madhur (2002) believes capital and labour mobility, and price and wage flexibility, compares well with Europe.

Sabhasri and Janevathanavitya (2001) conclude that Korea, Malaysia, the Philippines, Singapore and Thailand (but not Indonesia) would be suitable candidates to join a yen currency area. Yuen (2000) suggests there are three pairs of economies that could each adopt a common currency; Malaysia and Singapore, Japan and Korea, and Hong Kong and Taiwan. These could later be joined by other economies to form "clusters" and eventually merge into a single Asian currency.

But there remain large differences between some Asian countries. Even within China, Hong Kong does not yet form an OCA with the mainland, according to Tsang (2002).

Oceania

Counterfactual simulations by Grimes and Holmes (2000) lead them to conclude that a currency union of New Zealand with Australia (or the United States) would not impair the buffering role of the exchange rate.

Americas

Murray (1999) argues that Canada's terms of trade move in opposite directions to those of the United States in response to fluctuations in commodity prices. He also cites work suggesting that structural shocks hitting Canada, Mexico and the United States share very few common characteristics, whereas those hitting regions within the United States are similar and those hitting the Canadian provinces are similar. However, Beine and Coulombe (2002) argue that it would be advantageous for the two largest Canadian provinces to use the US dollar.

Levy-Yeyati and Sturzenegger (2000) conclude that the Mercosur countries do not constitute an OCA, and are unlikely to do so in the future. They argue the countries would be better off adopting the US dollar. Compared to western Europe, there is much less trade and labour mobility among the members, wider differences in average income and less similarity in the shocks facing them. The euro had credibility from being seen as, in a sense, the successor to the strong Deutsche mark. For Mercosur to gain this kind of credibility, they would need to adopt the US dollar.

Scandizzo (2002) reports that within the Andean Community the strongest output correlations are between the oil exporters Colombia, Ecuador and Venezuela, but these are below those between European countries. Interregional trade is much smaller than within Europe, and well below that in Mercosur. The Andean countries also have very rigid labour markets.

Temprano Arroyo (2002) says that no Latin American regions meet the traditional OCA criteria. However, taking into account aspects such as unofficial use of foreign currencies and credibility problems, there may be a case for monetary integration. Berg et al (2002) conclude Latin American

countries do not constitute an OCA as they do not trade that much with each other, face diverse shocks and have uncoordinated business cycles.

Africa

Masson and Pattillo (2001) examine the project of creating a currency union among all the 15 economies of West Africa. They note that the problem of asymmetric shocks (a key element of the OCA literature) is especially acute for the region, since Nigeria as a major oil exporter faces very different terms of trade to the other countries. Ogunkola (2002) concurs, adding that many African economies are dominated by (differing) single commodities. Masson and Pattillo (2001) also note the relatively low level of intraregional trade (see Table 3), which suggests that the transaction cost savings from a common currency might not be very great.

Mkenda (2001) concludes that Kenya, Tanzania and Uganda tend to be affected by common shocks.

USA

There are also studies of whether existing countries are OCAs. Kouparitsas (2001) concludes based on sources and responses to shocks that while New England, the Mideast, Great Lakes, Rocky Mountains and Far West form an OCA, the Southeast, Plains and Southwest do not belong.

Annex B:
Currency boards

Currency boards have by constitution full backing of the currency by foreign assets (Table B1). They also tend to have more foreign assets relative to the money supply than do central banks.

Table B1

Currency boards and central banks: size of foreign assets (end-2001)

	% to currency	% to money base	% to broad money
Currency boards			
Argentina	164	84	20
Bahamas	203	76	9
Bosnia	164	108	56
Bulgaria	258	197	71
Djibouti	133	119	22
Estonia	210	110	47
Hong Kong SAR	815	357	27
Lesotho	3,493	1,030	258
Macau SAR	1,691	846	36
Namibia	...	295	27
Median	*210*	*119*	27
Other			
China	127	48	13
Euro area	140	64	7
Japan	63	49	16
United Kingdom	35	19	1
United States	12	11	1

Source: IMF, *International Financial Statistics*, lines 11, 14, 14a, 34, 35.

Currency boards were little discussed in the economics literature during the first decades of their existence. Interest in them surged after their readoption by Hong Kong in 1983 and Argentina in 1991. However, this literature generally made simplifying assumptions appropriate to the simple colonial currency boards but not to modern day systems; see Hawkins (2003b). One example of this was the implication of almost fixed relationship between currency and broad money. Table B2 shows this is not the case.

While interest rates were less relevant in the colonial currency boards, they are crucial to understanding the transmission mechanism in modern day currency boards, as they are in understanding the operation of central banks. Inflation in modern day currency boards is determined by the effect of domestic interest rates (heavily influenced by those in the reserve currency economy) on domestic activity with non-tradable prices in the reserve currency economy providing a loose anchor. See Hawkins (2003b) for a fuller discussion and Ha et al (2002) for an econometric model of a currency board economy from a similar intellectual tradition.

Table B2

Correlation of monthly change in monetary authority foreign assets with

		Currency	Base money	Broad money
Currency boards				
Argentina	Jan 1996-Dec 2000	0.60	0.60	0.36
Argentina	Jan 2001-Dec 2001	0.11	0.45	0.71
Bosnia & Herzegovina	Jan 1998-Dec 2002	0.87	0.99	0.89
Bulgaria	Jan 1988-Dec 2002	0.35	0.40	0.24
Djibouti	Jan 1996-Oct 2002	0.61	0.74	-0.01
Estonia	Jan 1996-Dec 2002	0.50	0.85	0.15
Hong Kong SAR	July 1997-June 1998	0.02	0.80	–0.93
Hong Kong SAR	Jan 1999-Dec 2002	0.05	0.24	0.49
Lesotho	Jan 1996-Nov 2002	0.02	0.03	–0.08
Lithuania	Jan 1996-Oct 2002	0.14	0.08	-0.04
Other economies				
Australia	Jan 1996-Dec 2002	0.26	0.15	–0.05
Chile	Jan 1996-Dec 2002	0.52	–0.01	0.05
Latvia	Jan 1996-Dec 2002	0.31	0.39	0.24
United Kingdom	Jan 1996-Dec 2002	–0.16	–0.04	–0.23
United States	Jan 1996-Sep 2002	0.23	0.24	0.14

Source: BIS calculations based on data from IMF, *International Financial Statistics*. Foreign assets are line 11, currency line 14a, money base line 14 and broad money the sum of lines 34 and 35.

Another difference with the modern day currency boards is the existence of an active foreign exchange market. Arbitrage should keep market rates close to the official rate. Empirically it had been the case that deviations from the link rate were higher in Hong Kong SAR where only currency transactions were conducted at the link rate, than in Argentina, where convertibility had also applied to bankers' deposits with the central bank.

Table B3

Short-term volatility of interest rates[1]

Currency boards			Other economies		
Argentina	Jan 1996-Dec 2000	52	Argentina	Feb 2002-Dec 2002	712
Argentina	Jan 2001-Dec 2001	310	Australia	Jan 1996-Dec 2002	1
Estonia	Jan 1996-Dec 2002	139	Chile	Jan 1996-Dec 2002	9
Hong Kong SAR	Jan 1996-June 1997	28	Latvia	Jan 1996-Dec 2002	59
Hong Kong SAR	July 1997-June 1998	65	United Kingdom	Jan 1996-Dec 2002	19
Hong Kong SAR	Jan 1999-Dec 2002	5	United States	Jan 1996-Dec 2002	12
Lithuania	Jan 1996-June 2002	88			

[1] Average daily absolute changes in one-month money market rates; basis points.

Sources: Bloomberg; national data.

Annex C:
Seigniorage losses from adopting a foreign currency

Seigniorage is the rate of return earned on central bank assets multiplied by currency on issue (less costs of printing the currency, but these are minor in all but the smallest economies). Table C uses the government bond yield (a risk-free domestic asset for the central bank, and an alternative source of funding for the government) as the rate of return for central bank assets. If currency on issues grows in proportion to GDP, a simple assumption consistent with observed patterns,[19] then if interest rates are unchanged seigniorage will be a constant proportion of GDP. The amounts in Table C are not insignificant but are small relative to the output losses from currency and banking crises.

Table C

Currency seigniorage (% to GDP; average 1999-2001)

China	0.7
Indonesia	0.3
Korea	0.2
Singapore	0.1
Thailand	0.1
Brazil	0.8
Mexico	0.3
Hungary	0.5
Poland	0.3
Russia	1.4
South Africa	0.2
Advanced economies[1]	0.1

[1] Simple average of Australia, Canada, Switzerland and the United Kingdom.

Source: Hawkins (2003a).

Seigniorage calculations sometimes include below market interest rates paid on reserves banks are required to hold with the central bank. But even if a foreign currency is officially adopted, banks could be required to hold such reserves with a government department and so this quasi-tax could still be collected. Within an RCA it may be better for the regional central bank to do this and then share the proceeds among its members, perhaps after meeting the cost of bank supervision if this is conducted by the regional central bank.

In a country with substantial currency substitution, the amount of domestic currency on issue will be correspondingly lower, and so the loss in seignoriage smaller. It is, however, quite hard to quantify this due to the many factors affecting currency/GDP ratios. Less developed financial systems, availability of high denomination banknotes, larger "underground" economies and other forms of tax evasion, lower crime rates, low acceptance of credit cards and electronic money all lead to higher usage of currency. Comparing domestic currency usage in economies with and without substantial currency substitution suggests currency is of the order of 1% of GDP lower in the latter on average.

[19] Berg and Borensztein (2000) instead assume currency on issue will grow by 0.3% of GDP each year, the annual increase in the G7 countries over the 1990s. But some (or perhaps a lot) of the increased issue of G7 currency was being used outside the G7 so this may not be a good assumption for emerging economies. If forms of electronic money become prevalent currency may contract, although there has been minimal sign of this happening so far; see Hawkins (2001).

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Regional currency areas: a few lessons from the experiences of the Eurosystem and the CFA franc zone

Marc-Olivier Strauss-Kahn[1]

1. Introduction

Contemporaneously with the run-up to European economic and monetary union (EMU) and the successful introduction of the euro, the issue of whether or not to adopt common currency arrangements, from regional currency areas (RCAs) to currency boards and even the unilateral adoption of a foreign currency, has ranked high among the topics discussed by the policymakers of many countries.

As suggested recently by Alesina and Barro (2001, 2002), two main factors may have contributed to this renewed and sustained interest in exchange rate arrangements. One may be, rather obviously, the ongoing process of globalisation, which could be briefly characterised as the remarkable and steady increase in international trade in goods, capital and services over the recent period. The other, which is subtler, may be the increased emphasis that has been put by policymakers on price stability, as opposed to active macroeconomic stabilisation, as a primary goal for monetary policy. These changes have led to a general reassessment of the benefits and costs for smaller open economies of constituting an RCA. Although a number of criteria must be fulfilled (such as increased trade integration), the costs of relinquishing monetary policy autonomy at a national level may seem more and more likely to be outweighed by the benefits. The latter include reduction of transaction costs in external trade and increased price stability when anchoring to partner economies with a better inflation track record or a lower long-term inflation rate.

As a concise contribution to this important debate, this paper endeavours to underline some of the conditions underpinning the success of RCAs, in their different forms. It makes special reference to the experience of the Banque de France within the Eurosystem, the system composed of the ECB and the 12 national central banks of the euro area, as well as through its partnership with the central banks of the CFA franc zone.[2]

First of all, it is necessary to stress that the creation of any properly functioning monetary union is an achievement requiring primarily time. Apart from the CFA franc zone, which dates back to 1939, the example of EMU as the crowning phase of a very long process of nominal and structural European convergence would be enough by itself to underline the need for a strong political will to achieve union, sustained over several decades. See Annex 1 for a short reminder of the EU and EMU construction process and Annex 2 for a chronology of the African franc zones.

With this temporal aspect and the experience of both EMU and the CFA franc zone in mind, this paper seeks to consider present and future challenges. It focuses on macroeconomic policies and structural reforms, namely how to formulate monetary policy strategy in an RCA (Section 2); the degree of coordination required between decentralised fiscal policies in such an area (Section 3); and how to deal with financial stability issues (Section 4).

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[1] This paper has benefited from key contributions by Philippe Bonzom, Emmanuel Carrère and Jean-Stéphane Mesonnier, and from substantial comments, notably by François Mouriaux and Jean-Patrick Yanitch.

[2] The CFA central banks are the Central Bank of Western African States (BCEAO), the Bank of the States of Central Africa (BEAC) and the Central Bank of the Comoros.

2. How should monetary policy be formulated in a regional currency area?

This paper does not intend to tackle the theoretical issue of defining an "optimal" monetary policy in a regional currency area. Regarding the definition of monetary policy, it focuses on four practical issues - the prerequisites and consequences of the fixing of the exchange rate, the definition of price stability, the sources of price dispersion across participating countries and the assessment of the transmission mechanisms of monetary policy impulses - drawing, in particular, from the experience of the Eurosystem.

The general requirements stemming from fixing the exchange rate

The fixing of an exchange rate, and the correlative forsaking of this instrument, can be successfully achieved only if decision-makers have settled a number of preliminary issues.

First, one has to be aware of the close interaction between the goal and the process. The goal is, most generally, to create a zone providing increased internal stability, based on price and fiscal discipline. The process for reaching this goal should include the establishment of appropriate institutions, frameworks and procedures, but also the achievement of a "culture" of peer pressure among decision-makers. In this sense, the process may be considered as important as the ultimate outcome. In the case of the European Union, for instance:

- Countries first accepted a constraint through participation in an exchange rate mechanism (the core group participated for over 20 years in this ERM and avoided any realignment for more than 12 years) before EMU.
- The countries set up preliminary institutions (eg the Committee of Governors in 1964, the European Monetary Institute in 1994 and the Monetary Committee as early as 1958) in which a common culture for stability and an acceptance of peer pressure gradually emerged.

Second, a clear vision of the balance of costs and benefits is needed. However, the establishment of such a vision is not always easy. Indeed:

- Some costs may already be borne (eg in the case of small open economies with little monetary autonomy).
- Costs are often perceived quickly whereas benefits are usually enjoyed more progressively (although exceptions exist: some benefits can materialise even before the finalisation of a formal RCA, as was the case in 1998 with the "de facto EMU" leading to the quasi-elimination of bond spreads across countries one year before formal EMU).
- Unrealistic expectations often translate into higher costs. For instance, it would be wrong to believe that the establishment of an RCA will significantly reduce the external constraint and diminish the need for structural reforms. It is true that a single currency is a structural reform in itself, since it affects (ie reduces) the costs incurred by the economy. However, a practical consequence of a single currency is also the disappearance of some highly visible indicators of competitiveness or of market assessments of national policies (like the exchange rate of a country vis-à-vis its main trading partners if they participate in the same RCA). This means that, in an RCA, even more attention needs to be devoted to monitoring (and fostering) competitiveness through unit labour costs and productivity gains. As recent history has shown, this is also relevant for currency boards, in which undetected and unsolved currency mismatches, misalignments or fiscal slippages result in increased borrowing, which has to be repaid sooner or later, often at a high cost for the economy.

It is thus quite clear that problems may emerge if a critical threshold of requirements and conditions is not achieved and maintained by each country prior to and after the establishment of an RCA.

The definition of price stability: the European experience

The Maastricht Treaty assigns to the Eurosystem the primary objective of maintaining price stability in the euro area as a whole. With a view to conducting a transparent monetary policy, this objective was quantitatively specified in 1998 by the Governing Council of the ECB as "a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%". Furthermore, the

Governing Council stated that this objective has to be met over the medium term, reflecting the consensus that:

- Monetary policy is unlikely to affect the level of prices in the short run due to its transmission lags.
- Short-term volatility in inflation can thus not be offset by monetary policy.

Price stability is assessed in terms of a specific aggregate price index - the HIPC. This index is the result of painstaking work in cross-country methodological harmonisation agreed on by all the participating states and including, for instance, common rules for the treatment of new goods and services, a harmonised classification of sub-indices - allowing for cross-country sectoral comparisons of price developments, as well as common revision procedures for the various commodity weights.

Moreover, since the price index is based exclusively on price developments occurring in member states, the single monetary policy would not take into account price developments (in fact, any developments) in other countries that choose to unilaterally adopt the euro as their domestic currency. In the view of the European authorities, the adoption of the euro is linked to EU membership and to the fulfilment of several macroeconomic criteria.

In the European case, the move to a single currency has rounded off a long process of convergence towards low inflation rates in all participating countries. And indeed, low inflation is among the criteria for EMU entry. All in all, this process has proved successful. For instance, national inflation levels ranged from 1.8% (for France) to 5.1% (for the Netherlands) in annual terms in 2001, while the rate of inflation for the euro area as a whole reached 2.5% in 2001. Inflation differentials across the area are now well below their 1996 levels of 8 to 12 percentage points. In addition, cross-country inflation differences within the euro area also remain moderate compared with inflation dispersion observed across US cities: see ECB (1999).

Nevertheless, some inflation differentials across euro area countries can still be observed. This has sometimes been pointed out as a possible issue of concern for the single monetary policy. Some clarification should be made in this regard. The existence of a monetary union per se does not imply that all participants either would or should continuously experience the same rates of inflation. Consequently, not all inflation differentials should be of concern for overall price stability and for the single monetary policy. In this regard, it is of crucial interest to determine the pattern of price dispersion effectively at play.

Price dispersion issues and convergence

There are three sources of inflation divergence, with relatively little importance in terms of risks for overall price stability in the medium run.

First of all, a number of statistical factors, as well as unpredictable events, such as weather conditions or non-synchronised tax changes at national levels, may temporarily affect price developments in participating countries - unprocessed food prices, for example - without significantly affecting the risks for aggregate price stability in the medium term for the whole euro area.

More interestingly, the progress of market integration is very likely to speed up the convergence of price levels of traded goods if these were initially different among member states. Trends in car prices in the euro area over the last few years may provide a good example of this. To the extent that individual prices seldom fall, however, a reduction in price differentials translates, in the transition period, into increased inflation differentials between countries.

Finally, besides this nominal convergence process, a real convergence process may account for a part of inflation differentials among countries participating in an RCA, whose initial living standards may be relatively heterogeneous. This is the so-called Balassa-Samuelson effect, which states that, under a set of standard assumptions, including the price of traded goods being set at the international level and cross-sectoral wage equalisation, intersectoral differentials in productivity growth between internationally traded and non-traded goods and services imply a rise in the relative price of non-traded goods. This sectoral rise in prices usually leads to higher total inflation in the less developed economy and to an appreciation in the real exchange rate under a nominal exchange peg. In the long run, as the real catching-up process advances, the magnitude of the Balassa-Samuelson effect is expected to diminish in absolute terms in the RCA. However, the disinflation process may increase the relative importance of this effect.

Undoubtedly, the Balassa-Samuelson effect was at play to some degree among the economies of the current euro area over the 1990s: for a review of empirical studies see De Grauwe and Skudelny (2000). Nevertheless, the available empirical studies suggest that most of the inflation differences between rapidly growing member states and the rest of the euro area cannot be attributed to this effect. In Greece, according to IMF estimates, the effect accounted for no more than 1.7 percentage points of annual inflation during the 1990-96 period, when the average inflation rate there reached 14%. In the case of Portugal, according to a recent study by their central bank, the annual inflation differential with Germany that may be justified by relative productivity gaps remained below 1.9 percentage points during the whole period from 1986 to 1995. In the case of Spain, available studies failed to provide evidence of any significant effect during the 1990s: see Estrada and Lopez-Salido (2002).

To sum up, many sources of inflation dispersion across the euro area are out of reach of the single monetary policy and should not be of concern for the Eurosystem. Nevertheless, as stated by the ECB (1999), "if sizeable and protracted inflation differentials not justified by the effects of either market integration and real convergence were to emerge, this could result in undue changes in competitiveness and in economic imbalances in individual euro area countries". Such imbalances would require national policy responses in terms of fiscal and/or structural policies (see Section 3).

Monetary policy transmission mechanisms

To a certain extent, the Eurosystem may have to cope with both increased complexity and increased uncertainty in the functioning of the mechanisms by which key interest rate changes are transmitted to relevant macroeconomic variables, namely long-term rates, inflation and activity:

- More complexity, as these transmission channels may remain somewhat country-specific well after entry into monetary union (due to the specific structural features of the banking and financial sectors, for example).
- More uncertainty, as the introduction of the new single currency may induce changes in consumption or production behaviours (eg with an impact on the stability of money demand) as well as changes in the monetary definition process itself, in order to account for the new environment (including the relatively reduced importance of the exchange rate channel).
- However, such difficulties should not be overstated. Firstly, there is no reason why the single monetary policy, which pursues an objective of price stability at the euro area level, should have identical effects in the different member states. Secondly, the convergence process between the core countries of the euro area was completed before the introduction of the euro. The new currency is therefore unlikely to have induced a regime shift in these countries or major changes to the monetary transmission process (Box 1 mentions a number of recent empirical studies based on a variety of econometric tools).

Taking into account this difficulty in assessing the "true" transmission mechanisms of the single monetary policy, there is a clear rationale for the two "pillars" of the monetary policy strategy of the Eurosystem. This strategy assigns a prominent role to monetary developments (the first "pillar", including a "reference value" for the annual growth of broad monetary aggregate M3), but also requires the ECB to monitor a broad range of real and financial variables, which act as leading indicators of short-term inflationary pressures (the second "pillar").

The exchange rate is, of course, one of the variables of the second pillar. In the process to EMU, the exchange rate was often a key anchor: in France, for instance, the stability of the exchange rate was a key element of the monetary policy strategy with a view, inter alia, to safeguarding the single market and completing EMU. Also, sustainable stability of the exchange rate in the context of a full liberalisation of capital flows was one of the criteria for entry into EMU. After monetary union, the exchange rate remains a relevant indicator, all the more so since the exchange rate channel of the monetary policy for the area as a whole remains active. Thus, although the exchange rate is not an objective as such for the single monetary policy, there is clearly no place for any benign neglect of the external value of the euro in the monetary policy strategy of the Eurosystem.

To conclude, the thorough cross-checking of the information derived from both "pillars" allows the conduct of a more robust monetary policy - ie a policy that is more likely to deal correctly with an uncertain environment.

Box 1

Recent empirical studies on the transmission mechanism of the single monetary policy across member economies: a brief overview

In 2001, an expert group from the national central banks of the Eurosystem performed a coordinated exercise of extrapolating from the their individual macroeconomic models the impact on national economies of a temporary increase in ECB rates of 100 basis points. They concluded that the impact of monetary policy on prices and activity appeared to be somewhat higher in southern countries and Germany: see Locarno et al (2001).

Other authors preferred small structural models or structural VAR models, which suggested slight differences in impacts. See Jaillet and Pfister (2002) for a short selection of references.

Other Eurosystem studies focused more specifically on the pass-through of changes in ECB rates to retail banking rates and on the elasticity of flows of new bank loans to short-term rates, which may in both cases provide interesting insights into the credit channel due to the still important financing role of banks in the European economies. The results suggest the existence of some asymmetries among member states in terms of interest rate pass-through: see Mojon (2000). In any case, one should keep in mind that the relative role of the narrow credit channel, as opposed to both the interest rate channel and the broad credit channel, is likely to decrease with the progress of financial market integration in the euro area and the development of these markets.

3. How should fiscal policies be handled in an RCA?

Besides the formulation of a single monetary policy for the whole area, the efficient coordination of fiscal (and structural) policies, which are still defined at the national level, is crucial to the success of an RCA. The academic literature on optimum currency areas (OCAs) emphasises the difficulty of coping with asymmetric shocks that may hit some of the participating countries, at a time when monetary policy autonomy has been relinquished at the national level. This section starts by looking at this question and then discusses the respective institutional answers of the euro area and the CFA franc zone to this major challenge.

Coping with asymmetric shocks

Since the seminal contributions by Robert Mundell (1961) and Ronald McKinnon (1963), the economic literature has become accustomed to assessing the sustainability of RCAs in terms of their distance from OCAs. These are defined as groups of countries which may optimally share the same currency (or irrevocable peg) because they fulfil a set of criteria or properties acting as prerequisites.

From the well known theoretical conditions singled out by Mundell and other pioneers of OCA theory, such as a high degree of bilateral economic openness, a significant mobility of factors, and price and wage flexibility as an alternative to exchange rate variability, the list of OCA criteria has of course evolved over time. It has been enriched to the point that it had become more and more difficult to rank the proposed criteria by priority and use them for the practical assessment of RCAs. Fortunately, the similarity of shocks faced by economies applying to join RCAs has emerged over the years as a pertinent meta-property, a kind of a catch-all criterion summarising many others: see Mongelli (2002). Following this, Frankel (1999) proposed in particular to focus on two key indicators for deciding whether or not to adopt a single currency: the degree of trade integration among members of the area and the correlation of business cycles between them. Both are aimed at ensuring a low probability of asymmetric output shocks. Of course, these conditions should not be exclusive of others, notably labour mobility and the existence of some risk-sharing devices (such as a common budget or integrated financial markets) between members of the area.

In fact, the prevalence of asymmetric shocks affecting countries participating in an RCA should be a major concern for area-wide and national policymakers, since it could threaten the sustainability of the monetary union itself. In the face of an adverse asymmetric shock, the former policy tool of a devaluation is of course not available any more. Besides, as stressed by the consensus among economists, and in line with the Tinbergen rule of “one objective-one instrument”, the single monetary policy is committed to maintaining price stability. If it tried to fine-tune the level of economic activity,

this would prove inefficient in the medium run since it would undermine the credibility of the monetary authorities and result in inflation premia for all participating countries. For an adversely and asymmetrically shocked country, the advantages of joining the union in terms of monetary efficiency (reduction of transaction costs, benefits of credibility, lower long-term inflation rate, etc) could be offset by the costs in terms of output stabilisation and unemployment.

In the same vein, smaller transition or emerging market economies that decide to unilaterally adopt the currency of an anchor economy, hereafter called "dollarisation" for the sake of simplicity, would be very likely to experience severe downturns in case of adverse asymmetric shocks. Countries usually expect to gain increased discipline or fiscal benefits from dollarisation - and indeed such a move should help to reduce debt servicing costs given that in such countries a high share of public debt is generally denominated in foreign currencies, and to tighten the government's budget constraint. However, there is neither evidence nor strong theory to suggest that dollarisation will eliminate fiscal problems at a stroke: see Eichengreen (2002). Moreover, there is neither evidence nor undisputed theory that such a unilateral adoption of a strong foreign currency will lead to a smooth harmonisation of business cycles with the anchor economy or bypass the need for in-depth financial sector reform. All in all, there is a high risk of underestimating the necessary reforms to be undertaken before any move towards relinquishing the domestic currency. The consequences of a short-sighted approach in this regard would be all the more painful since, unlike in the case of a multilaterally agreed RCA, the small dollarised economy would in no way be able to influence the definition of the anchor area's monetary policy.

The European case

Turning back to the European experience, what can we say about the fulfilment of OCA criteria and Europe's ability to contend with asymmetric shocks?

Until recent years, a common assertion by some economists was that Europe was too heterogeneous a geographical area to form a well-functioning monetary area. Labour mobility within the euro area is indeed usually described as low and European labour markets as more rigid than, for example, that of the United States.

Yet the case for the sustainability of EMU in the long run is supported by the evidence of a high degree of trade integration among participating economies, the diversification in consumption and production of those economies and the achievement of a long nominal convergence process. Also, the correlation of business cycles in the euro area does not seem to be significantly inferior to the corresponding correlation between regions of the USA, as pointed out by Mihov (2001). This holds even though the observed long-run real convergence process between European economies, as measured by the series of intra-area standard deviations of annual output growth rates, has tended to slow since 1997: see Jaillet and Pfister (2002).

Furthermore, account must be taken of the fact that the main OCA criteria are partly endogenous. As Frankel and Rose (1998) put it, "more integration can be expected to lead to more trade and more international trade will result in more highly correlated business cycles". Of course, such a case for monetary unions is not undisputed. In a famous paper, Krugman (1993) put forward an opposing view inspired by international economics, where decreasing transaction costs brought about by the peg lead to increased industrial specialisation and finally to a greater probability of destabilising asymmetric shocks. This theoretical case against the sustainability of RCAs does not, however, seem appropriate for the European context, where intra-industry trade largely dominates intra-EMU trade, with a share, for example, of 70% in France, 67% in Germany and 54% in Italy, making Krugman's disintegrating specialisation process most unlikely. To conclude with the European case:

- The fact that the process might be partly "endogenous" does not mean that practical convergence criteria should not be considered as binding for joining the single currency area. As a matter of fact, the so-called Maastricht criteria are now part of the "acquis communautaire" for EMU. Those are "nominal", rather than "real", criteria but the "endogeneity" of the process means that the critical OCA conditions (eg labour mobility) may be progressively fulfilled, even if not totally ex ante.
- The probability of large asymmetric shocks endangering EMU is relatively low. The need for a single fiscal policy in the euro area, in order to prevent the occurrence of asymmetric shocks, should as a consequence not be overstated, although this does not mean that there is no need for close coordination, permanent vigilance and peer pressure in this area.

- Indeed, in the absence of a significant federal budget at the European Union level,[3] the very important tasks of stabilising output in face of area-wide output shocks and maintaining an adequate level of fiscal discipline lie with national economic policies, with strong coordination provided at the European level. This coordination is essential for several reasons, including the following:
    - A common budgetary response may be needed to dampen symmetric shocks that could affect the euro area as a whole.
    - The enforcement of multilateral surveillance and strict discipline of national economic policies - especially fiscal policies - also appears crucial to prevent "free rider" national behaviours, where excessive deficits in one country lead to increased risk premia on long-term interest rates for all countries. This is all the more important given that financial markets are slow to discriminate correctly between the different credit risks of sovereigns, including within EMU. Also, sound fiscal policies need to be conducted, over the medium term, in order to reload the "fiscal gun" during upward periods of the growth cycle and to build room for automatic stabilisers to play their role, if need be, during downward periods.
    - A consistent policy mix is in any case required at the euro area level as it is in any other economy. If the required surveillance and coordination fail to define the appropriate fiscal element of this mix, to accompany the monetary policy defined independently by the Eurosystem, then the union will face a host of threats. These could include the risk of "overburdening" monetary policy, or the risk that an opaque policy mix could be sanctioned by market operators and undermine the international credibility of the single currency.

How does this surveillance and coordination work in practice? The conduct of fiscal policies within EMU is fully decentralised, reflecting the still large differences among member states in national preferences with regard to both revenue and spending and reflecting also the fact that important public goods such as social security, health and education are provided at the national level. Against this background, the framework for the conduct of fiscal policies has nevertheless to be designed in order to minimise the risk of negative spillovers from inadequate fiscal policies in some of the participating countries. As an answer, appropriate forms of policy coordination, such as ex ante agreements on common rules and objectives that serve as guidelines for national policies, have to be created.

The present coordination framework of fiscal policies within EMU establishes, on the basis of the Maastricht Treaty provisions, a regime which could be best described as one of "constrained flexibility": see ECB (2001b). The provisions for ex ante commitments are enshrined in the Maastricht Treaty. "Sound public finances" are put forward as a guiding principle (Article 4), which is consistent with the prohibition of monetary financing of public deficits and the existence of an explicit "no bail out" clause (stipulating that neither the European Union nor the other member states shall be liable for the commitments of a member state). Most importantly, the Treaty contains an obligation to avoid "excessive deficits" (Article 104). This constraint has been complemented by the Stability and Growth Pact (SGP), which stipulates quantifiable debt and deficit rules and thus provides a clear policy orientation to the budgetary authorities in the member states.

Against the backdrop of such commitments, the member states have also developed a network of multilateral procedures and use a number of important policy instruments. Among these, the Broad Economic Policy Guidelines constitute the main instrument designed to facilitate the coordination of economic policies at EU level (apart from monetary policy, of course, thus respecting the independence of the ECB). By setting, annually, the common standard for various fields of possible public intervention, including public finances, taxation and labour market regulation, against which subsequent policy decisions at the national level have to be assessed, the Guidelines pave the way for a kind of "soft" coordination (see ECB (2001b)), which relies mainly on "peer pressure" to galvanise governments into appropriate policy actions. The procedure appears to be soft, but is effective. Even in the absence of strong enforcement procedures, the strength of the ex ante commitments serving as

[3] The revenues raised at national levels for supranational activities of the European Union may not exceed 1.27% of member states' GDP.

a cement for monetary union, combined with the fact that the Guidelines are endorsed by the Heads of State or Government of the member states, endows the proposed orientations with substantial political weight.

The CFA franc zone

The case of the CFA franc zone is worth describing briefly in this context, since both similarities and differences with EMU are instructive. One of the major similarities is the progressive deepening and widening of regional integration. A major difference lies in the reverse order of integration: from economic integration to monetary union in the European Union; vice versa in the CFA franc zone.

The CFA franc zone, as well as its two main sub-components, the two monetary unions of WAEMU for Western African States and CAEMC for Central African States, are clearly not OCAs in the full economic meaning of the term. In particular, in the absence of any regional budget, member economies of each union are exposed to potential external asymmetric shocks, due to the export specialisation of many of the countries in raw commodities (including oil), and also to the effects of climatic conditions on agriculture, in particular in the Sahelian countries.

Also, living standards across both regions are very heterogeneous, especially within the CAEMC. Across the whole CFA franc zone, GDP per capita, for instance, ranges from a factor of 1 to 24. Admittedly, labour mobility is relatively significant (the foreign population can be high - in Côte d'Ivoire it is 27%, mainly employed in cocoa fields) and has benefited from recent reforms such as the introduction of regional passports. However, regional labour mobility remains hindered, inter alia, by poor transport infrastructures. Commercial integration remains low by EMU standards, even though official figures are likely to be underestimated, given the significant role of unofficial trade in these areas (official intraregional trade accounts for only 6% of total official trade in the CAEMC and around 12% in the WAEMU). Last, financial integration remains weak, as suggested for instance by the low share of international transactions in interbank relations.

Nevertheless, the CFA franc zone monetary unions have functioned properly thanks to the effects of the CFA franc zone mechanisms, which provide a favourable framework for enhancing regional integration and economic development (see Box 2 on the following page for details about those mechanisms). There has also been a strong political will over recent years to foster regional integration. Indeed, African CFA franc zone countries have achieved further progress in recent years despite a testing political and economic environment, to the extent that the CFA franc zone stands at the forefront of regional integration efforts in Africa. New institutions have been set up and community regulations have been adopted in the form of directives, in particular to speed up the introduction of customs unions. Thus, the customs union in the WAEMU has been in effect since January 2000, together with the introduction of a common external tariff and the removal of customs duties on intraregional trade. A similar process is ongoing in the CAEMC. In order to maximise the benefits of customs unions, both regions have pursued their efforts at tax harmonisation, leading to the introduction of a harmonised value added tax in each sub-area. In the legal field, which is widely recognised as crucial for development, business law is now governed by a common treaty, and the WAEMU and CAEMC countries have set up (like the European Union) a Court of Justice in each sub-area. In addition, in accordance with the CFA franc zone agreements, both monetary unions have set up regional exchange regulations that also support financial integration by lifting all restrictions on current transactions, in line with Article VIII of the IMF's statutes.

As regards the convergence of economic policies, both sub-areas have implemented a macroeconomic stability pact based on multilateral surveillance and convergence criteria rather similar to the euro area framework. The WAEMU introduced a Convergence, Stability, Growth and Solidarity Pact in December 1999 while the CAEMC adopted four new convergence criteria in 2001 which are identical to the top four criteria embedded in the WAEMU Convergence Pact, namely:

- a zero or positive budget balance by 2002;
- a public debt/GDP ratio of below 70%;
- overdue payments (whether internal or external) by governments to be settled by 2002 for the WAEMU and by 2004 for the CAEMC;
- an inflation rate to be maintained below 3% per year.

Finally, as in the euro area, multilateral surveillance has been reinforced by a commitment to medium-term stability programmes. These efforts have enhanced budgetary policy coordination and added credibility to the CFA-euro peg. In the near future, one of the major challenges facing regional integration policies will be the formulation and implementation of sectoral policies and structural projects to foster more balanced development across the various economic sectors and across the various member states of the unions, with a view to increasing the benefits of monetary union.

Box 2

Some stabilising features of the CFA franc zone mechanisms

The smooth functioning of the supranational central banks (the BCEAO and BEAC) is a first indicator suggesting that both monetary unions have worked properly. These central banks have been able to deliver their objective of maintaining price stability. From 1996 to 2001, inflation averaged about 3% in both areas, compared with 15% in Africa as a whole. This performance can be attributed first and foremost to the nominal pegging of the CFA franc to the French franc, and since 1999 to the euro, as African CFA franc zone countries conduct around half of their foreign trade with the euro area. The vigilant monetary policies conducted by the CFA franc zone central banks lend credibility to this pegging and contribute to its sustainability, as the BCEAO and the BEAC pursue policies aimed at maintaining the internal and external value of their currency. The sound pegging of the CFA franc to the euro is also the fruit of multilateral surveillance of national policies (see Section 3 in the text). In addition, the convertibility of the CFA franc is backed by a foreign partner: the French Treasury (a key and noteworthy difference between the EMU and the CFA franc zone, of course).

CFA franc zone mechanisms have played an essential stabilising role in the area. First, solidarity between member states, via the pooling of all foreign exchange reserves in each issuing area, contributes to encouraging a more rigorous management of public finances. Second, the principle of free transferability within the area facilitates economic and monetary trade flows and tends to increasingly support investment. Thus, overseas direct investment in CFA countries averaged 5% of the total in sub-Saharan Africa over 1985-91, 8% over 1992-99 and 12% in 2000. Moreover, monetary policy, though based on single regional currencies and official interest rates, is implemented through effective decentralised procedures, in order to take into account specific national economic features and facilitate the absorption of potential asymmetric external shocks. Finally, it can be noted that even though all member states have defaulted on their external debt in the past, the sharing of sovereignty in monetary and exchange rate policies has prevented participating countries from experiencing exchange rate crises.

It should be added that the assertion that the CFA franc zone mechanisms have delayed the process of financial integration and rerouted financial links through Paris is unconvincing and not supported by any evidence. Rather, a look at countries neighbouring the CFA franc zone shows that their own degree of financial integration is lower, not higher. Furthermore, although not optimal, the degree of financial integration of CFA franc zone countries benefits from the favourable zone framework (for instance, regional exchange regulations, lifting of all restrictions to current transactions between members, common Treaty business law, common stock exchanges, etc). Finally, what is needed to further financial integration is a reduction in some divergences in market practices and, as elsewhere in Africa, solutions to the persistent lack of infrastructure.

4. Financial stability issues: RCAs and systemic risks

The creation of a new currency union requires that a series of technical issues have been properly addressed in order for the various sources of systemic risk to remain under control and for the central bank to maintain the financial stability of the whole area. Firstly, it is worth recalling that the goal of financial stability is closely linked to the achievement of price stability. If a systemic shock spreads within the financial system, the transmission mechanisms of monetary policy are unable to function effectively. Commonly expected consequences of a systemic shock are excessive interest rate volatility and a surge in risk aversion. Excessive interest rate volatility blurs monetary policy signals, while a surge in risk aversion goes along with shrinking liquidity, and affects the real economy through a wide array of channels.

It goes without saying that any central bank feels concerned with these issues. Yet, they have special importance for an RCA.

- The gradual creation and entry into existence of an RCA may accelerate the consolidation of the banking sector and financial markets.

- While a fully integrated money market is the cornerstone of a regional currency union, it does not necessitate a single financial centre or a unified set of legal or regulatory provisions governing the activity of the financial sector. Indeed, persisting differences in financial systems, as well as the coexistence of several financial centres, should be regarded as a benefit. They sustain competition, innovation, diversity of behaviour, and proximity - both geographical and cultural - thereby extending the benefits of monetary union beyond the achievements of price stability to the overall efficiency of the financing of the economy. However, systemic shocks arising from defaults in the financial sector may also occur in an RCA. On the one hand, such shocks are likely to be better absorbed in an RCA thanks to deeper and more liquid financial markets; on the other, the full integration of the money market and the increase in cross-border flows may magnify spillover effects from one financial centre to another.

Against this background, a framework has to be designed to monitor, and cope with, the risks to financial stability (see Pfister (2000) for a short overview from a central banker's point of view). In this respect, we can distinguish the framework for banking sector stability and supervisory issues from the framework for market integration issues.

Banking sector stability and supervision

The euro area

From the point of view of financial stability, the expected effects of the euro on the financial stability of European banking activities may have been deemed ambiguous. On the one hand, the introduction of the euro, combined with the completion of the single market for financial services, raised reasonable hope that European credit institutions would rapidly benefit from new growth opportunities at a European level. On the other, increased competition and a greater homogenisation of activities may imply in the medium to long run significant downward pressure on margins and provide incentives for riskier behaviour, thus threatening overall stability.

However, it is likely that the ongoing consolidation process at the euro area level will be a fairly progressive one. Such a step by step approach - eg consolidation at the national level, followed by cross-border consolidation of specialised markets like merchant banking, fund management or leasing, and finally pan-European mergers - appears fully consistent with the smooth functioning of a currency area that allows, in a transitional period at least, for residual specificities in national financial markets.

The Eurosystem's ability to face and solve systemic crises in this changing financial environment has been questioned in the past. Two issues are at stake here: the institutional arrangement of prudential supervision and its capacity to prevent the euro area from experiencing any major banking crises, and, if a crisis occurs, the operational efficiency of lender of last resort procedures.

Two remarks may be made to tackle these two issues very briefly. Firstly, the perfect containment of the 11 September 2001 liquidity shock on European banks may supply enough ex post proof that the fears expressed ex ante about the capacity of the Eurosystem to deal quickly and effectively with major liquidity shocks, in a decentralised but coordinated manner, were largely misplaced.[4] Secondly, as far as banking supervision is concerned, there is a good rationale in terms of efficient use of available information to support both:

[4] In the Eurosystem, lender of last resort (LLR) responsibilities are well defined and lie mainly with national central banks (NCBs). First, commercial bank accounts are held at NCBs, and commercial banks have a centralised treasury generally at the head office, so liquidity problems arise in practice in the account held by the head office with the NCB concerned. Second, before providing LLR facilities, it is key to assess whether there is a liquidity or a solvency problem (only the former is treated by LLR) and, since supervision is also decentralised (either at the NCBs or close to them), NCBs can quickly assess the situation and potentially take action. Third, the associated costs are borne at the national level (a successful LLR operation has no cost; in the case of solvency problems, the cost of recapitalisation and restructuring operations is borne at the national level, by deposit insurance schemes and/or by the state). Of course, appropriate information is shared with the ECB.

- A decentralised system, which is able to "act locally", ie implement banking supervision rules at the national level, while "thinking globally", thanks to a constant flow of informational exchanges, mainly within the Banking Supervision Committee of the ECB and various other fora, including the Basel Committee on Banking Supervision and the European Union's "Groupe de Contact" on banking regulation, and
- A system where banking supervisory responsibilities and the conduct of monetary policy are combined within the national central banks, or at least where close cooperation prevails, as recommended by the ECOFIN "Brouwer report" on financial stability of April 2000. Indeed, information stemming from banking supervision on the one hand, and monetary policy implementation on the other, offer obvious complementarities. Regarding the implementation of monetary policy, credit institutions participating in refinancing operations must comply with precisely defined regulatory and technical guidelines (timeliness and accuracy of reporting for the calculation of minimum reserves, compliance with the procedures regarding bidding and collateral delivery procedures). When a counterpart fails to meet these requirements, it points to possible internal malfunctioning, which acts as an early warning. Moreover, through the monitoring of aspects such as bidding behaviour, use of standing facilities, and user profiles in payment systems, the central bank is in a good position to detect liquidity stress situations. It appears natural that under such circumstances national central banks should play a pivotal role in instigating the relevant exchanges of information with banking supervisors at the national level, and within the "regional" system of central banks, as far as the assessment of the potential impact on money market functioning and the successful implementation of monetary policy is concerned. Thankfully, since the start of EMU, Banque de France has gained no practical experience in such aspects. Nevertheless, preparatory works conducted to ensure a safe Year 2000 change included a review of potentially more vulnerable sub-sectors of the financial system. In this context, the relevant informational resources and analytical skills of the Banque de France and the Commission Bancaire were successfully pooled, paving the way for an easy monitoring of counterparties during the few days before and after 31 December 1999.

To sum up the European experience as regards supervision, the following has proven key: a set of sensible principles (proximity, exchange of information, cooperation), appropriate rules (eg the respective responsibilities of home and host countries), implementing texts (eg bilateral or multilateral memoranda of understanding[5]) and relevant bodies or committees where authorities can meet.

The CFA franc zone

As part of the financial integration process, in the early 1990s, each sub-area of the CFA franc zone set up a single regional supervisory authority, called a "Banking Commission". There were no local supervisory structures prior to that. These Commissions are in charge of designing the prudential regulations applicable to banks and supervising banks through on-site and off-site inspections. The Banking Commissions, chaired by the governors of the regional central banks, played a key role in the restructuring process carried out in the last decade. By setting up common prudential and accounting standards, the Commissions contributed to achieving a level playing field throughout the RCA and to consolidating the solvency of both local and regional credit institutions, thus enhancing deposit security and access to credit. However, the degree of banks' compliance with key prudential ratios varies across countries, pointing to a need for enhanced financial integration.

Issues arising from dollarisation

As far as financial and banking stability is concerned, the risks associated with the unilateral adoption of a foreign currency by a smaller open economy are twofold.

For the banking system of the smaller dollarised economy, the removal of the exchange rate can be viewed as a remedy to the widespread problem of currency mismatches, which is one of the major weaknesses of intermediation in emerging markets. However, dollarisation would drastically limit the

[5] Such as that between Belgium and France on the supervision of Dexia.

freedom with which the central bank can fine-tune liquidity and thus smooth transitory shocks - including liquidity shortages arising from the failure of an individual credit institution - to safeguard financial stability. Thus, it is vital for a country contemplating dollarisation to reform its financial sector in depth, to foster, in particular, the upgrading of banks' internal risk management practices, and to overhaul the prudential supervision and regulation scheme. In any case, this is a long-run undertaking, and there is high risk that the country will dollarise too early in relation to the progress made in reforms.

For the anchor area - usually the United States or the euro area - the main concern would be that the country risk associated with the banking sector of the dollarised economy could spill over to international banking groups headquartered in the United States or the euro area. International banks of the anchor area would indeed have an incentive to increase their exposure to domestic banks or local branches in the dollarised economy, while country risk in that economy would probably not decrease rapidly after the adoption of the foreign currency. There would then be scope for very close cooperation between the prudential supervisors of the home and host countries to prevent a far-reaching weakening of the international credit institutions of the home country.

Financial market integration

As mentioned above, financial market integration was identified very early in the academic literature on OCAs as an important factor that may contribute in the long run to the success of an RCA. Financial integration helps to reduce the need for exchange rate adjustments insofar as, for instance, it makes it possible to cushion temporary adverse disturbances through capital inflows. McKinnon (2001) reformulated this statement more recently, positing that countries sharing a single currency can dampen the effects of asymmetric shocks among them through adjustments in their wealth portfolio that result in a diversification of their income sources. Private financial markets, as well as common fiscal instruments, may thus provide a kind of insurance provision against asymmetric adverse shocks that would otherwise endanger the integrity of the RCA.

Conversely, the creation of an RCA and the consequent removal of exchange rate risk between the residents of different participating countries provide an obvious incentive for a rapid and deep integration of the various domestic financial markets. Integrated markets at the level of the RCA permit debtors to broaden their investor base and reduce their issuance costs, while investors may benefit from more liquid, deep and complete market segments.

However, two main factors might impede this self-reinforcing process of market integration and RCA consolidation. Firstly, the speed of the integration process is very likely to differ from one segment to another: the money market may integrate rapidly, while the integration of longer-term securities and equities might hinge on the speed of legal harmonisation, such as for instance the full harmonisation of repo markets. Secondly, the process of financial market integration may well enhance the efficiency of financial markets in the RCA, but it may at the same time translate into more risks of contagion of local shocks across the whole area. Such risks can nevertheless be addressed properly in the context of an RCA, thanks to the diversity of market participants and the enhanced resilience of market liquidity in the face of adverse shocks.

The euro area

As expected, since 1999 the introduction of the euro has triggered a remarkable process of integration of financial markets among member states. This process is almost complete in the market for short-term debt (monetary instruments) and is already well advanced in the bond markets, as shown by the upsurge in issuance activity, notably in the corporate debt segment, and by the number of very large bond issues targeted at an enlarged basis of European institutional investors. Last but not least, this process has gathered pace in the equities markets thanks to the ongoing restructuring of the main European stock exchanges (eg Euronext, which groups together the exchanges of Paris, Amsterdam, Brussels and Lisbon plus the United Kingdom's LIFFE). The European financial markets are rapidly converging towards an integrated model, while the banking system still remains rather fragmented.

Furthermore, the recent Lamfalussy Report, which was prepared following a request by ECOFIN in July 2000, has paved the way for sound regulation aiming at simultaneously enhancing the development and the stability of the European securities markets. In this report of the Committee of Wise Men on the regulation of European securities markets, a four-level approach was proposed, with a view to making EU securities legislation more flexible and effective: for a detailed presentation, see

ECB (2002). As a consequence of the recommendations formulated in this report, two committees have been established: the European Securities Committee, entrusted with the task of quickly adopting technical provisions to EU Regulations regarding securities markets, and the Committee of European Securities Regulators, entrusted with the task of ensuring effective cooperation between supervisory authorities, promoting best practices and carrying out peer reviews. A full review of this regulatory structure will be carried out in 2004.

The CFA franc zone

In the CFA franc zone, financial integration took place with the creation of the WAEMU regional stock exchange in Abidjan in 1998. A similar plan was devised for the CAEMC in 2001. CFA franc zone stock markets are to play an important role in financing regional economies, in particular in channelling domestic savings and foreign capital towards productive investment. Indeed, there is a substantial need for long-term resources for firms, in particular given the opportunities for privatisation and the expected development of the public debt market, with the end of advances from the central bank to the governments. These financing needs can only be met at a regional level given the absence of critical mass at national levels.

5. Conclusion

The EU experience is different from that of the CFA franc zone. Neither one nor the other is a blueprint for regional integration that can be applied directly and entirely to other regions. Nevertheless, as a conclusion, some tentative lessons can be drawn for others. In this respect, it should be emphasised that:

- A successful regional integration is the result of a long, gradual process, which includes monetary policy and also other economic policy aspects. The success of regional monetary integration, as in the European Union, depends on a number of key policy areas: improving efficiency in resource allocation through the development of competitive, market-based economies, macroeconomic policies geared towards stability and redistribution mechanisms to help less developed member states catch up.
- It has to be supported by a strong economic and political will, which implies the pooling or the partial transfer of national sovereignty to supranational entities. This pooling/transfer is itself dependent on a broader political will and project.
- Regional integration does not mean more freedom to define the role of monetary policy. Monetary policy in an RCA should still focus on the primary objective of price stability. Provided this condition is fulfilled, regional integration does not entail additional risks regarding price stability.
- Insofar as the creation of a currency area may foster financial market integration and increased competition in the banking sector, appropriate cooperation schemes among supervisors have to be developed and harmonised market regulations put in place in order for systemic risks to remain subdued.

In any case, time is what is required, if only to allow (i) for the proper development of an appropriate and credible institutional framework and strong “stability” culture for decision-making and (ii) for the achievement of a sufficient level of economic integration.

Annex 1:
A brief chronology of European economic and monetary union[6]

1951: Treaty of Paris: *integration of coal and steel markets*; establishment of federal institutions (parliament, high court and the precursor of the commission).

1957: Treaty of Rome: *integration of all goods markets, creation of customs union*; strengthening of institutions; ***creation of the Monetary Committee; obligation to consider exchange rate policies as a matter of common concern.***

1964: **Creation of the Committee of Governors** of the central banks of the European Economic Community.

1971: Adoption of ***Werner Plan*** fixing the objective of EMU for 1980 (a deadline later abandoned due to the differing reaction of member states to the oil shocks and the collapse of the Bretton Woods system).

1972: "**Snake**" agreement limiting intra-EEC exchange rate fluctuations.

1973: Creation of the **European Monetary Co-operation Fund**.

1979: Creation of the **European Monetary System**.

1987: Single Market Act: *objective of single market* (goods, capital, services) by 1993, further strengthening of institutions.

1989: ***Delors report on EMU approved***.

1990: Beginning of "***first stage of EMU***": strengthened economic coordination, increased cooperation between central banks.

1992: Maastricht Treaty: widening of EU competencies, **objective of single currency by 1999**, further strengthening of institutions.

1993: Single market achieved.

1994: "***Second Stage of EMU***": the **European Monetary Institute**, precursor of the ECB, replaces the Committee of Governors.

1997: Amsterdam Treaty: further strengthening of institutions.

1997: Adoption of the *Growth and Stability Pact* (implementation of Treaty obligations on fiscal coordination).

1998: Selection of the ***first 11 countries*** to join the euro area according to Maastricht criteria.

1999: "***Third stage (fully fledged) of EMU***": creation of the euro, irrevocable fixing of parities, entry into function of the ECB/Eurosystem.

2000: *Common strategy for employment and structural reforms*.

2000: Treaty of Nice: further strengthening of institutions, adjustments in preparation for further enlargement.

2001: Greece becomes ***12th member of EMU*** after having met the criteria.

2002: **Introduction of euro banknotes and coins, withdrawal of national banknotes and coins.**

NB. Alongside these developments leading to the deepening of the integration process, the European Union was gradually enlarged from six countries (1951) to nine (1973), 12 (1986) and finally 15 (1995).

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[6] Economic developments are shown in *italics* and monetary developments in **bold**.

Annex 2:
A brief chronology of the CFA franc zone

The colonial period

1939: Creation of the CFA franc zone.

1945: Creation of the CFA franc, pegged at 0.02 French franc.

1951: Creation of the Monetary Committee of the CFA franc zone: follow-up of monetary relations and coordination with local central banks.

Following independence

West African Economic and Monetary Union[7]

1959: Creation of the BCEAO, in charge of issuing the "Franc de la Communauté financière africaine" (or CFA franc), parity unchanged at 0.02 French franc.

1962: Treaty establishing West African Monetary Union.

1962: First monetary cooperation agreement between West African Monetary Union and France.

1973: Treaty consolidating West African Monetary Union.

1973: Cooperation agreement between the Republic of France and the members of West African Monetary Union (currently in force).

1994: 50% devaluation of the CFA franc to 0.01 French franc.

1994: Treaty establishing West African Economic and Monetary Union: deepening of economic integration.

Central African Economic and Monetary Community[8]

1959: Creation of the BEAC, in charge of issuing the "Franc de la Coopération financière en Afrique centrale" (or CFA franc), parity unchanged at 0.02 French franc.

1972: Cooperation agreement between the Republic of France and the Member States of the BEAC (currently in force).

1994: 50% devaluation of the CFA franc to 0.01 French franc.

1994: Treaty establishing the Central African Economic and Monetary Community: deepening of economic integration.

The substitution of the euro for the French franc

1998: The European Union Council decision of 23 November 1998 states that after the substitution of the euro for the French franc, France may continue its present agreements concerning exchange rate matters with the WAEMU and CAEMC. In case of a substantial change to the agreements, France would ask for the approval of the EU Council.

1999: The CFA franc is pegged to the euro (1 euro = 655.957 CFA francs).

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[7] Benin, Burkina Faso, Guinea Bissau (since 1997), Côte d'Ivoire, Mali, Niger, Senegal and Togo.

[8] Cameroon, the Central African Republic, Chad, Congo, Equatorial Guinea (since 1985) and Gabon.

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The currency board and monetary stability in Bosnia and Herzegovina

Dragan Kovačević

1. The transition economy of Bosnia and Herzegovina

When the Central Bank of Bosnia and Herzegovina (CBBH) started its operations in August 1997, the country faced, and largely still faces today, three major concurrent transition processes:

- the transition from war to peace;
- the transition from a socialist command economy dominated by the state to a market-oriented private sector economy; and
- the transition from being a part of a larger nation to being an independent country with its own democratic and administrative institutions.

Any one of these transition processes on its own is extremely challenging. Within this avalanche of change there is a need to provide some anchors or areas of economic stability at an early stage of the reform process. One such anchor, which the experience of Bosnia and Herzegovina (BiH) shows can be attained successfully and relatively quickly, is a stable currency.

What did the financial system in BiH look like in 1997 when the CBBH commenced its operations? There were four currencies being used in the country (BiH dinar, Yugoslav dinar, Croatian kuna and Deutsche mark). Of these currencies, only the mark was a generally accepted transaction currency across the entire country. There were around 75 commercial banks but most of them were very small, none of them operated over the whole country, and in the main citizens did not use the banks. There were three payments bureaus, each of which had a monopoly on non-cash payments in the territory it covered. In short, it was a very weak and fragmented financial system.

2. Monetary policy in Bosnia and Herzegovina

The most important function of the CBBH is to "formulate, adopt and control the monetary policy of BiH". The CBBH conducts monetary policy through a currency board arrangement, as stipulated in the CBBH Law and in the Dayton Peace Agreement.

The choice of a currency board had two main motivations. First, it provides a firm nominal anchor in the form of a fixed exchange rate. This was considered critical for the very uncertain postwar economic situation in BiH. Second, it is a rule-based approach to monetary policy that took into account the difficulty there would be in establishing institutions and making political decisions in the complex political environment that existed in BiH after the war.

The three essential features of the currency board, all of which are specified in the CBBH Law, are:

- Fixed exchange rate: the BiH currency, the convertible mark (KM), was tied to the Deutsche mark (DM) at a fixed exchange rate of 1:1. This exchange rate allowed the two currencies to be used together during the period in which citizens were building up their trust in the new currency. It has been tied to the euro at the same rate as the Deutsche mark (1.95583 per euro) since the euro was introduced in January 1999. We did not alter the exchange rate at the time of the euro changeover as we believed it was very important that the citizens of BiH (and potential foreign investors) continue to have complete confidence that the exchange rate will remain fixed against our anchor currency.

- Full foreign exchange backing: the domestic currency liabilities of the CBBH have to be fully backed with convertible foreign assets. At the end of December 2001, our KM liabilities were KM 2.623 billion and our foreign assets were KM 2.697 billion, so we had more than 100% coverage.
- Full convertibility: the CBBH had to be prepared to exchange KM for DM at any time for any amount. Now the KM is convertible into euro. Since the establishment of the CBBH in 1997, we have issued KM 8.1 billion and we have converted back KM 5.9 billion. So it has been a fully convertible currency in practice as well as in name.

The CBBH has not had any special arrangements with the Bundesbank for the use of the Deutsche mark or now with the ECB for the use of the euro. The CBBH bears by itself the costs of handling the foreign currency, and invests the funds for the coverage of the local currency as deposits in foreign banks according to its own business policy on a commercial basis.

3. The performance of the Central Bank of Bosnia and Herzegovina

Linking the KM to the DM through a currency board was an easy choice for BiH because the DM was already extensively used in the country and was the currency that people trusted. It proved to be a successful choice for the following reasons:

- The KM has been a stable currency against the DM and the euro since it was introduced.
- Inflation in BiH is low and stable. The latest figure is around 1% per annum and it is similar in both the Bosnian and Herzegovinian regions.
- KM use has risen rapidly within BiH and it is now the dominant transactions currency in all parts of the country. Our KM liabilities rose from an initial KM 132 million in August 1997 to KM 1,166 million at the end of September 2001. During the final four months of the euro introduction they more than doubled. The citizens of BiH took the large amounts of DM banknotes they had been keeping under their mattresses to the banks and converted a lot of them either to KM banknotes or put them on deposit in a BiH bank. By 31 December our KM liabilities had reached DM 2,623 million and they have stayed around that level during 2002 so far. This is a clear sign that the citizens of BiH trust the KM and are beginning to trust the banking system too (see the box); and
- The KM can now be traded in specified banks in a number of other countries in Europe.

There is no other type of monetary policy, other than the adoption of the DM as the currency of BiH, that could have given a country like BiH a stable and trusted currency and low inflation this quickly.

Deposits with commercial banks

Total deposits with commercial banks at the end of June 2002 totalled KM 3.4 billion, having more than doubled between 1997 and 2001. During this period, a significant increase was recorded in domestic currency deposits, a reflection of increasing confidence in the domestic currency. They rose from 16% of total deposits in 1997 to 44% by June 2002.

The proportion of time and savings deposits in total deposits decreased from 43% in 1997 to 37% in June 2002, with some increase in domestic currency time and savings deposits more than offset by a decline in foreign currency time and savings deposits.

Within these totals, deposits by BiH citizens account for an increasing proportion. They reached KM 1.5 billion by June 2002, having risen fivefold between 1997 and 2001. By June 2002, 22% of citizens' deposits were in domestic currency accounts.

4. Why has the currency board worked in Bosnia and Herzegovina?

There are four main reasons:

- First, people have faced many financial traumas. They therefore value a stable currency. The currency board consequently has a high level of public support within BiH.
- Second, people had complete trust in the anchor currency, the DM. A strict currency board has allowed the CBBH, a new institution with no track record, to gain some of the credibility of the DM and the Bundesbank. The changeover to the euro as the anchor currency does not appear to have weakened the credibility of the currency board in BiH.
- Third, the CBBH has a foreign governor. This has been important for establishing the political neutrality of the CBBH.
- But the major reason why the CBBH works well is the very good legal and institutional framework under which the CBBH operates:

  (i) The *goal* of the CBBH is simple, clear and specified in the law.

  (ii) The law *limits our activities* where there would be any potential conflict with the currency board requirements.

  (iii) Within these statutory goals and limitations, the CBBH is *independent* of political direction.

  (iv) How did the CBBH provide for its independence from political influences?

  Article 3 of the CBBH Law states: "Within the limits of its authority established by this Law, the Central Bank shall be entirely independent from the Federation of Bosnia and Herzegovina, the Republika Srpska, any public agency and any other authority in the pursuit of its objective and the performance of its tasks. Except as otherwise specified by law, the Central Bank shall take no instructions from any other person. The independence of the Central Bank shall be respected and no person shall seek improperly to influence any member of a decision making body of the Central Bank in the discharge of his duties towards the Central Bank or interfere in the activities of the Central Bank."

  The important provision of the Law is that on the impossibility of extending credit and lending to the BiH government or government entities or banks. It is true that those criticising currency board arrangements consider this as an important shortcoming in the conduct of monetary policy.

  (v) We have *sensible and sound internal decision-making processes*.

  (vi) We are easily and firmly held *accountable*. A breach of the currency board requirements would be quickly obvious to all. To use the current economic jargon, it is a very *transparent* form of policy implementation.

Shadowing the euro: Bulgaria's monetary policy five years on

Kalin Hristov and Martin Zaimov[1]

1. Introduction

Bulgaria's economic progress in recent years is regarded as determined by the currency board regime introduced in 1997. It seems appropriate, five years on, to weigh up that assumption.

The graphs and analysis which follow support our generally positive view of the then government's decision to accept the IMF's advice on how to manage its monetary policy. But we are well aware that the currency board, now as then, has not been without critics; this report examines the medium-term challenges to a policy of shadowing the Deutsche mark's successor, the euro.

The paper is structured as follows: Section 2 describes the Bulgarian National Bank's (BNB) monetary policy over the past five years, and summarises the results. Section 3 analyses the link between monetary and fiscal policy by outlining changes in the latter after the launch of the currency board, and its increased effectiveness. Section 4 shows the link between the currency board, foreign trade and the balance of payments, highlighting the conditions for balance of payments sustainability with a fixed exchange rate. Section 5 looks at changes in the economy and the banking system in the last five years. Section 6 concludes with some of the medium term challenges facing the currency board.

2. The role of monetary policy

A realistic view

The decade of transition from a centrally planned to a market economy in central and eastern Europe and the former Soviet Union coincided with a change in accepted views on economic policy. The role of central banks, and of monetary policy, in national economic development was seen in a new light. Macroeconomic policy during the 1990s changed significantly, both in theory and in practice. A consensus emerged that the basic goal was to ensure a nominal anchor for controlling inflation and inflationary expectations, in order to support overall economic stability and to create a favourable environment for sustainable long-term growth and wealth creation.[2] It follows that the broad thrust of monetary policy must, at least to some degree, coincide with overall economic policy.

It was long believed that central banks' monetary policy could influence long-term trends in employment, output and inflation. In other words, the monetary authorities could control both nominal and real variables, thus achieving more than one goal. But both theory and empirical evidence show that pursuing several goals at once, some at odds with each other, does not work. A better approach is to limit monetary policy to achieving price stability within various institutional frameworks.

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[1] Policy Adviser and Deputy Governor, respectively, at the Bulgarian National Bank. We thank Maria Karcheva, Petar Pandushev and Boris Petrov for invaluable help and support; Krasimir Germanov, Ralitza Stoyanova and Tzvetan Tsalinski for providing data; and Luchezar Bogdanov, Georgi Ganev, Nikolai Georgiev, Jana Kostova, Ilian Mihov, Nikolay Nenovsky, Georgi Petrov, Krassen Stanchev and Slavi Trifonov for comments on earlier versions of the paper. We are greatly indebted and thankful to John Hawkins, Edward Steen and Sheila Tschinkel for their diligent and thorough remarks on the English version. Errors and omissions rest entirely with the authors.

[2] Allsopp and Vines (2000) discuss the consensus on the new economic policy principles formed in the 1990s.

High and volatile inflation rates create uncertainty and affect both the quantity and quality of investment. This has evident consequences for long-term growth and social prosperity. The most pernicious economic consequences are:

- Inefficient allocation of economic resources.
- High and volatile nominal interest rates which direct economic agents to short-term, high-risk activities rather than wealth creation.
- A severely negative overall effect on investment, a determinant of long-term growth.

The social consequences are equally serious. For protection from high inflation an individual needs the kind of specialised knowledge unavailable to the lowest-income groups. Moreover, high inflation leads to a massive, and politically unsanctioned, redistribution of wealth. And for the individual, high and variable inflation hampers household as much as commercial planning.

Table 1 confirms the validity of the above arguments for the Bulgarian economy in the period 1992-2002. High inflation was accompanied by significant skewing of motivators, leading to savings being channelled into high-risk speculative projects, a shortage of investment in the economy, low economic growth, high inflation tax and the involvement of the banking system in highly risky operations.

Table 1

The negative effects of inflation

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Inflation[1]	80	64	122	33	312	548	2	7	11	5	4
Real GDP[1]	–7.3	–1.5	1.8	2.1	–10.9	–6.9	3.5	2.4	5.8	4.0	4.5
Investment[2]	16.2	13.0	13.8	15.3	13.5	11.0	13.0	15.1	18.3	20.4	20.8
Inflationary tax rate[3]	44.3	39.0	54.9	24.6	75.7	84.6	1.6	6.5	10.1	4.6	3.7
Inflation tax[2]	6.6	4.0	5.3	1.8	10.6	10.5	0.2	0.7	1.1	0.6	0.5
Interest rate[4]	...	...	...	80	300	210	14	14	12	12	10
Interest rate variation[5]	...	...	...	30	338	277	1	1	1	1	1
Banks' e/r gains[6]	...	143	237	36	12	316	–9	10	8	12	...

[1] Annual percentage change. [2] Share of GDP. [3] Defined as 100*[CPI inflation/(100 + CPI inflation)], a measure of inflation tax, bounded between 0 and 100%, on monetary balances held by economic agents. See Masson et al (1997). [4] Mean annual short-term lending rate. [5] Standard deviation. [6] Banks' net exchange rate gains as a percentage of their pre-tax results.

Sources: BNB; National Statistical Institute.

Maintaining low and stable inflation is the biggest contribution monetary policy can make to an overall economic policy aimed at securing high and stable growth and employment.

The currency board

The launch of the currency board in mid-1997 was a move from a situation of multiple central bank goals to the single goal of achieving price stability.[3] Apart from the unwavering maintenance of a fixed lev/euro exchange rate, Bulgaria's monetary policy strategy has for five years been based on:

- The BNB's managing board having independence from the government, achieved through a combination of specific legislation, board members' personal integrity and public support.
- Proscription of any direct lending to government.

[3] In practice, the BNB's main goal was defined in the same way in both the 1991 and 1997 central bank laws.

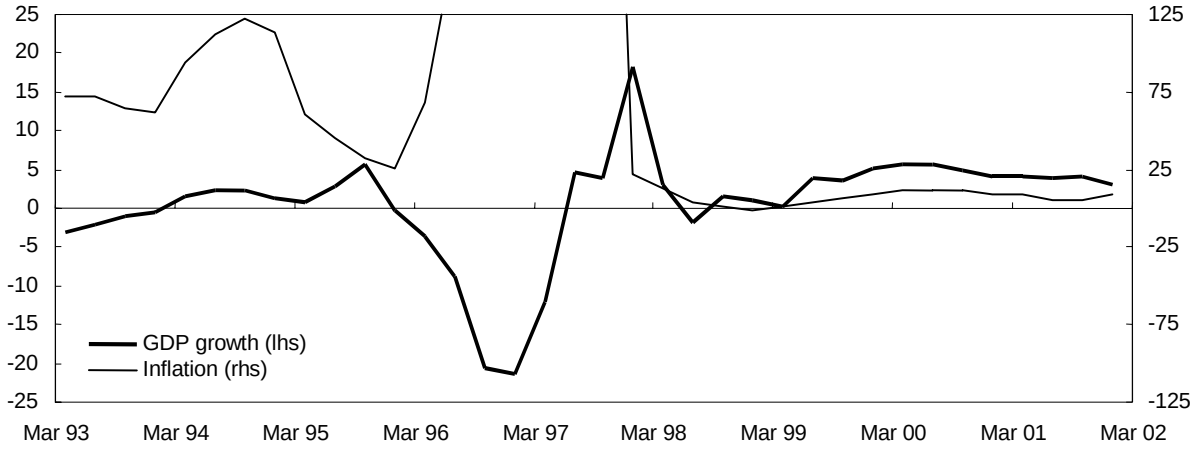
- Active encouragement of constant monitoring by economic agents. Policymakers are held responsible for their actions through citizens' ability to freely exchange the national for the reserve currency.
- Clear and transparent mechanisms for the central bank to perform the function of lender of last resort while making its abuse practically impossible.

The consistency, predictability, and clarity of this strategy created the nominal anchor in the economy which Bulgaria so badly needed, and stabilised inflationary expectations. In the post-1997 period, Bulgaria achieved the lowest and most stable inflation rates since the beginning of the economic reform, combined with the highest and most stable output growth (see Graph 1).

Graph 1

Real GDP growth and inflation

Annual percentage changes



Over the period 1998-2002, inflation and real GDP growth rates were comparable with those of other central and eastern European countries (see Table 2).

Table 2

Inflation and economic growth

	Inflation				**Real GDP growth**			
	Average		**Volatility**		**Average**		**Volatility**	
	1991-1997	***1998-2002***	**1991-1997**	***1998-2002***	**1991-1997**	***1998-2002***	**1991-1997**	***1998-2002***
Bulgaria	237.4	*5.4*	219.1	*3.8*	–4.9	*4.0*	5.7	*1.3*
Estonia	26.7	*4.9*	12.7	*1.2*	1.6	*4.4*	7.3	*2.9*
Latvia	20.9	*2.6*	11.0	*0.7*	–0.6	*4.4*	8.7	*2.3*
Lithuania	58.2	*1.3*	74.5	*0.9*	–2.1	*2.9*	10.3	*3.8*
Poland	32.2	*6.6*	16.5	*3.4*	3.5	*3.1*	4.8	*1.6*
Romania	145.0	*37.6*	100.1	*12.4*	–1.6	*0.1*	7.6	*4.1*
Slovak Republic	17.6	*7.7*	19.2	*4.1*	–0.1	*2.9*	8.3	*0.9*
Slovenia	66.0	*7.8*	94.0	*0.9*	0.8	*3.7*	5.6	*1.3*
Hungary	23.2	*8.7*	5.0	*2.6*	–0.8	*4.4*	5.5	*0.8*
Czech Republic	17.0	*3.9*	15.8	*1.9*	0.0	*1.2*	5.7	*2.6*

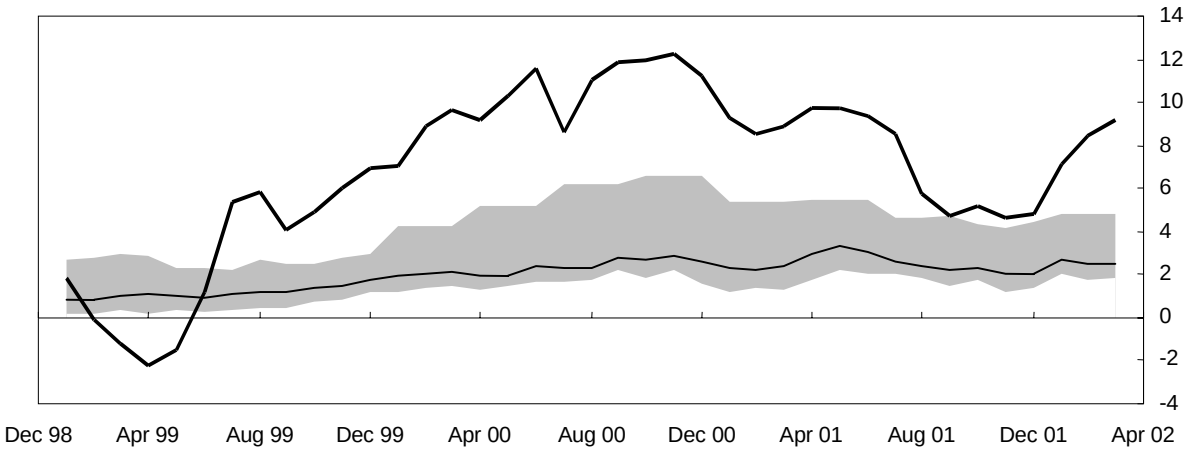
Source: IMF, *International Financial Statistics*.

However, despite the currency board, actual inflation in Bulgaria remains higher than that within the countries participating in European economic and monetary union (EMU). Such differentials are largely determined by differences in the structure and flexibility of the economies concerned. They do not result from monetary factors and do not create permanent inflationary expectations among the public, but they risk causing significant and protracted differentials between Bulgarian inflation and that within the euro area (see Graph 2).

Graph 2

Inflation in Bulgaria and the euro area

Annual percentage changes



Note: The thick line represents inflation in Bulgaria, and the thin line that in the euro area. The shaded area marks the extent of the inflation rates in the individual countries (excl Greece) in the euro area.

The irreversible fixing of the lev to the euro creates economic conditions identical to those that would prevail if Bulgaria were a member of the euro area. This in turn means that inflation differentials between Bulgaria and the euro area have the same effect on the Bulgarian economy as do differentials between individual member states and overall euro area inflation.

Graph 2 compares inflation rates in the euro area with that in Bulgaria. The differential with the higher-inflation euro-using economies is not that large, despite the long road to convergence they have passed over, and which remains ahead for the Bulgarian economy. One must bear in mind that Bulgarian price levels in the year the currency board was launched were some 25% of those in the European Union: see National Statistical Institute (1999).

The volume of Bulgaria's international reserves (those of the central bank and those of the banking system) has shown stable growth since the introduction of the currency board, reaching unprecedented levels for the Bulgarian economy (see Graph 3). This often poses the question of whether this is the most effective way of using our resources. Would not investment in domestic assets do more for the Bulgarian economy than accumulating international reserves? International reserves secure four major functions whose benefits for the economy are greater than the lost opportunities to invest in domestic assets:[4]

- Under the existing currency board regime, foreign currency reserves are the nominal anchor determining the supply of bank reserves, banknotes and coins.
- Excess reserves over and above BNB's monetary obligations, including the fiscal reserve, may be viewed as buffers absorbing both external and domestic economic shocks. In this sense international reserves can act as a stabiliser: see Clark (1970).

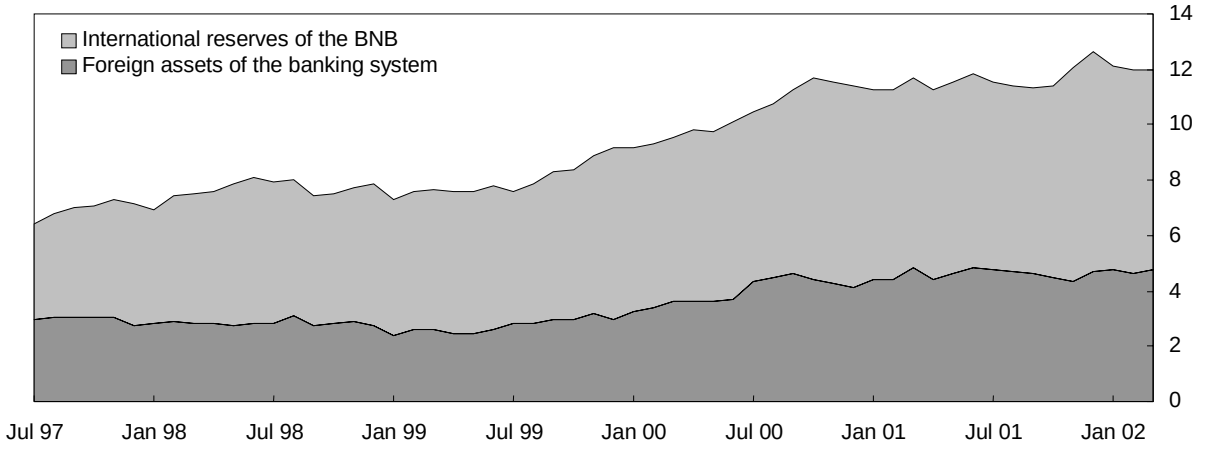
[4] For an in-depth discussion on the optimal level of international reserves within an economy, see Flood and Marion (2002) and Lane and Burke (2001).

- Foreign assets are a source of liquidity in foreign currencies, which enable routine government and economic agent transactions.
- International reserves are necessary for the country (the government as well as the private sector), because of the imperfect access of Bulgaria's economy to international capital markets.

Graph 3

International reserves

In billions of leva



The argument is often voiced that fixed exchange rates, and the concomitant loss of independent monetary policy and flexibility in macroeconomic policy, limit the possibility of using discretionary instruments to cope with external shocks.

The effectiveness of discretionary policies in softening external shocks is highly questionable. Governments should only pursue economic policies that promote sustainable long-term growth, robustness and flexibility. Such policies cannot be influenced by a fixed exchange rate and must take place regardless of central bank monetary policy. They include market and business deregulation and maximum freedom of trade and capital flows.

At the time the currency board was launched, the collapse of confidence in the central bank and its monetary policy pre-empted any possibility of trying alternative strategies to stabilise the economy or to guarantee low inflation.

The limited range of options available in early 1997 is best illustrated by the dynamics of inflation, currency substitution and output growth between 1991 and mid-1997. During this period Bulgaria failed to limit inflation to single digit levels and had the highest and most volatile inflation rates of all accession countries, combined with the lowest average GDP growth rates (see Table 2 above). Moreover, after 1995 there was hyperinflation and falling real GDP, reflecting serious difficulties both in defining the ultimate targets of monetary policy and in its implementation.

The abuse of monetary policy in an attempt to maintain real incomes and employment at an unsustainable level during the period 1991-97 delayed economic reforms. It also undermined confidence in the central bank, above all in its capacity to implement an effective independent monetary policy.

Along with badly formulated goals, the strategy for implementing monetary policy in 1991-97, and the alternatives to a currency board which were subsequently proposed, lacked internal consistency, logic, clarity, and transparency.

The BNB's policy prior to 1997 was based on:

- managed floating of the exchange rate with no explicit commitment by the central bank to supporting any particular level of the exchange rate - this was inconsistent with achieving price stability;

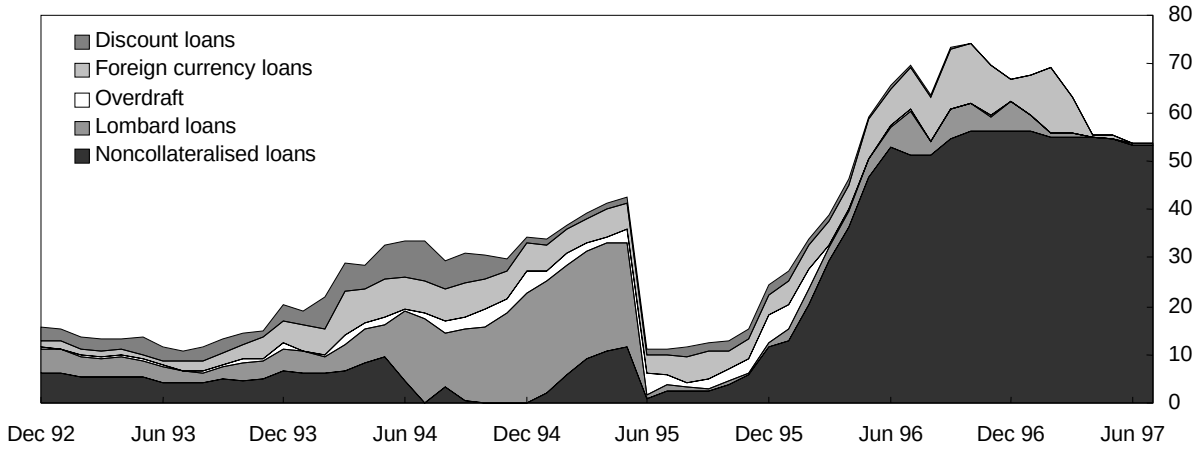
- an attempt by the central bank to control money supply (initially broad money and, after autumn 1994, reserve money) with no explicit commitment to attaining a certain rate of expansion consistent with the achievement of price stability;
- in contravention of the Law on the BNB, every year between 1991 and 1997 saw direct long-term loans extended to the government (see Table 3 on direct budget financing by the BNB);
- using the lender of last resort function to support insolvent banks.

Illegitimate lending to the government was matched by the irresponsible creation of expectations of unconditional support to banks, which were encouraged to take on greater risks (moral hazard). The volumes of last resort financing, the identity of decision-makers, and the conditions and procedures a bank had to fulfil to benefit from the BNB handouts were completely opaque. As if this were not enough, from the start of 1996, almost all lending to commercial banks was uncollateralised (see Graph 4).

Graph 4

Commercial bank refinancing

In billions of leva

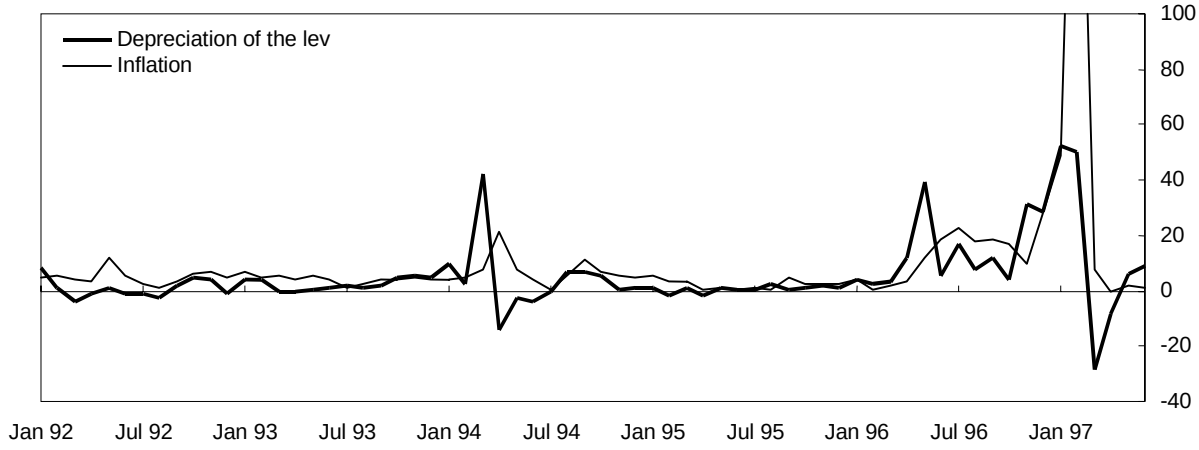


Under these circumstances, economic agents directed their attention to the most transparent and easily monitored variable: the exchange rate. The depreciation of the national currency translated into more expensive imports and inflationary expectations provoking an immediate rise of prices. Inflation rates primarily reflected the expectations raised by the exchange rate dynamics and in turn generated expectations of further depreciation of the exchange rate (see Graph 5).

Graph 5

Exchange rate depreciation and inflation

In percentages

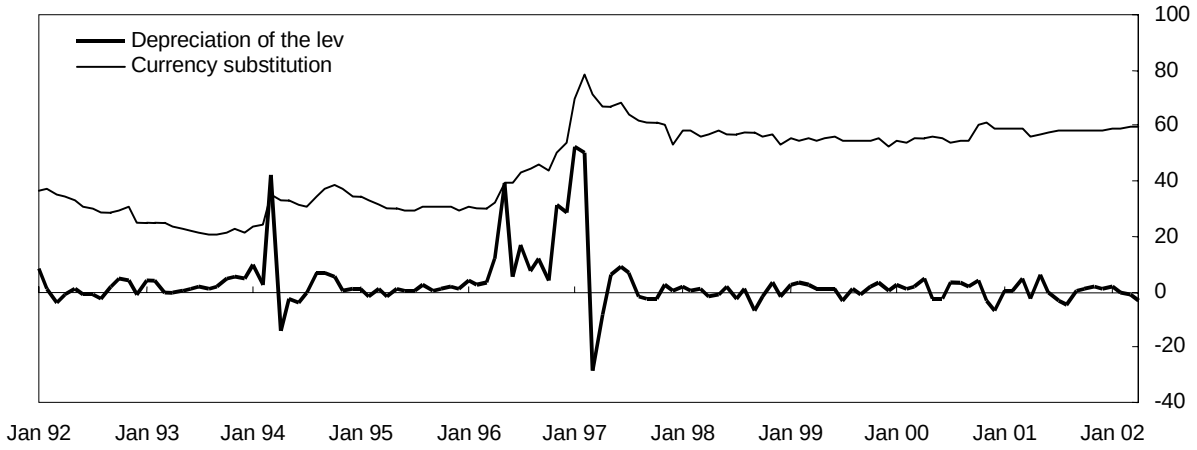


The large-scale depreciation of the exchange rate led to an irreversible process of currency substitution, further limiting the central bank's ability to control the money supply and inflation (see Graph 6). This process had self-fulfilling dynamics. Exceptionally high interest rates were deployed to try to curb inflation and expectations of further exchange rate depreciation. But the high interest rates were also a signal to economic agents to expect further depreciation of the exchange rate, and an even higher inflation rate. In view of the well known fact that monetary policy works with uncertain and variable lags, the central bank's policy was doomed to transform price instability into financial instability. High nominal interest rates automatically turned many bank loans into non-performing loans. The effect was a never-ending and spiralling demand for support through unsecured central bank refinancing, and a growing danger to the solvency of the entire banking system.

Graph 6

Exchange rate depreciation and currency substitution

In percentages



Note: The level of currency substitution is measured as the ratio of foreign currency deposits to total bank deposits.

By giving the responsibility for achieving this ultimate goal to a legally and de facto independent central bank, the currency board provides the price and financial stability needed by the Bulgarian economy. It is the best possible monetary policy for the country given the circumstances.

3. Coordination of monetary and fiscal policy

Macroeconomic policy under existing conditions requires coordination and consistency between its major components - monetary and fiscal policy. We define fiscal policy as a long-term strategy for managing public revenue and expenditure and maintaining sustainable levels of government debt.

Interaction between monetary and fiscal policy

The core of monetary policy is managing the government debt issued to finance the budget deficit.[5] The inability of the central bank to control the size of the portfolio of government debts that it must manage constrains monetary policy. The fiscal authorities, those who set tax rates and government expenditure, determine the size of the debt portfolio: see Sargent (1999).

[5] According to the general definition, government debt includes both securities issued to finance the budget deficit, and banknotes and reserves issued by the central bank, as they are government obligations to the holders of these instruments.

The central bank's capacity to pursue efficient monetary policy (attaining price stability) is seriously limited where there are huge budget deficits requiring government debt monetisation. The legal independence of the central bank does not therefore per se guarantee that monetary policy will be independent of government.

In practice, the fact that the central bank holds securities (acquired through open market operations) issued by the government is an element of government debt portfolio management, whereby interest bearing government debt (government securities) is swapped for non-interest bearing government debt (banknotes and bank reserves). The introduction of a currency board is in effect a clear statement by the government that it will not finance its expenditure by credit from the central bank. It follows that the stability of the currency board largely depends on the government's ability to control its deficit and debt. Where the government has no access to market funds to finance its deficits, it will resort to issuing non-interest bearing debt and the use of seigniorage, undermining the principles of the currency board. Such considerations show clearly how interdependent are fiscal and monetary policy, and the importance of prudent fiscal policy to sustaining the currency board.

The interaction between fiscal and monetary policy does not allow for their explicit separation.[6] The credibility of both monetary and fiscal policy is equally important and requires consistent actions over time, a long-term orientation, and a high degree of coordination. The currency board may in this context be considered an explicit commitment to low budget deficits and sustainable government debt levels. Tight fiscal policy coupled with a high degree of government transparency helps to strengthen overall economic confidence.

Table 3 displays deficit financing of the consolidated state budget since the beginning of the transition. During 1991-96 budget deficits averaged almost 7% of GDP, mostly financed by direct central bank lending. This had a strong inflationary effect and seriously impeded the fulfilment of monetary policy goals. After 1997, fiscal policy was oriented towards low budget deficits of around 1% of GDP. In practice, BNB financing reported in the budget represented tranches received under IMF agreements. The mechanism employed to utilise IMF credits was insufficiently transparent with respect to budget deficit financing, and violated the principles of modern central bank operation. IMF tranches ought to have been remitted directly to the Ministry of Finance, and reported as external financing.

Table 3

Budget deficit financing

As a percentage to GDP

	Average 1991-96	**1997**	**1998**	**1999**	**2000**	**2001**	**2002e**	**Average 1997-2002**
Budget balance financed from:	–6.9	–2.9	1.0	–0.9	–1.0	–0.9	–0.8	–0.9
Foreign sources	–1.4	0.0	–0.6	1.2	–1.5	–0.3	–1.2	–0.4
Domestic sources, of which:	8.3	2.9	–0.4	–0.3	1.2	0.6	0.2	0.7
Government securities	*6.6*	*3.2*	*–1.1*	*–1.3*	*–1.1*	*–0.3*	*0.3*	*–0.1*
BNB - net[1]	*3.2*	*3.0*	*0.8*	*1.3*	*1.1*	*–1.2*	*–0.5*	*0.8*
Privatisation	*0.0*	*3.1*	*1.6*	*2.2*	*1.3*	*0.6*	*1.8*	*1.8*
Other	*–1.5*	*–6.4*	*–1.7*	*–2.5*	*–0.1*	*1.5*	*–1.4*	*–1.8*

[1] After 1997, includes loans received under IMF agreements.

Source: Ministry of Finance.

[6] For details on the interaction between monetary and fiscal policies both in implementing general economic objectives and in establishing institutional and operational procedures, see Laurens and de la Piedra (1998).

The currency board and the fallacy of constrained fiscal policy

A currency board, with its tight constraints on spending, is often seen as limiting governments' freedom of manoeuvre. In contrast, in Bulgaria, the arrangement has in practice afforded the government greater flexibility by increasing rather than diminishing its disposable income (after adjustment for interest payments). There have been adequate funds to support sustained spending on economic and social programmes from 1997 onwards (see Table 4).

Table 4

Government disposable income

	Average 1991-96	1997	1998	1999	2000	2001	2002e	Average 1997-2002
Budget balance[1]	–6.9	–2.9	1.0	–0.9	–1.0	–0.9	–0.8	–0.9
Revenues[1]	*38.7*	*32.2*	*39.8*	*40.7*	*41.4*	*40.0*	*40.5*	*39.1*
Expenditures[1]	*45.6*	*35.1*	*38.8*	*41.6*	*42.4*	*40.8*	*41.3*	*40.0*
Interest payments[1]	11.6	8.3	4.3	3.8	4.0	3.7	3.3	4.6
Interest payments[2]	25.7	23.7	11.0	9.1	9.6	9.1	7.9	11.7
Expenditures less interest[1]	34.0	26.8	34.5	37.8	38.4	37.1	38.0	35.4
Real GDP[3]	–4.6	–6.9	3.5	2.4	5.8	4.0	4.5	2.2

[1] As a percentage to GDP. [2] As a percentage of total expenditure. [3] Annual percentage change.

Source: Ministry of Finance.

The currency board contributed helped raise government disposable income in the following ways:

- Interest payments fell due to lower and stable interest rates. Interest payments declined from an average of 26% of total expenditure between 1991 and 1996 to 12% after 1997.
- The tax base grew as a result of relatively high and sustainable economic growth after 1997.
- The share of GDP redistributed by the government increased.[7] Between 1991 and 1997 government revenue averaged 38.7% of GDP. After 1997 it averaged 39.1%, with a progressive increase in GDP.[8] Expenditure adjusted for interest payments averaged 34.0% of GDP prior to 1997 and 35.4% after the introduction of the currency board.

Low budget deficits and negative net financing release funds for banks to lend to the private sector. After 1997 a reverse crowding-out effect occurred as a result of reduced credit to government and increased credit to the private sector. Changes to fiscal policy after the introduction of the currency board have had an impact on the dynamics and structure of government debt. The level of debt in

[7] The authors defend the position that the huge GDP share, which is collected and redistributed by the government, is a positive economic indicator. According to this position the currency board does not limit the government's opportunities to implement its economic and social policies. The issue concerning the amount of income to be collected and redistributed by the government is a subject pending wider public discussion.

[8] This is likely to reflect also the impact of improved tax collection following the introduction of a currency board. There is no immutable quantitative indicator on tax collection. The indicator used measures the proportion of relative income to projected budget income, and is unreliable due to its tendency to underestimate projected tax revenue. This in turn helps reduce the risk of a higher than projected deficit and increases government discretion within the framework of the budget approved by parliament. Moreover, in case of higher than projected inflation within the budget framework, tax collection automatically increases. Any government tends to project a lower inflation rate, which results in higher nominal income. This gives it greater discretion than actually approved by parliament. This practice ought to end, with budget framework forecasts being more transparent. Furthermore, the government (the Ministry of Finance) should publish and explain the forecast model of macroeconomic indicators used in designing Bulgaria's budget.

absolute and relative terms should be considered in the context of structural changes to the economy and the potential for medium- and long-term debt servicing. The level of sustainable debt is specific, and does not establish a rule that can be applied to other economies operating under different conditions. The level of sustainable debt is impacted by credit history, fiscal sector discipline, and the interdependence of real growth, the budget deficit, and debt payments.[9] Prior to 1997 the ratios of both foreign and domestic debt to GDP were extremely high and volatile (see Table 5). The high inflation rate prompted devaluation of domestic debt. However, given the strong interdependence between inflation and the exchange rate, combined with a worsening debt structure, the rapid devaluation of domestic debt was offset by the progressive increase in foreign debt.

Table 5

Government debt

	Average 1991-96	**1997**	**1998**	**1999**	**2000**	**2001**	**2002e**
Domestic debt (millions of leva)		2,781	3,102	2,963	1,767	1,861	2,066
Domestic debt as % to GDP	*37*	*16*	*14*	*12*	*7*	*6*	*6*
Foreign debt (millions of US dollars)		8,744	9,284	9,070	8,970	8,513	8,500
Foreign debt (millions of leva)		15,534	15,551	17,658	18,854	18,892	17,850
Foreign debt as % to GDP	*141*	*89*	*69*	*74*	*70*	*64*	*54*
Total debt		18,314	18,653	20,622	20,621	20,752	19,916
Total debt as % to GDP	*178*	*105*	*83*	*87*	*77*	*70*	*60*

Source: Ministry of Finance.

Following the introduction of a currency board the situation changed radically, allowing greater government flexibility. While the debt/GDP ratio gradually decreased, the implementation of a consistent macroeconomic policy helped Bulgaria regain access to international credit markets despite its poor credit history since the early 1990s.[10]

Fiscal discipline is not self-generating and is logically associated with the need to improve budgetary procedures. To this end, the number of extra-budgetary funds was reduced from over 1,000 in 1998 to 10 in 2002, and budget entities from approximately 130 in 1997 to less than 30 in 2001. Establishment of a single budget account with the BNB, including budget and extra-budgetary funds, helped improve liquidity management and control. Accumulated fiscal reserves, an indicator of the government's ability to cover its debt payments, could be used in case of emergency (higher than expected expenditure associated with structural reform, interest payments and reduced foreign financing).

The currency board, which entailed restraining public expenditures, was introduced at a time of worsening demographics (a rapidly ageing population). It meant changes needed to be made in the socially sensitive pension and health insurance sectors.

Despite the clear progress made in Bulgaria's public finances, we believe reforms should continue. Low fiscal deficits depend on reduced expenditure, with social expenditure concentrated on what is urgent. Medium- and long-term goals are often neglected. Fiscal policy focuses mainly on taxes, with expected income used as a tight constraint on expenditure. The measures deployed are too conservative and only aimed at stabilising the position. The lack of a clearly defined long-term strategy on public expenditure remains a potential source of fiscal risk.

[9] See Mussa (2002) for a discussion on the amount and dynamics of Argentina's government debt and the role of this indicator in the collapse of the Argentine currency board.

[10] Bulgaria's poor credit history dates back to the beginning of the 20th century.

4. The currency board, foreign trade and the balance of payments

The central bank's monetary policy strategy has relatively little effect on a country's balance of payments. Other policies and factors determine economic competitiveness, the level of exports and the ability to attract capital. Price stability can only indirectly support economic competitiveness.

The relationship between monetary policy, foreign trade and balance of payments dynamics is determined by exchange rate policy. Generally, a floating exchange rate, which provides greater flexibility vis-à-vis external shocks, is the most appropriate regime to reduce foreign trade volatility. However, it does not necessarily create trade and does not affect long-term trends in foreign trade.[11]

Although fixed exchange rates do not provide the flexibility inherent in floating ones, they do boost international trade, facilitating the exchange of goods and services by lowering transaction costs: see Rose (2000), Glick and Rose (2002) and Box A on page 6 of this volume. In other words, a fixed exchange rate may have a positive long-term effect on the volume of foreign trade, creating trade between countries with fixed exchange rates.

Quite often, however, fixed exchange rates lead to continuous overvaluation of the real exchange rate,[12] in certain cases affecting export competitiveness,[13] shifting the effect of trade creation to the import of goods and services. This is one of the factors affecting a country's trade balance deficit, along with the need to attract foreign capital and import investment goods due to low capitalisation and technological backwardness.

The Bulgarian balance of payments since the introduction of the currency board has been characterised by deficits of trade and current accounts and surpluses of services and current transfers. But it is too mechanical, and rather superficial, to suggest that a fixed exchange rate automatically leads to lower export competitiveness and permanent deficits. The following economic factors need to be considered if the dynamics of the Bulgarian balance of payments are to be understood:

- After 1997, Bulgaria liberalised capital movement and integrated itself into global financial markets. This considerably increased its ability to attract capital and finance its current account deficits.
- Privatisation on an unprecedented scale in the same period helped attract foreign capital and paved the way for further capital inflow in the medium and long run.
- The decade of transition to a market economy in Bulgaria was accompanied by the export of human capital: a source of constantly increasing flow of current transfers.[14]

The reducing proportion of industry in the economy and increasing proportion of services has led to an ever stronger role for exports of services. Analyses of foreign trade are often based on an old-fashioned, mercantilist view that trade in goods should be in surplus for the country to benefit from it. The following major trends in foreign trade over the last five years merit special attention:

- The fixed exchange rate has had an impact on the geographic structure of foreign trade, shifting trade flows to EU and central European countries at the expense of the CIS. There is potential for further growth in trade with the European Union after the full lifting of customs and tariff constraints (the average-weighted customs rate on imports fell to 7% in 2001 from 8.5% in 2000; the forecast for the average-weighted customs rate for 2002 is for a further fall

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[11] Theoretically, there could be a special case in which continuous devaluation of the national currency could ensure competitive benefits for the country without affecting producer prices and export prices. In practice, this would last for a very short period, and in the medium- and long-term the continuous devaluation would lower foreign trade and worsen the balance of payments.

[12] Hanke (2002) takes the view that overvaluation of the real exchange rate is impossible under a currency board, ie if the exchange rate of a currency were irreversibly fixed, the only real exchange rate is the fixed exchange rate.

[13] Usually real exchange rates are evaluated through purchasing power parity (PPP) but this is not the best way to measure the deviation of the real exchange rate from its equilibrium level. For descriptions of the shortcomings of PPP as a measure of the real exchange rate and competitiveness of the economy, see Rogoff (1996).

[14] Here we do not aim to examine the overall effect on the economy in the short and long run from the export of human capital. We focus only on the effect of this process on the balance of payments.

to 6.5%). Accession of central European countries to the European Union will expand the market, potentially increasing demand for Bulgarian goods.

- The change in the geography of trade led to a change in its currency composition. The fixed exchange rate reduced currency risk and transaction costs through the shifting of invoicing and payments from US dollars into euros (see Table 6). The potential of this trend is limited by the fact that most raw materials, metals and chemicals are traded on international markets in US dollars.
- The product structure of foreign trade has changed. Economic stability, along with economic growth and improved investment, has increased the share of investment goods in imports. In the medium to long term, this creates the potential for growth in Bulgaria's export capacity.[15] The share of energy commodities declined as a result of improved energy efficiency and the decreasing shares of processing and heavy industries. Growth of disposable income and easier access to consumer credit after 1997 boosted demand for consumer goods, leading to a rise in their share of imports.[16]

Table 6

Currency structure of foreign trade

In percentages

	Exports				Imports			
	1998	**1999**	**2000**	**2002**	**1998**	**1999**	**2000**	**2002**
US dollar	66	60	60	44	54	49	50	37
Euro	31	37	37	53	42	47	47	60
Other	3	3	3	3	4	4	3	3

Over the period 1995-2002, a persistent trade deficit emerged as a result of the continuous growth in imports of investment and consumer goods. It was counterbalanced to a great extent by the surplus in services and current transfers. After 1997 there has been a substantial increase of investment in the economy. The annual rate of increase of the trade deficit after 1997 has been largely determined by the rate of increase in imports of investment goods. As capital accumulation grows, its marginal return will decline, leading to a fall in the rate of investment and fewer imported investment goods while higher investment levels and capital accumulation will increase Bulgaria's export potential.

An argument in support of the thesis of balance of payments risk is that the current account deficit is financed mainly through privatisation revenue. It follows that once the privatisation potential is depleted, the country would not attract the same amount of foreign investment.[17] This would be the point at which a balance of payments crisis would ensue. But careful analysis of the volume and structure of foreign direct investments shows that after 1997 Bulgaria has attracted sizeable direct investments, predominantly from non-privatisation transactions.

[15] Undoubtedly, this effect depends largely on whether investment goods are used for manufacturing of tradables or non-tradables. In fact, we do not know to which sectors of the economy imported investment goods are channelled. Thus we cannot estimate how export potential grows as a result of higher imports of these goods. Explicitly we assume that investment goods are channelled into tradables manufacturing, given the relatively small domestic market. For a review of the relationship between imported investment goods and export competitiveness, see Mody and Yilmaz (2002).

[16] From early 2001 until the first quarter of 2002 the growth rates of imported consumer goods and consumer credit were almost perfectly correlated. Certainly, this is not a guarantee of causality between households' credit and consumer goods imports. A small cointegration model with error correction for imported consumer goods for the period after 1997 shows that credit to households is a significant explanator for the growth rates of imported consumer goods.

[17] For a description of the factors that determine the movement of capital to transitional economies, see Garibaldi et al (2001).

But when privatisation was halted by the political cycle in 2001, Bulgaria managed to draw the same volume of non-privatisation direct investment despite the political uncertainty. This proves the ability of the economy to attract foreign capital to finance its growing investment needs.

The increase in foreign direct investment will be decisive for balance of payments stability in the medium term. In 1999 Bulgaria managed to achieve (and retain during the next two years) a relatively high level of non-privatisation direct investment: an annual average of $640 million. However, the growth rate has slowed, which, given sustained investment growth, could pose a genuine risk to balance of payments stability.

Our view is that government policy should not try to stimulate exports through various government programmes, but rather to create the right conditions for direct investment. Such investment will above all be attracted by low and stable tax rates, an efficient administration and judiciary, and a well educated and diligent workforce.[18]

Another significant positive effect of foreign direct investment is that it becomes an instrument of a new corporate culture, bringing knowledge and management expertise and a faster transfer of technology to Bulgaria. It is possible that this invisible effect of direct investment is much more important for long-term growth than the visible effect reflected in the balance of payments statistics.

5. The economy and banking system

Many factors determine the structure of the economy and income growth rates. Monetary policy has only an indirect effect through price stability and low real interest rates. Sustainable positive economic growth emerged after 1997 by contrast with the period before. Although the structure of the economy changes relatively slowly, there are clear trends of a decline in agriculture and a growth in services.

A major problem associated with changes in the Bulgarian and global economies was unemployment. In our view, government has no choice but to withdraw faster from economic decision-making. The example of liberal economies with their flexible institutions and efficient markets over the past 20 years has illustrated the speed at which society creates jobs provided that flexible institutions and efficient markets are created (creative job destruction): see Greenspan (1999).

The role of the financial sector and its structure in achieving steady economic growth is indisputable: see Levine (1997). As early as 1911, Joseph Schumpeter advanced arguments based on the hypothesis of the key significance of services related to “mobilisation of savings, evaluation of investment projects, risk management, monitoring management behaviour and facilitating transactions as underlying for technological innovations and generation of economic growth”.

The central bank could underpin the process of establishing an efficient financial infrastructure by:

- maintaining low and stable inflation, resulting in positive real interest rates;
- deregulating financial markets and financial intermediaries;
- encouraging legislation that motivates those who obey the rules and sanctioning those who do not; and
- helping to create conditions for comprehensive monitoring between financial intermediaries and their customers: using market discipline as an efficient sanction.

What has the BNB achieved in this respect since the currency board was introduced in 1997?

- The BNB has shared in the success of bank privatisation, which has driven the restructuring of the financial sector. Banks of good international reputation currently manage over 85% of the banking system’s assets.

[18] A telling example of the inefficiency of programmes to boost exports is D. Cavallo’s efforts in 2001 to encourage Argentine exports by applying his “competitiveness plan” which included the introduction of a preferential exchange rate for exporters.

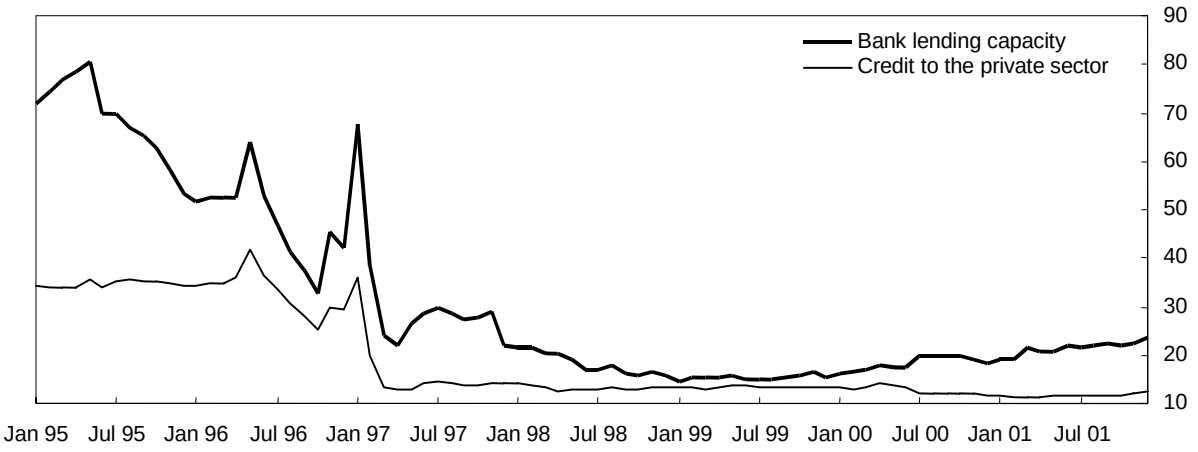
- The BNB has made a significant contribution to capital movement deregulation. The private sector gained access to international money and capital markets.
- The BNB has established modern banking supervision and gained an international reputation for effective banking sector regulation.[19]

There are currently 34 banks operating in Bulgaria whose assets are equivalent to 45% of GDP. Analysis of the historical levels of this indicator and comparison with other countries is possible but should be cautiously assessed in light of Bulgaria's financial history and the recent restructuring of banks. The indicator cannot be compared directly with pre-1997 data. The dramatic fall in credit to the private sector in the period following the early 1997 financial crisis reflects to a great extent the lower lending capacity of the banking system (see Graph 7). Commercial banks' lending capacity is defined as the total amount of banking system liabilities (plus retained profit) less minimum required reserves, notes and coins in commercial banks' vaults and equity.

Graph 7

Banking system lending capacity and credit

As a percentage of GDP



After the introduction of the currency board, commercial banks' lending capacity grew slowly, in line with the foreign currency composition of deposits and movements in the dollar/euro exchange rate. Bank lending to the private sector grew steadily, matching the economy's growth rates and close to the growth rates of lending capacity.

The interest spread between credits and deposits is a traditional measure of efficient bank mediation. High values may indicate inefficiency caused by high operating expenses, weak competition, high non-earning minimum required reserves, and stringent provisioning rules. Since 1999, the spread has gradually narrowed; see Graph 8.

Another trend evolving in the banking system is the change in the asset structure of commercial banks (see Graph 9). Credit to the government has halved, freeing funds for lending to households and companies. Credit to private enterprises grew by 46% in 1999, 40% in 2000, 25% in 2001 and 43% in 2002. The share of credit to public enterprises fell dramatically due to privatisation and the lower share of public enterprises in GDP. The introduction of the currency board gave households access to the

[19] Additional changes in the structure and organisation of the central bank are needed to prepare for the successful incorporation into the European System of Central Banks. There are too many hierarchical levels and a number of divisions with overlapping functions. This leads to low efficiency and poor quality of work, posing additional risks to the institution. The preparation for euro area accession requires profound changes in the central bank's fiscal agent functions, reserve management strategy, transaction procedures with commercial banks and measures to achieve greater convergence of Bulgaria's money and capital markets with those in the euro area.

credit market, and credit to households grew from nothing in mid-1997 to 1.25 billion leva by end-2002.

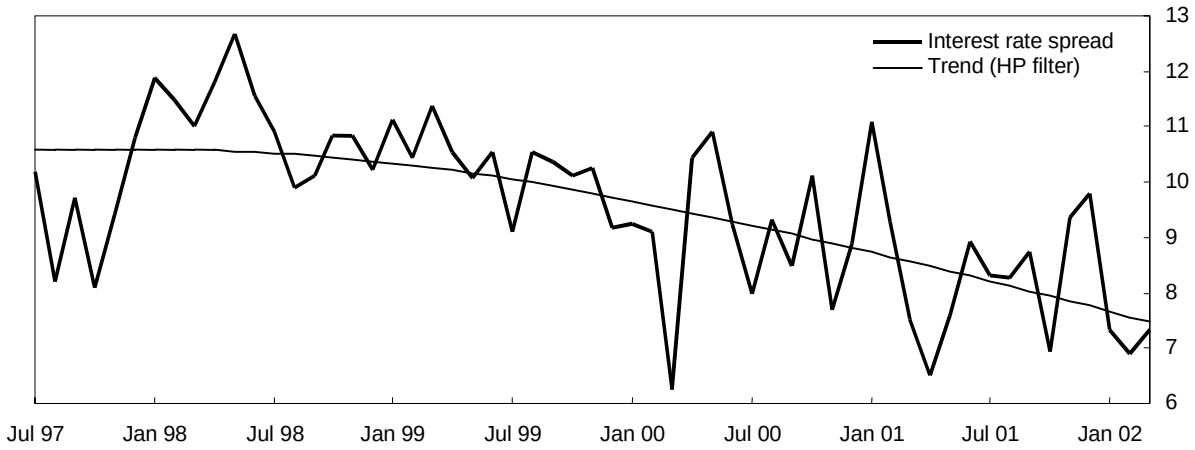
The share of foreign assets in commercial banks' assets has grown considerably. This was made possible after liberalisation of the rules governing the financial account of the balance of payments and the lifting of restrictions on open currency positions between the lev and the euro.

Generally, the high share of foreign assets (38% on average during 2001) is viewed as indicating the banking system's inability to identify profitable investment projects.

Graph 8

Interest rate spread

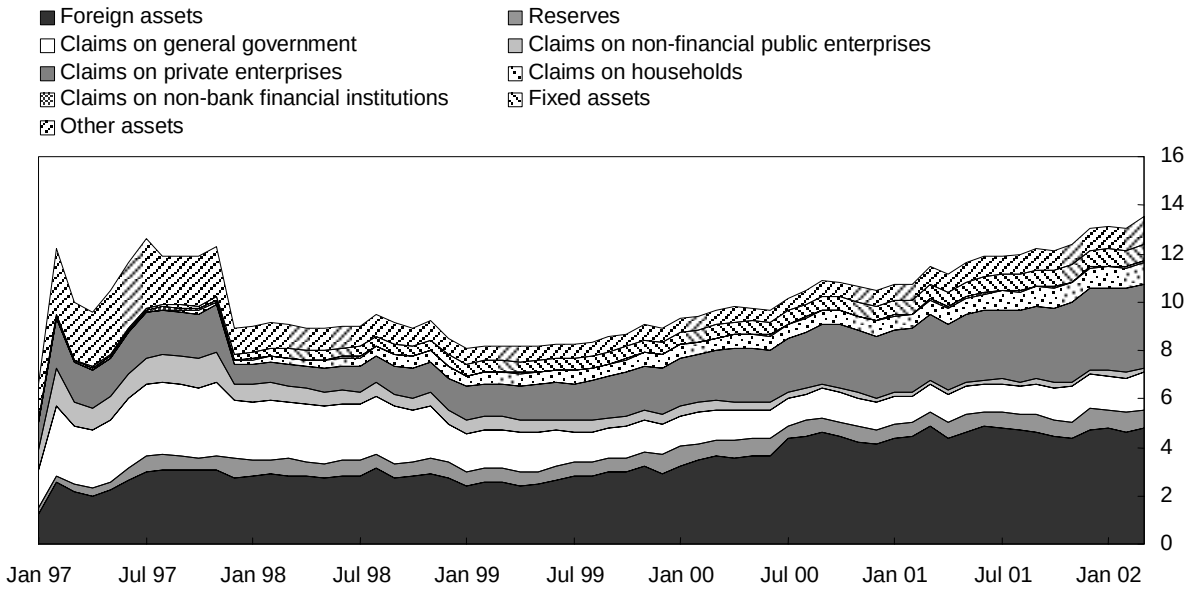
In percentages



Graph 9

Commercial bank assets

In billions of leva



6. Challenges and recommendations

The currency board helped to promote the price and financial stability the Bulgarian economy needed. In this conclusion, without being exhaustive, some medium-term challenges confronting Bulgarian monetary policy are covered.

Fiscal policy and the central bank

The currency board arrangement requires greater attention to fiscal policy, since the latter must be able to adjust to shocks. This entails precise assessment of risks in its implementation.[20] The basis of overall fiscal strategy is implementation and observance of the government budget. Progress has been made, but more is needed.

- Schiller et al (2000) highlight the need to reform the procedure for setting budgets, which remains inefficient. There are overlapping budget lines, and it remains possible to impose changes even after the National Assembly has adopted the budget. The legal framework also appears clumsy and unstable, with an inadequate time frame for implementation to be effective or consistent.
- The budget preparation stage should be adapted to modern budget programming and the relevant ministers properly involved in strategic decision-making.

The budget process does not exhaust the issues confronting fiscal policy. Problems stem from defining the size of government obligations and their dynamics.[21] Contingent and implicit medium- and long-term fiscal obligations are often neglected.

- The municipalities, which play a key role in the provision of public services in Bulgaria, should not be allowed to default. Given growing social inequality, generally poor management and planning skills or experience, and the inadequate infrastructure (roads and communication, public utilities) there is a serious danger of a spiralling growth in public debt if fiscal policy is decentralised. It is the right strategy only if the functions and responsibilities of municipal and central government budgets are clearly defined.
- Overdue obligations to or by public enterprises could be a source of a quasi-fiscal deficit.[22] Obligations to big monopolies (electricity, telecommunications and gas) are also generated by underprivileged groups, raising doubts about whether they will be settled.
- Over the long term, pension and health insurance reform has profound social implications and entails implicit guarantees by the government, which would burden the budget in case of worsening demographics and/or planning mistakes.

Centralisation of government funds at the central bank through the Single Account improves their management and control by the Ministry of Finance. However, there is no clear management strategy linked to well defined government debt management. The target of the government to maintain a fiscal reserve within the central bank equal to annual payments on foreign debt creates unwelcome possibilities for the Ministry of Finance to use these funds to affect monetary conditions in the economy.[23] The design of the Single Account provides an overdraft facility for the government. Admittedly it has never been used. But the right to such an overdraft contravenes sound central banking principles, and we recommend that the government's technical right to central bank finance should be abolished.

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[20] For a theoretical basis of the assessment of fiscal policy and major risks see Polackova (1998), Hemming and Petrie (2000) and Chalk and Hemming (2000). The budgeting process is reviewed in Schiller et al (2000).

[21] See Brixi et al (2000) for an assessment of major fiscal risks for Bulgaria.

[22] In the new agreement with the IMF, indicative limits of overdue tax and social security obligations are defined for a list of enterprises, their total amount coming to 683 million leva as of end-2001, with a fall of at least 120 million leva projected for 2002.

[23] See Miller (1999) for an in-depth discussion of the positive and negative effects of the presence of government accounts within the central bank.

Central bank credits to the government create uncertainty in the relationship between government and the central bank, constraining the latter's independence. Lending to the government by the central bank is inconsistent with the principles of the Economic and Monetary Union, which requires the abolition of this practice.

The current account

The current account deficit will exist until the economy achieves an optimum level of capital accumulation. In the medium term, balance of payments sustainability will be determined by the growth of foreign direct investment. A slowdown in FDI growth rates, rather than trade balance dynamics, could pose a risk for the sustainability of the balance of payments. The government's priority should be to create an environment for attracting foreign investment rather than to stimulate exports through different government programmes. As noted above, the most effective way of doing this is through tax policy, an efficient administration and legal system, and good-quality human capital.

The banking sector

The significant share of foreign assets in commercial banks' balance sheets reflects a low-risk policy on the part of banks investing in domestic assets. In the medium term, the rapid rate of conversion of banks' foreign assets into domestic ones may increase the risks to national financial stability and monetary policy. It could prompt a rise in loan defaults and inflationary pressure as a result of more credit being raised and increased demand for goods and services.

EU accession

Bulgaria's accession to the European Union and hence participation in Economic and Monetary Union requires a number of strategic, legislative, and functional decisions by the central bank, the government and the National Assembly.

First, we believe that Bulgaria should make a strategic choice as to the exchange rate regime and monetary policy to apply during the transition period following the accession to the European Union but prior to full participation in the monetary union. Since unilateral euroisation is politically unacceptable to both the European Central Bank and the European Commission, the currency board is the best alternative compatible with ERM 2. To devise an alternative monetary strategy may be feasible, but not recommended. There is no reason to tamper with success. It could jeopardise trust in the currency board. The merits of any alternative to the currency board are unclear and uncertain. For example, the introduction of a pegged exchange rate fluctuating within a wide range (15%) would incur a number of potential risks for Bulgaria's financial and price stability.

Second, during the negotiations, Bulgaria committed to initiate changes intended to increase central bank autonomy. These changes concern the central bank's management and budgetary independence as well as its relationships with the Ministry of Finance, and require amendments to the Law on the BNB.

Third, rapid and continuous change, both globally and specifically in European politics, economics and finance, will unavoidably lead to the reform of even such pivotal institutions as the European Commission and the European System of Central Banks. To implement a successful monetary policy, the central bank must therefore be sufficiently flexible and ready to react effectively to such changes.

Conclusion

This paper's analysis of Bulgaria's monetary policy, together with our concluding recommendations, are shaped by practical experience of the Bulgarian economy during the five years since the currency board was introduced, as well as by our personal convictions.

Other conclusions are evidently possible; there are other understandings of the world and of the economy. But this paper is not an academic discussion of the relative merits or truth of different points of view. It is severely practical, and based on experience. And our conclusion is unambiguous: we are firmly convinced that Bulgaria's current monetary policy should be continued until such time as the country is a member of the European Union and integrated into the euro area.

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Monetary policy and management of capital flows in a situation of high euroisation - the case of Croatia

Boris Vujčić[1]

1. Introduction

Typically, emerging economies seek foreign savings to solve the intertemporal savings-investment problem, while countries with current account surpluses seek opportunities to invest their savings. To the extent that capital flows from surplus to deficit countries are well intermediated, and therefore put to productive use, they increase welfare. Capital flows can, however, also be dangerous, as shown by many currency and banking crises, such as those in Korea, Mexico, Sweden or Turkey (see IMF (2001)). They can make countries more vulnerable to exogenous shocks. In particular, if serious macroeconomic imbalances exist in a recipient country and if its financial sector has poor risk management, prudential regulation and supervision, large capital flows can easily lead to a crisis.

Views differ markedly on the role of "contagion" in crises. In one corner, many economists, especially from crisis-hit economies, claim financial markets will hit you even if you do everything right because of the notorious herd behaviour of investors. Economists in the other corner, often from financial markets, claim that affected countries are hit because their fundamentals are weak. An increasingly accepted intermediate view is that while emerging markets are often hit by a reversal of capital flows or worsening borrowing conditions even if they do nothing wrong, those hit the most are the countries with weaker fundamentals. Markets seem recently to have distinguished better between different countries; there appeared to be less "herding" following the problems in Argentina and Turkey in 2001.

The consensus is now that careful and gradual capital account liberalisation should follow other major economic reforms; McKinnon (1991) is an early proposal and Wyplosz (2002) is based on experience. Countries have sometimes resorted to forms of capital controls, the best known being the Chilean type, praised by eg Valdes-Prieto and Soto (1996) while discounted by others eg Edwards (2000).

Since the beginning of the transition, Croatia has undergone three distinct phases of capital flows. First came capital outflows during the war when, due to the repressed domestic demand, the economy recorded current account surpluses. Then followed the repatriation of foreign currency savings to the domestic banking system and, since 1998, foreign direct investment.

This paper analyses the causes, as well as the macroeconomic and microeconomic consequences, of capital flows. Section 2 decomposes and analyses the magnitudes and causes of capital flows in Croatia. Section 3 describes the nature of monetary policy in a situation of high euroisation and strong capital flows. Section 4 analyses what seemed to be an onset of twin crisis in 1998-99, when problems in the banking sector were accompanied by a high current account deficit and exchange rate pressure. It explains how policymakers coped with the twin problems and avoided a crisis, and how, in the process, capital flows were moderated and better intermediated. Section 5 describes capital controls and capital account liberalisation. The paper concludes by asking what the future holds for Croatia.

2. Capital flows in Croatia

Croatia became independent in 1991. However, as much of its borders were not controlled by the government during the war, balance of payments data were of poor quality. In 1993-94 the current

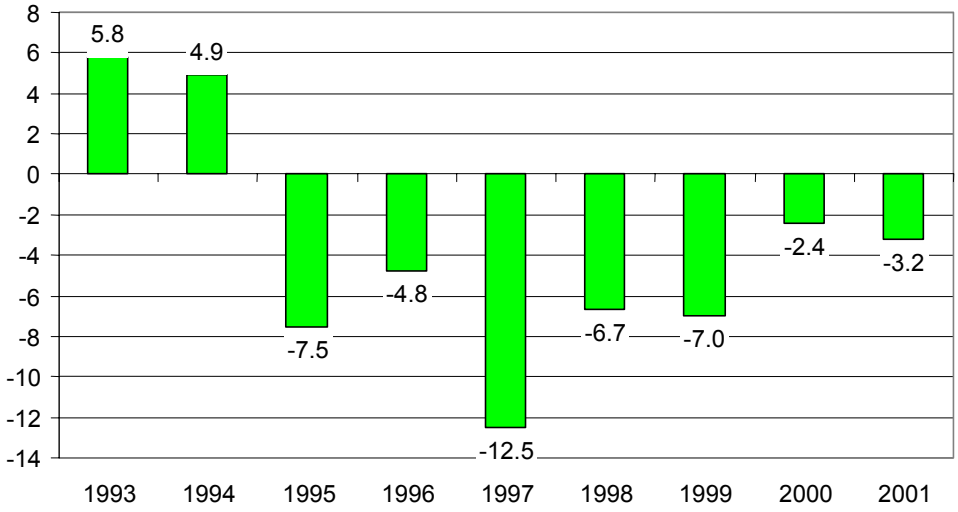
[1] The author thanks Maroje Lang for excellent research assistance and participants at the ICEG workshop on "Managing capital flows in transition" in Budapest for comments on an earlier version of the paper. Alan Bellulo helped with the estimation of the effects of the banking crisis on the banking and financial markets.

account was in surplus (Graph 1) due to a war-related drastic decline in real domestic demand. At the lowest point, in 1993, real wages were only 28% of the 1990 level. At the same time, much of the domestic savings fled the banking system and/or country. The vast majority of savings were traditionally kept in foreign currencies, mostly held under mattresses or in foreign banks (abroad). It is likely there was capital flight and a current account surplus in 1992. Unlike most transition economies, during the initial stages of the transition, Croatia exported rather than imported capital.

Graph 1

Current account balance

As percentage to GDP



Source: CNB.

During 1995-99 the current account deficit was generally reported as above 5% of GDP. However, given the grey economy was estimated at 25% of GDP (see Institute for Public Finance (1997)), this is probably an overestimate. There were three main sources of the deficit financing. In the beginning there was a large repatriation of foreign currency savings to the banking system (as Croatians held approximately 80% of their savings in foreign currency). Once these tapered off, and the deficit widened even more in 1997, debt creation was the main source of deficit finance. Recently, the current account deficit was sharply reduced and FDI became the dominant source of capital inflows (Graph 5).

After the war, Croatia was gradually integrated into international financial markets. In 1995-96 the rehabilitation process started in four large state-owned banks ruined by their pre-1990 legacy and the war (ranked two to five in the market by assets). Bad assets were carved out, management was changed, and the banks recapitalised and prepared for privatisation between 1997 and 1999. Fixing the banking system was a major precondition for a functioning financial system and for integrating the country into the international financial markets. In 1995-96, another essential precondition for this integration was met after the agreement on debt allocation was signed with the Paris and London clubs. Finally, in 1997 Croatia obtained an investment grade credit rating. That has opened the door for the government, banking and corporate sectors to tap the international markets and has enabled financing of the record current account deficit in 1997, which amounted to 12% of GDP.

Composition of flows

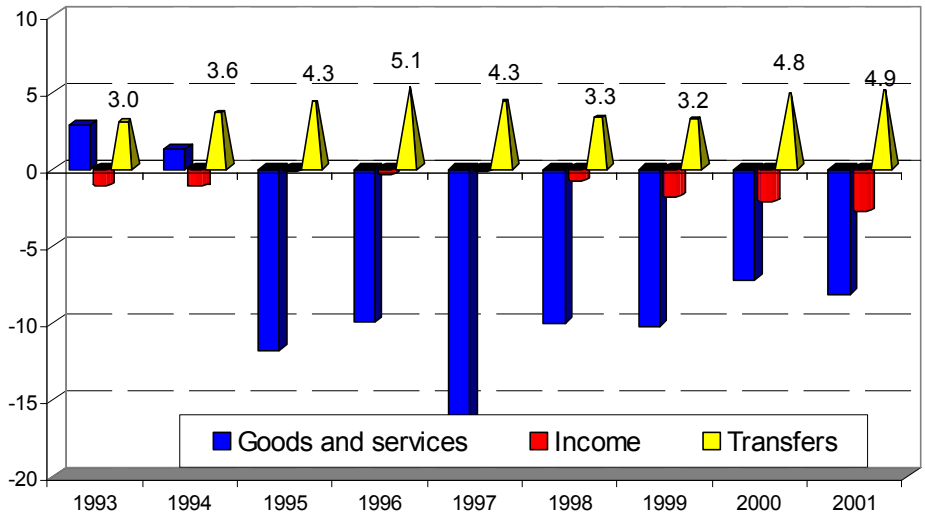
Croatia differs from other central and eastern European countries (CEECs) in the importance of the household sector in capital flows, both as recipients of transfers in the current account (Graph 2) and as depositors in the capital account. Except during the banking crises of 1993-94 and 1998-99, net transfers to Croatia were between 4 and 5% of GDP. This mainly reflects the large and widespread Croatian diaspora. Many post-WWII economic emigrants regularly send remittances back home to their families and an increasing proportion of them have recently returned to Croatia, and receive their pensions from abroad via remittances. In a way, Croatia is becoming a “Florida” for its recent

economic emigrants, receiving both an inflow of retirees and associated funds. Until the war's end in 1995, general government transfers were significant as the international community helped a huge number of refugees and displaced persons.

Graph 2

Current account: the importance of transfers

(as percentage to GDP)



Source: CNB.

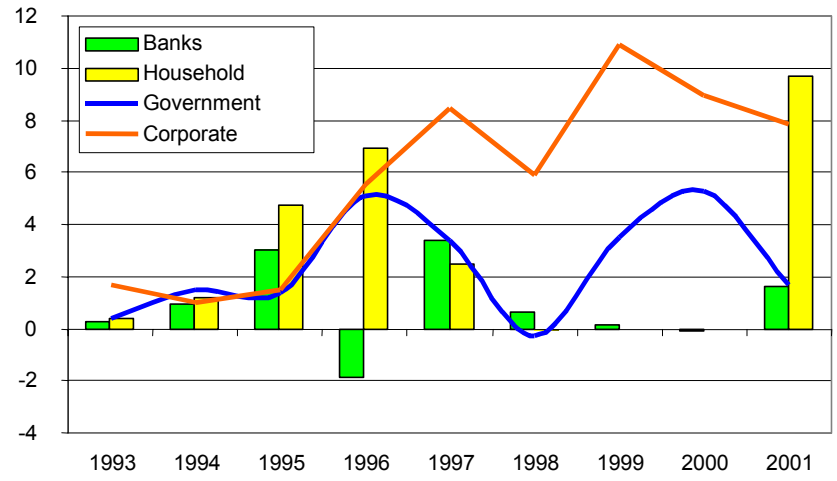
Graph 3 shows the rapid rise in capital inflows from 1993 until 1997. In 1995-96 the current account deficit was mainly financed through an inflow of foreign currency deposits to the domestic banking system, mainly due to:

- regained confidence after prices and the exchange rate had stabilised, and growth resumed;
- regained trust in the banking system after the rehabilitation process started in 1995; and
- high interest rates on deposits in Croatian banks relative to foreign interest rates.

Graph 3

Capital inflows by sector

(as percentage to GDP)



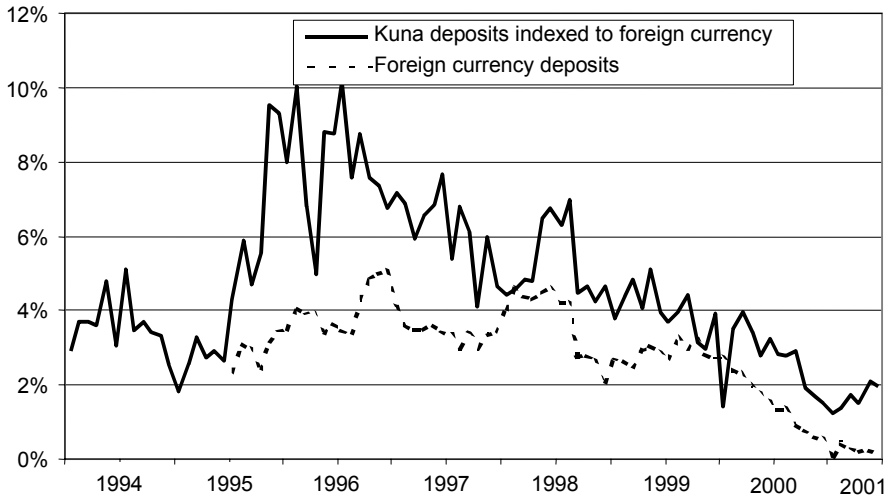
Source: CNB.

The spread on foreign currency deposits and kuna deposits indexed to foreign currency rapidly grew from mid-1995 until mid-1998 (Graph 4). Together with the regained confidence in economic stability and the banking system, this explains the large reflow of foreign exchange deposits into the domestic banking system. The exchange rate stabilised, and kuna deposit interest rates were much higher than foreign currency deposit rates resulting in a gradual crowding-out of the Deutsche mark as a transaction currency. As shown in Šonje and Vujčić (2001), in late 1998, however, when a number of banks failed, and depreciation expectations rose, banks stopped compensating for the expected depreciation through higher interest rates on domestic currency time deposits. Such a policy would have required extremely high interest rates on these deposits, which banks did not want to pursue for various reasons: a fear of adverse selection (prudential reason), low inflation expectations (credibility reason), and the low interest rate elasticity of domestic currency deposits. Reverse currency substitution therefore stopped in 1998 and 1999, and in 1999-2000 the household sector recorded capital outflows. On a net basis, the corporate sector contributed most to the capital inflows in the late 1990s, while government contributed only moderately.

Graph 4

Spread between the deposit rate in Germany and Croatia

(three-month deposit rates, in percentage)



From the maturity standpoint, capital inflows look good (Graph 5). Long-term borrowing and foreign direct investment dominated total capital inflows throughout the period. Portfolio and short-term flows, which are more volatile, were moderate. As expected, they exhibited more sensitivity to market conditions, being low before the end of the war, and then again during the mini banking crisis and the slowdown in 1998-99. Short-term capital inflows slowed in 1998, in part due to Chilean-type capital controls introduced at the beginning of 1998. These, however, were removed in October 1998 as the international financial crisis took care of most of the capital inflow problem.

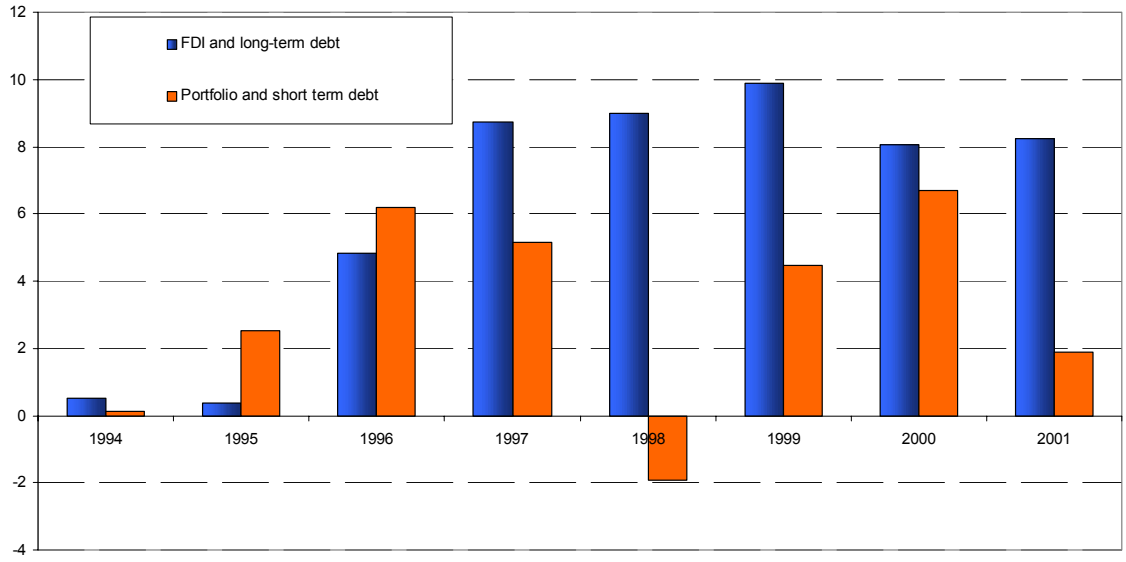
Foreign debt has grown rapidly since 1996-97, when the London club debt and Paris club debt were included in the statistics, and is reaching a level relative to GDP where policymakers must be careful not to create future debt servicing problems. The term structure of foreign debt, however, is favourable, as short-term debt has been kept low. At the moment, the debt repayment schedule for Croatia looks relatively smooth, but the emphasis must be placed on fiscal adjustment. The large government deficits (above 6% of GDP) since 1999 are unsustainable and risk debt dynamics pushing the level of public debt and external indebtedness above prudent levels.

As noted above, since 1996, FDI has become the dominant method of financing the current account deficit. Prior to 1996, the level of perceived business risk associated with the war in the region was extremely high and, consequently, when other CEECs started to receive foreign capital, the level of foreign investment in Croatia was very low. From 1996, FDI started to flow in quickly, and from 1999 to 2001 FDI fully financed the current account deficit. Most of the FDI inflows, however, have been connected to government privatisation projects, and have been used to cover budget deficits. Therefore, it is necessary for the government to bring down the budget deficit before the privatisation revenues come to an end.

Graph 5

Total capital inflows

(as a percentage to GDP)



Source: CNB.

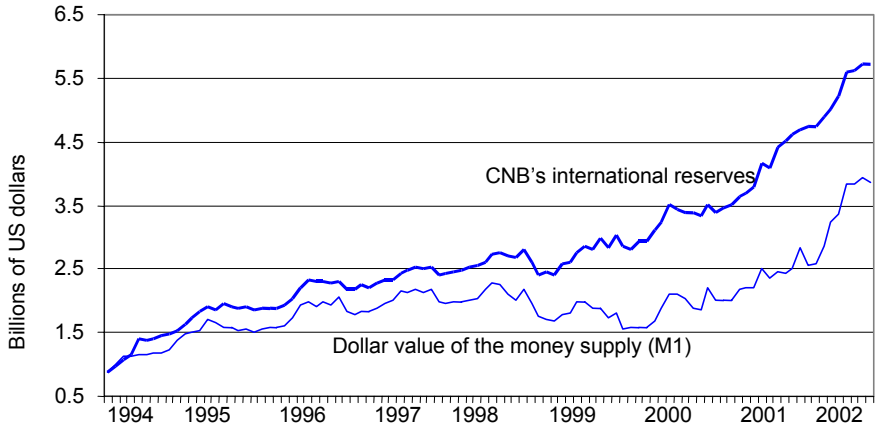
The first major portfolio inflow occurred in 1997 when, after obtaining an investment grade credit rating, the government started tapping the international bond market. Equity and money market investments have remained negligible.

3. Monetary policy

Since the 1993 stabilisation programme, Croatian monetary policy might best be characterised as a quasi-currency board, as the central bank's foreign exchange reserves have always been higher than the dollar value of the money supply, and domestic money has been created almost exclusively through foreign exchange interventions (Graph 6).

Graph 6

Quasi-currency board



Source: CNB.

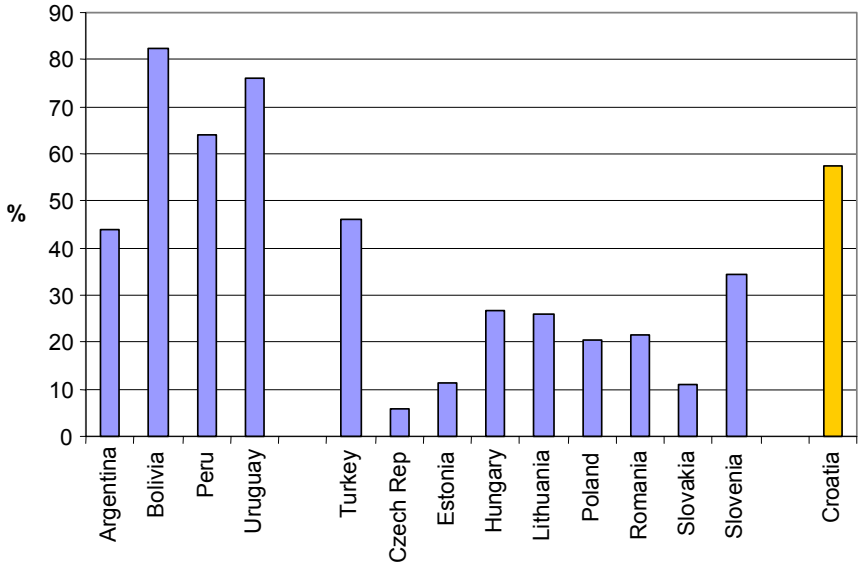
A currency board policy, however, has never been an explicit goal of the central bank. The exchange rate has never been fixed, although it remained very stable during eight post-stabilisation years (Graph 9). A pure currency board policy would have also required a clear legal mandate for the central bank. Such a mandate constitutes a policy constraint which substitutes for a lack of credibility on the part of the policymakers. The credibility of the Croatian National Bank (CNB), however, despite years of high inflation and an unstable exchange rate, has been built without legal constraints on policymakers, and without a priori commitments.

The main reason for the quasi-currency board monetary policy lies in the high level of currency substitution in Croatia and a long history of high inflation and an unstable exchange rate. Croatia has the highest level of currency substitution among CEECs (see Graph 7 and Table 10 on page 24 of this volume). Its financial market history is more of a Latin American than a communist type, with long periods of instability (since the 1960s) in which episodes of inflation were followed by hyperinflation, stabilisation, and again inflation. The exchange rate was extremely unstable and dual exchange rates existed. This financial history has led to widespread currency substitution. Financial depth, which is negatively correlated with the level of currency substitution (and the development of the grey economy), was consequently the lowest among the peer group of countries.

Graph 7

Currency substitution in various countries

(foreign currency deposits as a percentage of broad money)



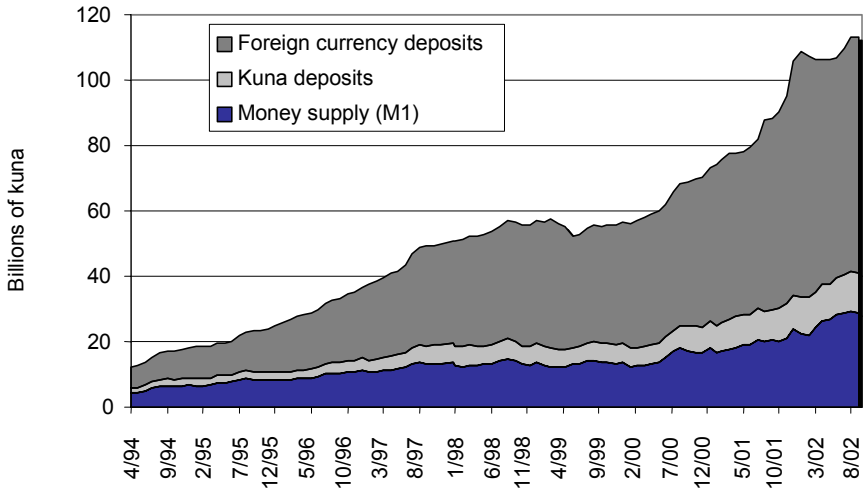
Source: IMF, *International Financial Statistics*.

Since 1995, the level of currency substitution, as measured by the share of foreign currency deposits in broad money has risen further as foreign currency deposits have returned to the domestic banking system. The euro changeover has further increased currency substitution, as most foreign currency cash previously in circulation was deposited in the banking system.

In such circumstances, a currency board-like monetary policy is an optimum strategy for a central bank. The incentives for conducting a prudent monetary policy in a country with such a history are very high, since the stability-oriented policy is rewarded not only by FDI, but also by a continuous reflow of the substantial capital kept in foreign currencies at home or abroad. On the other hand, any "misbehaviour" is met by an immediate reaction from both foreign investors and the domestic population, which has an inbuilt instinct to run away from a weak currency. Such a fear of weak currency dates back to ex-Yugoslavia's hyperinflationary episodes and occasional partial expropriations of foreign currency savings, with the last episode being the freezing of foreign currency savings by the Croatian government after independence. In a small, open and highly "euroised" (previously "Deutsche-markised") economy, exchange rate stability is simply a natural cornerstone of overall macroeconomic stability.

Graph 8

Broad money



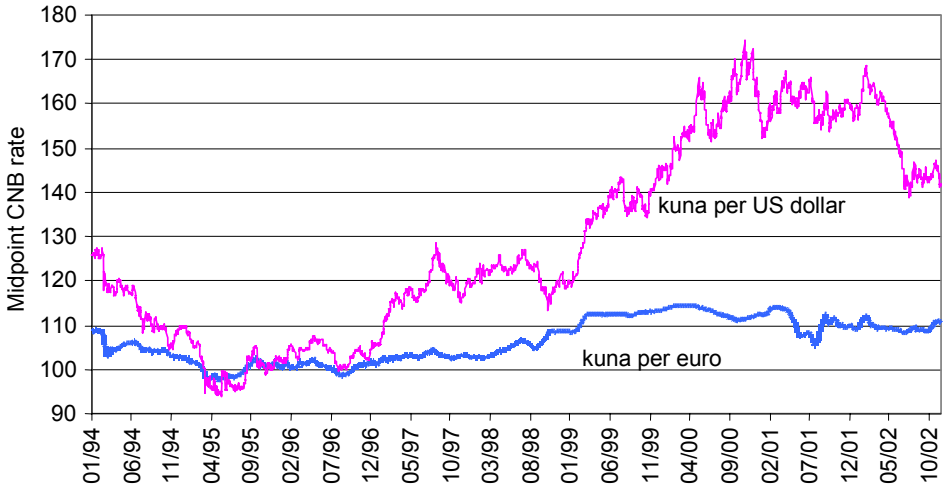
Source: CNB.

Although in a regime of managed floating, during the last eight years the kuna has been fluctuating in a narrow "ex post" band of approximately ± 7% around the euro. Exchange rate stability has played a major role in anchoring inflationary expectations. On the other hand, it has been possible to keep the nominal exchange rate steady because, after stabilisation, inflation has remained at very low levels for a country in transition, not causing the real exchange rate appreciation due to price movements, which is often associated with the Balassa-Samuelson effect. Reverse currency substitution has helped the policymakers to keep inflation low and the exchange rate stable at a time of increasing capital inflows.

Graph 9

Exchange rate indices

(kuna vs US dollar and euro, 1995 = 100)



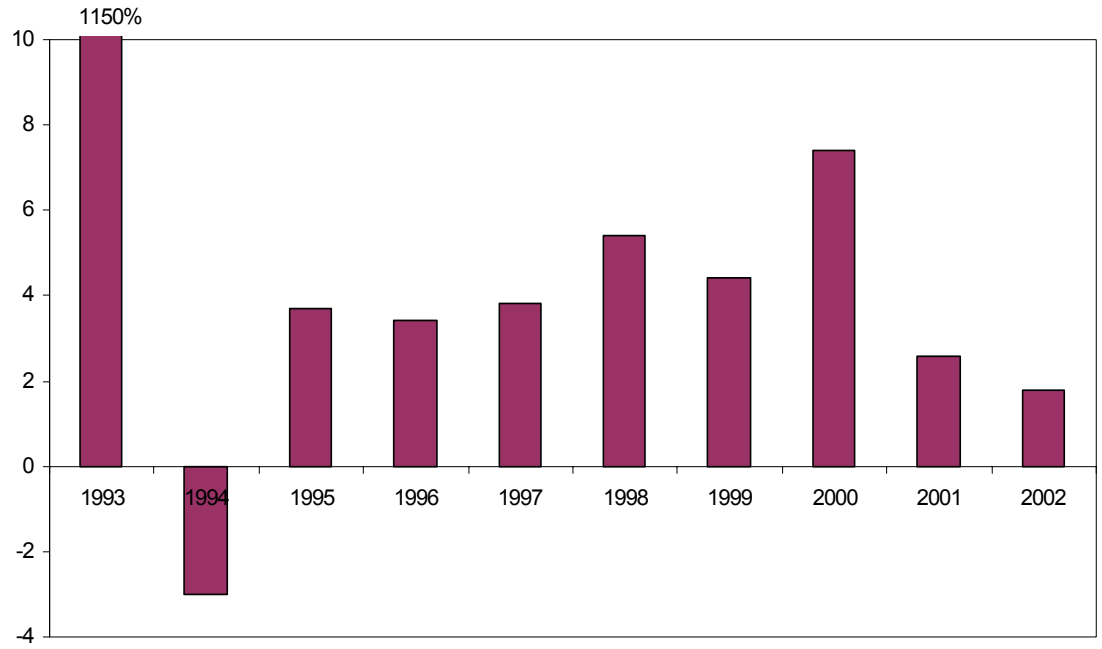
Source: CNB

Thanks to the low inflation since 1994 (Graph 10), the real effective exchange rate has not appreciated, as has been the case in some other CEECs, even though the nominal exchange rate remained stable. Instead, the real effective exchange rate has depreciated after the stabilisation.

Graph 10

Consumer price index

(annual percentage change)



Source: CBS.

A quasi-currency board monetary policy is actually a policy of trying to obtain the best of both worlds. On the one hand, it provides the central bank with the necessary credibility associated with exchange rate stability and low inflation. On the other, it retains a two-way risk in the foreign exchange market, which helps to discourage speculative capital inflows. It also allows the exchange rate to reflect changes in fundamentals, although in a limited way. That is why, after the first months of the stabilisation programme, the CNB never made a commitment to defend any exchange rate band. With the benefit of hindsight, this turns out to have been a wise choice, since it has introduced some helpful uncertainty in the foreign exchange market, preventing a massive inflow of speculative capital, while allowing the central bank enough room for manoeuvre.

Such a policy is, however, a difficult game to play. In a small and open country like Croatia, external financial shocks can be large, reaching an order of magnitude of several percentage points of annual GDP. The current account of the balance of payments can exhibit significant changes as long as (net) capital inflows do the same. But it is not only short-run speculative inflows that can create volatility. In transition, all types of inflows can change rapidly. Šonje and Vujčić (2001) show that the volatility of capital inflows (measured by the standard deviation of the net capital inflows to GDP ratio) was higher in the transition countries than in other developing countries, and that in Croatia it was much higher than the average for transition economies.

In particular, Croatia is characterised by what can be called “lukewarm capital”, which reacts to bad news and exchange rate movements, but not to the extent that the hot capital does. Hot capital is typically held by foreign investors looking for a quick profit opportunity. Such capital rapidly moves in and out of the country, and its movements are characterised by herd behaviour. Lukewarm capital is held by domestic residents. In Croatia, where the population holds more than 80% of its savings in foreign exchange deposits, and foreign exchange deposits make up almost three quarters of broad money, changes in exchange rate expectations and banking system confidence can cause large shifts in currency portfolios, which are characteristic of a currency attack or a run on the banks.

In such a situation policymakers face many instead of few important players in the domestic foreign exchange market. An attack on the currency does not come from hedge funds, or investment banks, but from domestic residents. And an important role is played by the household sector. Due to their large holdings of foreign exchange and great (historical) sensitivity to exchange rate movements, households have long played a dominant role in the Croatian foreign exchange market.

Lukewarm capital also exhibits elements of herd behaviour, but domestic players are different from institutional investors such as pension funds, investment banks or hedge funds. They are slower to react to bad news, and they react much less to news and more to market developments. Therefore, if nothing really starts to go wrong, nothing will go wrong. However, if the market situation worsens, as perceived by domestic agents, for example if the currency starts to depreciate relatively quickly, or if a couple of significant banks get into trouble, there is an imminent and real danger of a snowball effect. A large number of different economic agents (households, corporates, banks) could start to shorten their kuna positions and/or start to withdraw their deposits from the banking system. This would add to the foreign currency market pressure and cause other weak banks problems. The vicious circle quickly starts. In such a situation it is very difficult for the central bank to stop the meltdown. It is important to notice that the vast majority of contracts are indexed to "hard" foreign currency, and that domestic agents can easily shorten their kuna positions. Therefore, it might be more difficult for a central bank to control such a domestically induced currency/bank attack than the canonical one in which the main role is played by foreign speculators.

In a country like Croatia, constantly facing potentially huge lukewarm capital flows, the central bank tries to discourage short-term capital flows induced from abroad, even if they are not very large, because they can act as a trigger for large domestic capital flows. A couple of things helped the CNB to keep hot money at bay during the 1990s.

The first was the low degree of integration into the international financial markets, reflecting Croatia's overall low level of economic integration in comparison to the front-running transition countries such as the Czech Republic, Hungary and Poland. Croatia was, mainly on political grounds, until 2000 excluded from all major economic and political integration processes. It was neither a candidate for EU entry, nor WTO or CEFTA. The entry of foreign investors, particularly foreign banks, occurred only at the end of the 1990s. The international community only became receptive to the acceptance of Croatia into various economic integration processes after the 2000 elections.

The second was capital controls. Explicit controls were introduced in 1998, and will be discussed in more detail below. Implicit capital controls took a number of different forms. Initially it was the war and regional political instability, which deterred foreign capital inflows in the first half of the 1990s. Later it was the continuous political isolation and a lack of integration with the European Union. These two implicit capital controls were exogenous to the policymakers. In addition, the previously explained exchange rate policy kept a two-way risk in the foreign exchange market and, therefore, also helped to discourage short-run capital inflows.

As shown in Graph 5, strong capital inflows started after the end of the war in 1995, and were accompanied by an equally rapid monetary expansion. One thing that helped at that time was a relatively rapid (reverse) currency substitution, which allowed the central bank to keep the exchange rate and prices stable in a situation when it was overshooting its monetary targets. However, the sterilisation problem was still present.

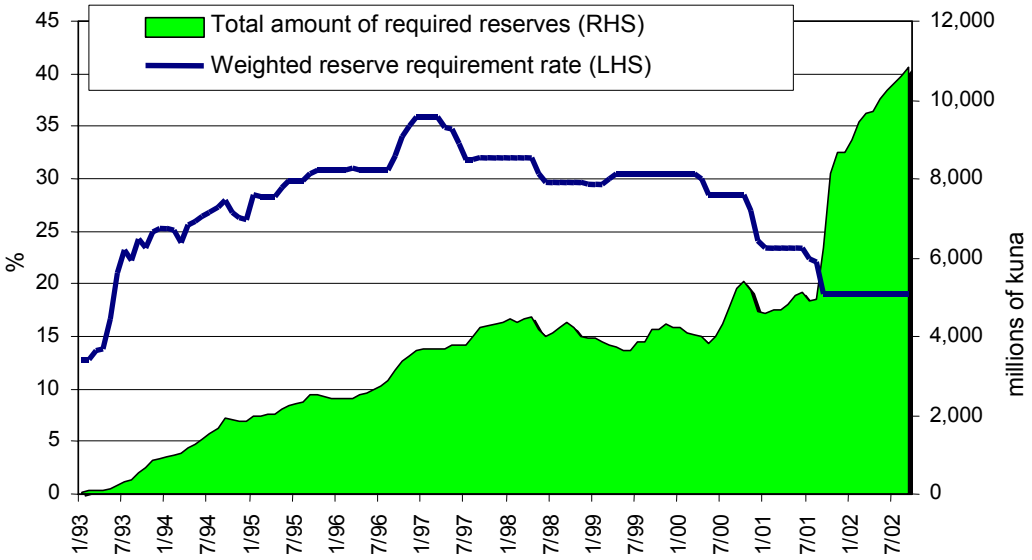
Initially, high reserve requirements (Graph 11), and at times obligatory holding of CNB bills, were practically the only sterilisation tools. Even very high interest rates on CNB bills in 1995-96 (Graph 12) were insufficient to induce banks to buy central bank paper. In such a situation the CNB resorted to obligatory CNB bills, which were remunerated at rates much higher than the deposit interest rates (in 1996 the rate was 18%) and somewhat lower than interest rates on voluntary bills. As the liquidity of the banking system continued to increase, and as a perception of the currency risk diminished, the amount of voluntary CNB bills rose. Obligatory bills were abandoned by the end of 1996, and in 1998 foreign currency bills were introduced and remunerated at the market rate.

Gradually, the CNB is switching from the reserve requirement to CNB bills as the main sterilisation tool. Since 1997, the reserve requirement has been lowered from 37% to 19%, with the aim of soon going below 10% (Graph 11). Of course, it is more difficult to lower the reserve requirement than to raise it. A vehicle that might be used to lower it is unification of the remuneration currency. At the moment, the reserve requirement on foreign exchange deposits is remunerated 75% in foreign exchange and 25% in domestic currency, while that on kuna deposits is remunerated in kunas. Switching to a single remuneration currency - the kuna - would enable the CNB to lower the reserve requirement sharply without any monetary effects in terms of kuna liquidity. However, such an operation would worsen the foreign currency exposure of the banks.

Graph 11

Reserve requirement

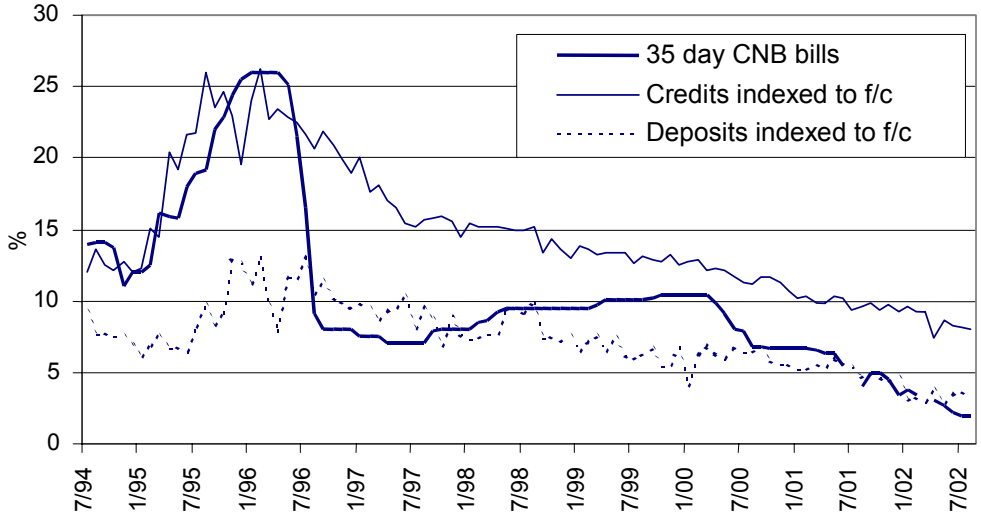
(monthly rate and volume)



Source: CNB.

Graph 12

Interest rates on CNB bills, credit and deposits



Source: CNB.

4. Coping with problems

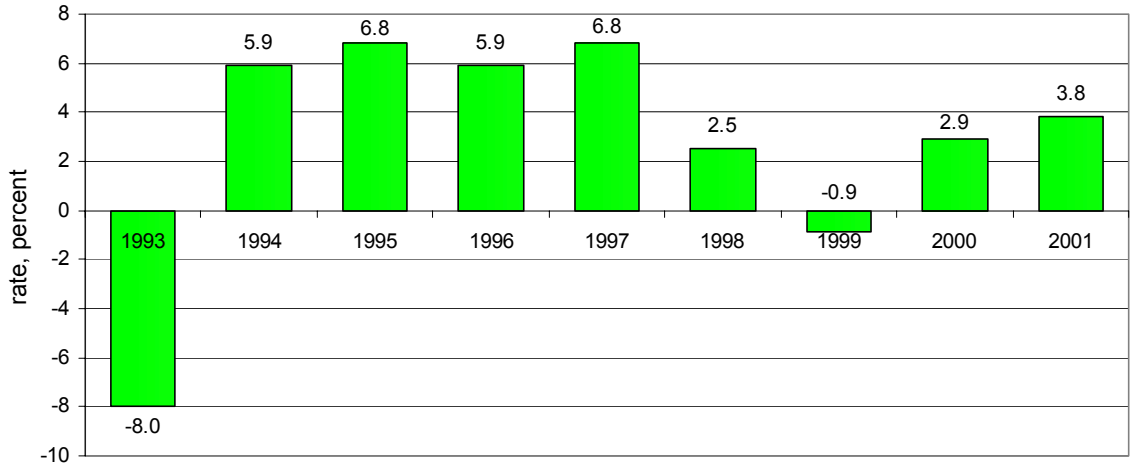
On the brink of a twin crisis

The economic situation after the successful stabilisation programme had many boom-bust features. The war-related slump was followed by a strong recovery in the post-stabilisation period (Graph 13), which was, however, based entirely on personal and government consumption as exports were flat. As noted above, the current account deficit remained relatively large and fiscal policy was expansionary.

Graph 13

Gross domestic product

(annual percentage change)



Source: CBS.

Financing the budget deficits has been relatively easy due to Croatia's investment grade credit rating, its favourable access to the international capital markets, and the continuous substantial inflow of privatisation revenues. The government raised debt abroad because the interest rate was much lower. Domestic interest rates were higher mainly due to the relatively inefficient, bank-dominated, financial sector, but also because of the continuing lack of confidence in the domestic currency.

Household consumption was financed mainly by domestic banks. Much of the capital inflows were poorly intermediated via the weak banking sector. Lending exhibited a typical boom-bust cycle, with rapid credit growth in the wake of the banking crisis. Immediately before the fifth largest bank failed in early 1998, the situation was the following: (i) GDP growth was 6.8%; (ii) the current account deficit stood at 11.6% of GDP; (iii) capital inflows were at their peak, amounting to over 15% of GDP; and (iv) credit to households was growing at almost 100%, and to enterprises by 40% (Graph 14).

Then, problems started in the banking sector with the collapse of a few aggressive banks in 1998. From the beginning of the transition process, the Croatian banking system had been characterised, on the one hand, by weak old state-owned banks with a heavy legacy of non-performing loans and poor management and, on the other, by liberal licensing of new banks. As a result, the market was overbanked (Graph 15) and inefficient. This resulted in two banking crises. The first one, in the mid-1990s, was related to the large old state-owned banks. These old banks were rehabilitated between 1995 and 1996, and then sold to foreign strategic owners in 1997-99. The cost of that operation was huge: 22% of GDP according to Babić et al (1999).

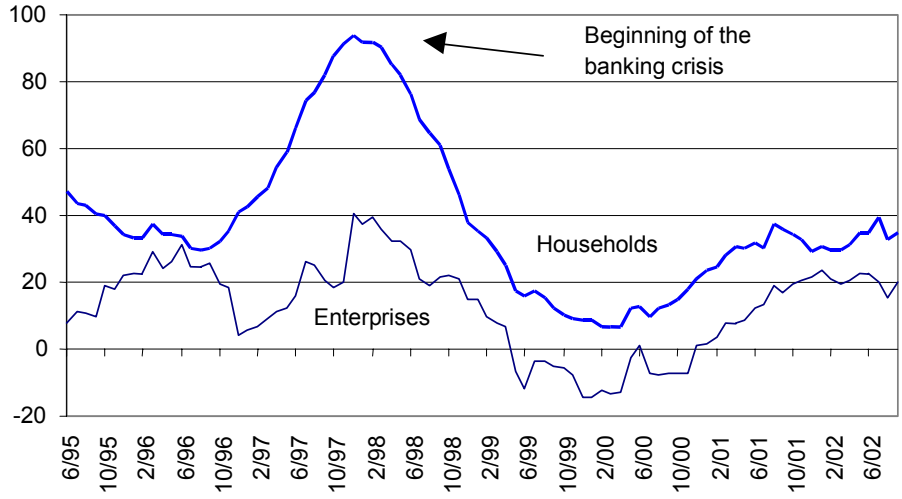
The second banking crisis was related to a number of small and medium-sized banks, which were aggressive, often undercapitalised and poorly managed. The main reasons for their failures in 1998-2000 was very weak corporate management, which resulted in typical wrongdoings such as connected lending; a weak regulatory framework and inadequate supervision. A number of medium-sized aggressively growing banks based their business development on extremely high deposit interest rates that served as the main vehicle for attracting foreign exchange inflows. While good banks were

paying a reasonable premium over the foreign interest rate on foreign exchange deposits (approximately 100 bp), bad banks were offering interest rates on foreign exchange deposits that were almost twice as high as those of the good banks. This led to a rapidly growing share of bad banks in the also rapidly growing foreign currency deposit base. Their share had reached 30% by early 1998 (Šonje and Vujčić (2001)), when the fifth largest bank failed.

Graph 14

Credit growth

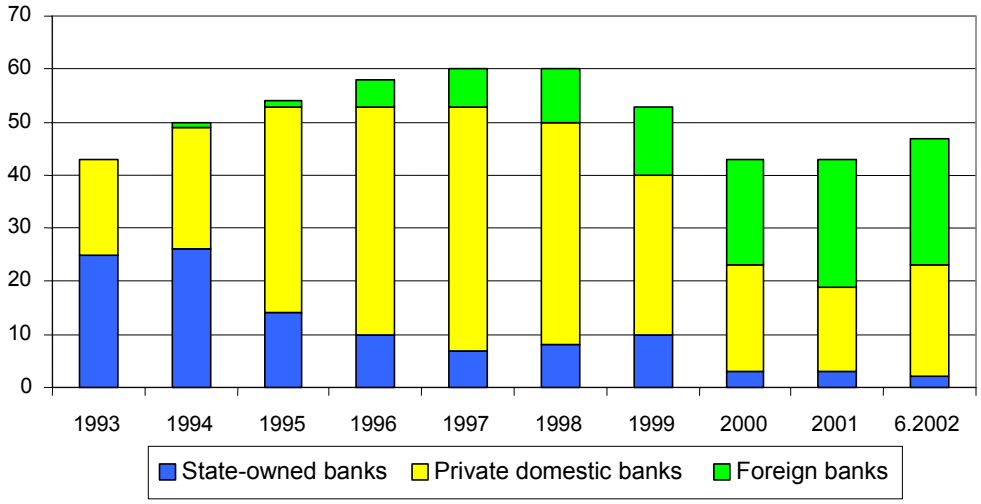
(in percentages)



Source: CNB.

Graph 15

Number of banks



Source: CNB.

All the major ingredients of a banking crisis were therefore present at the beginning of 1998. Luckily, at that time the large banks were already restructuring, and were not affected by the failures of small banks. That is why the cost of the second banking crisis, sometimes called the “mini crisis”, was much smaller; about 7% of GDP. Fourteen small and medium-sized banks went bankrupt, and insured deposits in them were paid out, while two banks were rehabilitated.

At the end of 1998 and at the beginning of 1999, the second banking crisis was about to end in a twin crisis, as had happened before in other countries. Twin crises might be triggered either via currency

problems spilling over into the banking sector or by banking sector problems spilling over into the foreign exchange market. In this case, banking sector problems threatened currency stability and the stability of other banks. In late 1998, and early 1999, the kuna was weakening rapidly by Croatian standards (Graph 9), and the banking sector started to experience outflows of deposits. Deposits were being withdrawn not only from banks affected by problems but also from healthy large banks. That was a sign of the contagion effect in the domestic banking market. It was the combination of bank failures and currency weakening that prompted deposit withdrawals from the banking sector and increasing pressure on the domestic currency.

One issue is the extent to which deposit withdrawals were the result of kuna depreciation or of banks' failures. Table 1 shows that currency depreciation did not have an effect on deposit withdrawals, but the banking crisis did. The table presents a simple maximum likelihood estimation of the effect of currency depreciation and bank failures on kuna and foreign currency deposits. Dependent variables are total, kuna and foreign currency deposits in the banking system, while explanatory ones are the exchange rate and bank failures measured as a share of assets of problem banks (temporary administration, or a bankruptcy) in total assets of the banking system. The crisis 1 model includes all deposits in the banking system, while the crisis 2 model excludes deposits in failed banks.

Table 1

Sensitivity of bank deposits to exchange rate and banking sector problems

$$\ln(y)_t = b_0 + b_1 \ln(ER)_t + b_2 (ACrisis)_{t-1} + b_3 (trend) + b_4 (trend^2) + \sum_{i=1}^{11} s_i (season)_{t-i} + \varepsilon_t$$

	y	ρ	b_0	exchange rate	bank failures	R^2	DW
Crisis 1	Total deposits	0.94 (13.9)	3.94 (1.5)	0.84 (1.9)	–0.49 (3.3)	0.98	1.61
	Kuna deposits	0.93 (15.6)	19.52 (4.7)	–2.05 (2.9)	–0.53 (2.4)	0.99	1.79
	Foreign currency deposits	0.93 (12.9)	0.80 (0.3)	1.33 (2.9)	–0.49 (3.3)	0.99	1.55
Crisis 2	Total deposits	0.93 (12.4)	4.22 (1.6)	0.80 (1.7)	–0.48 (3.4)	0.99	1.69
	Kuna deposits	0.94 (10.7)	20.24 (4.8)	–2.18 (3.1)	–0.52 (2.4)	0.99	1.81
	Foreign currency deposits	0.90 (10.7)	1.00 (0.4)	1.31 (2.8)	–0.49 (3.5)	0.99	1.62

($\varepsilon_t = \rho\varepsilon_{t-1} + u_t$) where u_t are non-autocorrelated residuals of the transformed model, and ε_t residuals of the original model. An increase in the exchange rate means a depreciation. t-statistics in parentheses.

Only a shortened set of results is presented. The model was tested in different specifications, with different subperiods, but the three main conclusions remained unaltered. The first is that even a relatively small exchange rate movement (well within a 10% range) prompts (reverse) currency substitution. A weakening of the domestic currency immediately and significantly leads to changes in the currency portfolio allocation of domestic economic agents. Second, exchange rate movements do not have a significant impact on total deposits. Third, bank failures do. Both kuna and foreign currency deposits decline after bank failures.

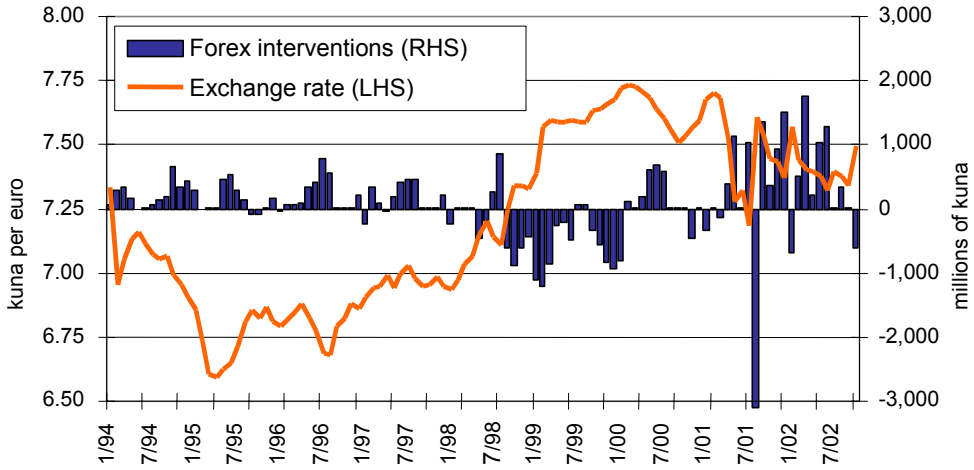
In late 1998 and early 1999 there were both currency portfolio substitutions and deposit withdrawals. Therefore, the situation was very serious because the lukewarm capital was obviously on the move, and it was well known within the central bank how difficult it would be to stop it were the "snowball" to reach a sufficient size. An immediate and decisive reaction was needed to forestall the looming twin crises. If the currency had further devalued significantly, it would have prompted further currency substitution and further bank failures might have caused runs on the healthy banks and, consequently, bank failures, which would have pushed the currency further down, and so on, in a vicious circle.

The central bank therefore decided to intervene heavily in order to stop the currency plunging further, and to help those banks with liquidity problems to stay afloat. In addition, it proposed to the government to rehabilitate a medium-sized problem bank with a nationwide branch network. The assumption was that letting it fail in such a situation would have created more uncertainty and prompted further withdrawals of foreign currency deposits from the banking system as a whole. Rehabilitation in that situation, on the other hand, might have had a calming effect on the depositors, particularly because the bank had a nationwide presence.

The CNB, for the first time, gave up the currency board policy, and injected a lot of money (1.5 billion kuna) into those banks that faced liquidity problems. On the other hand, as demonstrated in Graph 16, the CNB strongly and continuously supported the kuna in the foreign exchange market from September 1998 to the beginning of 2000, ie for almost a year and a half, until the situation in the foreign exchange market finally calmed down. Without such action, a number of other banks would have failed and the currency would have gone under, with all the collateral damage that a serious twin crisis does to the economy, particularly a heavily euroised and foreign currency indexed one.

Graph 16

CNB foreign exchange interventions



Source: CNB.

The response to the bust part of the cycle

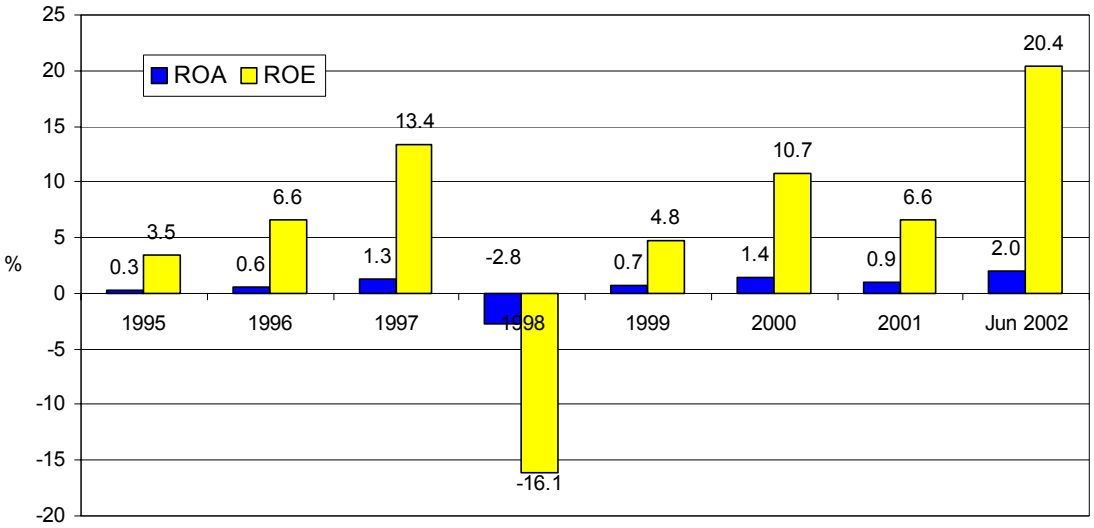
In 1998 and 1999, growth slowed (Graph 13). In response, fiscal policy was tightened. Under the IMF arrangement, the consolidated central government deficit was cut from 7.4% of GDP in 1999 to a still high 5.4% by 2001. Coupled with stabilisation of the banking sector, this allowed a more relaxed monetary policy, which facilitated a rapid decline in interest rates, without an adverse effect on the exchange rate or inflation. The banking sector was cleansed of unsound banks, while large state-owned banks were sold to foreign owners (Graph 15). In 1998 only 7% of the banking sector was in the hands of foreigners, while by 2000 84% of the banking industry was foreign controlled, all but one being strategic investors. The result is a much healthier, more competitive and more efficient banking system, as shown by the significant increase in the after-tax return on assets and equity in the banking sector (Graph 17) in a situation of rapidly declining interest rate margins (Graph 18).

Such a completely reshaped banking system now ensures much better financial intermediation than was the case prior to the crisis. Finally, real output recovered (Graph 13), the current account deficit declined (Graph 1), exchange rate pressures eased (Graph 9) and capital inflows moderated (Graph 5) and were better intermediated.

Graph 17

Return on assets and equity after tax

(in percentages)

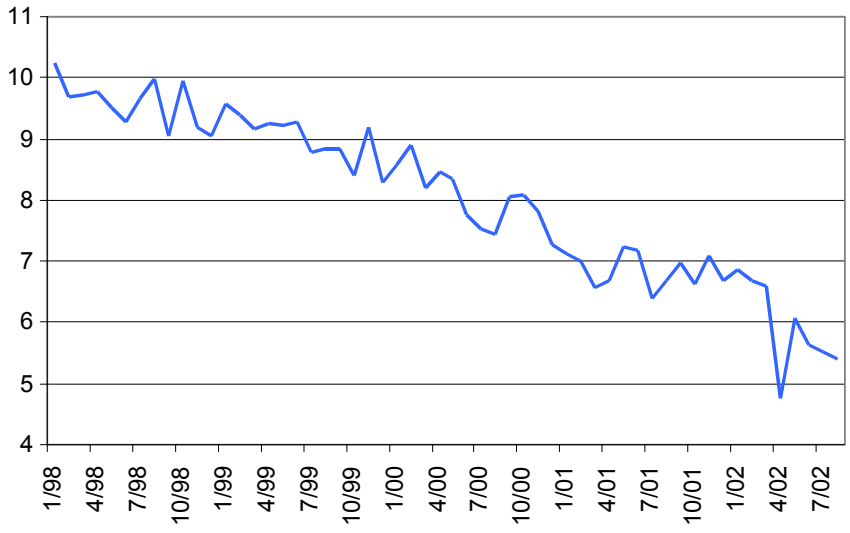


Source: CNB.

Graph 18

Interest rate spread

(Difference between interest rates on credits in kuna and on deposits in foreign currency, in percentage points)



Source: CNB.

5. The role of capital controls and foreign exchange liberalisation

Two episodes in recent (transition) history deserve a closer look. One is the introduction of Chilean-type capital controls in 1998. The other is the liberalisation of the foreign exchange market in 2001 and its consequences.

From the beginning of the transition, foreign short-term capital was generally absent in Croatia. However, in late 1997 and at the beginning of 1998, at the peak of the boom phase, when economic activity, credit expansion and current account deficits, as explained above, were high, short-term capital inflows emerged. At that time, interest rates were relatively high and only one large investment bank had over USD 200 million in short-term kuna-denominated assets (which was a significant amount given the narrow and shallow Croatian market). Domestic banks were increasingly borrowing short-term abroad and converting those inflows into kunas in order to finance the lending boom.

In order to curtail those surging short-term inflows, at the beginning of April 1998 the CNB introduced a set of Chilean-type capital controls:

- For all financial credits taken for conversion into domestic currency, banks were required to deposit (in domestic currency) with the central bank 30% of the amount for short-term credits (up to one year), and 5% for longer-term credits.
- When issuing guarantees on the credits for conversion into kunas, banks were required to deposit (in domestic currency) 10% of the amount of the guarantee.
- Banks were required to deposit 15% of the foreign exchange deposits of foreign banks (again in domestic currency) in a separate account with the CNB.

These capital controls worked well in the beginning, and the inflow of short-term capital significantly declined. By the autumn of 1998, however, the international financial crisis had taken care of most of the capital inflow problem. Foreign investors suddenly lost their appetite for emerging markets and, by autumn, it became quite difficult for both domestic banks and the corporate sector to raise any kind of capital abroad. Due to these changed circumstances, in October 1998 the CNB removed all capital controls for financial credits or deposits with maturity exceeding one year.

One can say that capital controls of the type introduced in Croatia worked well in the beginning, but their lifetime (particularly their effective lifetime, before the 1998 crisis) was too short to allow for any firmer conclusion. The presumption in most of the literature on the capital controls is that such types of controls often work well initially, but might lose effectiveness over time as economic agents find ways to avoid them. The Croatian case confirmed the first part, but did not allow for enough time to test the second part of that hypothesis.

The second interesting episode was a major liberalisation of the foreign exchange market. In mid-2001 the corporate sector was for the first time allowed full access to the foreign exchange market. Prior to that, companies had been allowed to buy foreign currency in the foreign exchange market only if that was justified by import needs. In other words, they could only buy foreign exchange in order to pay for imports or a loan liability which had become due, but not just to hold foreign currency in their accounts. The removal of that restriction in 2001 allowed corporations free participation in the foreign exchange market. In addition, the surrender requirement, which obliges companies to repatriate foreign currency receipts, had previously been lengthened from 90 to 150 days, with the possibility of prolongation by a further 60 days. The effect of the substantial extension of the surrender requirement was negligible, and now a complete removal of the surrender requirement is proposed for 2003.

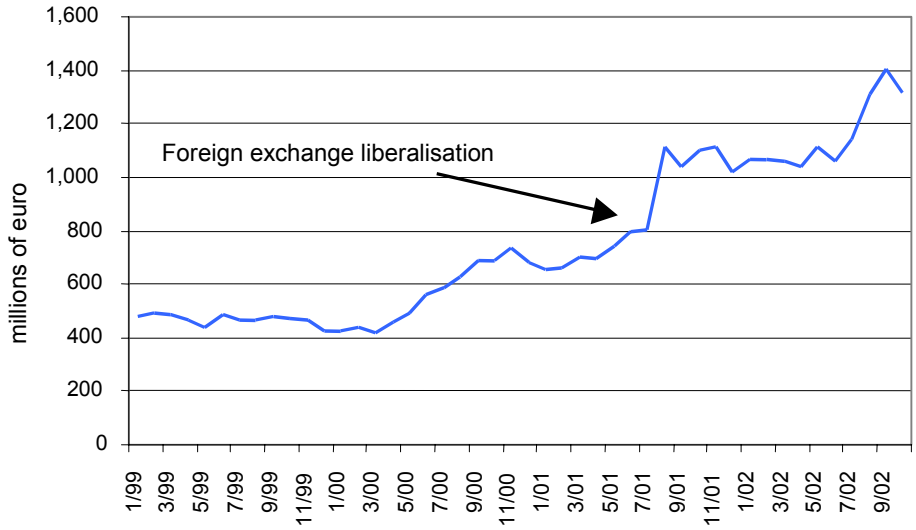
There are two obvious benefits of the corporate sector's access to the foreign exchange market. First, as companies are free to decide on the currency composition of their portfolio holdings, they can manage foreign exchange risks better. Second, liberalisation has deepened and broadened a relatively shallow and narrow Croatian foreign exchange market.

The downside is that this liberalisation has caused unusual depreciation pressure in the foreign exchange market (Graphs 9 and 16). In August 2000 the exchange rate rapidly depreciated by 8%. Given the nominal exchange rate's remarkable stability in Croatia since end-1993, during which period the exchange rate has fluctuated in a relatively narrow band of ± 7%, such an abrupt depreciation has created nervousness in the market and triggered speculation. Companies did not react immediately to the liberalisation in April, because they expected the usual seasonal (summer tourism) appreciation of the kuna. In August, however, when foreign currency was cheap, and kuna liquidity abundant, expectations changed, additionally fuelled by rumours about a possible kuna depreciation.

A few large companies decided to buy significant sums of foreign currency. Graph 19 shows how abruptly the corporate sector increased foreign currency deposits in August 2001. In a small market in which the average daily turnover is approximately 30 million euros, news that a couple of companies are buying a few hundred million euros immediately drives up the price of foreign currency. Of course, that was not a very smart move as the companies effectively bid up the price they eventually paid.

Graph 19

Foreign exchange deposits of the corporate sector



Source: CNB

Obviously, at that time, that was not clear to many companies unaccustomed to free access to the foreign exchange market. In addition, some banks tried to take advantage of the situation and fuelled the corporate sector demand by recommending that companies buy foreign exchange as soon as possible and suggesting the domestic currency would drop further. In order to stop the nervousness, the central bank had to intervene substantially.

Thanks to a comfortably high level of foreign exchange reserves it was possible to calm the situation purely through market intervention. However, the CNB was constrained in doing so because of the very tight floor under the foreign exchange reserves set by the IMF within the standby arrangement. Ironically, the floor was substantially raised after the liberalisation and less than one month before the depreciation pressures started. In order to stop the speculation and observe the floor, the CNB then resorted to an unorthodox measure. To sterilise local currency liquidity, it asked banks to hold 20% of the reserve requirement on foreign currency deposits in local currency.[2] This was later increased to 25%. By increasing the demand for the local currency, this measure has propped up the exchange rate, and halted the speculation.[3]

[2] Previously the reserve requirement on foreign currency deposits has been held in foreign currency, while the reserve requirement on local currency deposits has been held in local currency.

[3] A negative aspect of such a requirement is that it creates a mismatch in banks' balance sheets, but this has not proved to be an important issue. Banks are not allowed to have net foreign currency positions in excess of 20% of the liable capital.

An important point is that the holding of local currency reserves on foreign exchange deposits is also a useful "automatic stabiliser" in a highly "euroised" economy. This is due to the very high foreign exchange deposit base. When the domestic currency depreciates, banks are required to deposit more of the domestic currency as a reserve requirement. When it appreciates, more of the domestic currency is freed from the reserve requirement deposits. That helps stabilise currency fluctuations, which is particularly important in a situation where exchange rate movements are the most important transmission channel of monetary policy. These effects would, of course, be weaker in countries with lower levels of "euroisation".

6. What does the future hold for Croatia?

The future will clearly involve further and more rapid integration into the international financial markets. That process will be boosted by EU convergence, which has been missing so far from the Croatian transition story. Further integration is likely to attract more of both FDI ("good cholesterol" in the terminology of Hausmann and Fernández-Arias (2000)) and short-term capital inflows ("bad cholesterol"). Increased capital flows in principle reflect the fact that the country has been doing well and, in that sense, should be regarded as positive. However, they are a mixed blessing to the extent that it might become more difficult to control them, and consequently also the exchange rate and/or interest rates. That increases risks in the foreign exchange market and, in the case of the highly euroised country, overall economic risks.

With increasing integration into international capital markets, and accompanying increasing risks, it might be desirable to adopt the euro sooner. This would eliminate the problem of exchange rate control, and diminish the interest rate control problem. It would also lower interest rates and diminish risks associated with sudden capital flow reversals. Exchange rate risk would remain but on a macroeconomic level - in the balance of payments. For a country like Croatia, such an option is particularly attractive for at least three reasons. First, Croatia is already heavily euroised. With almost three quarters of broad money in foreign currency (mostly euros) and with foreign exchange reserves much higher than the euro value of money supply (the technical condition for a unilateral euroisation is in fact high-powered money), it would not be difficult to switch to a new currency, even unilaterally. Technically, Croatia has already changed currency twice during the last decade, and economic agents are well accustomed to foreign currency use. Second, Croatia is politically still relatively far away from EU/EMU entry. It is likely to join second wave candidate countries, which means that it might join the EMU by, say, 2010 (if, optimistically, in 2008 it becomes an EU member state). That leaves almost another decade of uncertainty and of coping with balance sheet risk and bearing costs associated with that risk. Third, the degrees of freedom for an independent monetary policy are anyway heavily reduced under an almost complete euroisation, creating a situation where "if you've got (almost) nothing, you've got (almost) nothing to lose".

There are two main risks associated with such an option. First, if a serious negative external shock happens during the next few years, there would be no exchange rate mechanism to adjust to it. However, due to the large balance sheet risk, the exchange rate adjustment mechanism is anyway a very limited one. Second, early euroisation might exacerbate the problem of meeting the Maastricht inflation criterion. Since the nominal exchange rate would be locked, and the substantial positive productivity differential would most likely exist vis-à-vis the European Union, inflation pressure would be strong. Moreover, the likely increase in capital inflows that would precede the EU/EMU entry would, without the exchange rate instrument, put additional pressure on inflation. The question of how suitable the Maastricht inflation criterion is for the accession countries is outside the scope of this paper, but there is a growing literature that deals with that question. One thing that seems to be clear, however, is that one way of lessening a problem under both monetary policy options would be for Croatia to retain controls on short-term capital inflows all the way until EMU entry.

If an early adoption of the euro remains unfeasible in the near future (say for political reasons), Croatia will have to be careful in liberalising the remaining capital flow restrictions. Under the proposed new foreign exchange law, the most important remaining restriction will be on short-term capital inflows. Capital controls, or the possibility of introducing them as a useful tool of monetary policy in an open and heavily "euroised" country, should be retained until entry into the monetary union.

Due to a much healthier banking system and better regulation and supervision, there are less concerns about capital flows now than was the case before the 1998-99 banking crisis. In 1998, prior

to the introduction of the Chilean-type capital controls, a significant amount of capital inflows was converted into kunas and poorly intermediated by a number of unsound banks. In that sense, a typical danger that a surge in short-term capital inflows, which often shows up as an expansion in short-maturity bank deposits, will be poorly managed in a situation of inadequate regulation and supervision of the domestic banking sector and a lack of lending expertise is now substantially lessened.[4]

However, a successful EU candidate country will become an increasingly attractive target for significant capital inflows, which can cause a rapid appreciation of the real exchange rate or, in a different scenario, an increase in inflation. Even if the sharp real appreciation is subsequently reversed, it might still have a strong effect on exports due to the hysteresis effect. Also, as long as these inflows are of a short-term nature, they also present a danger of a sudden reversal and can easily trigger a currency confidence crisis in a highly euroised environment. The possible adverse impact of capital flows on monetary policy in Croatia is reinforced by the fact that, due to the high level of euroisation, Croatia is unable to develop a set of full-blown indirect instruments of monetary policy.

Of course, capital controls are not a long-term solution, especially because they tend to lose their effectiveness as economic agents find ways to avoid them.[5] Nevertheless, although not a panacea, capital controls could be a useful additional instrument for restricting short-term capital flows[6], therefore lowering the pressure on the exchange rate/prices and the probability of a sudden reversal of capital flows. If not misused, capital controls can, at times, have a useful role to play in a small, open and heavily euroised country in which capital flows can be particularly volatile and in which the instruments of indirect monetary control are insufficiently developed. Therefore, their complete removal would best be left until the end of the process of accession.

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[4] Although, there are examples of banks that have relatively quickly accumulated a large amount of bad debts even after the bank rehabilitation and full or partial privatisation have been accomplished.

[5] This is, however, primarily a problem with restrictions on outflows.

[6] Although it may be difficult to design capital controls to target specifically short-term inflows. Not only is it difficult to design policies that influence only outflows or only inflows (in Yugoslavia and Chile at the beginning of the 1990s, for example, liberalisation of outflows - which might theoretically be a policy that counteracts heavy capital inflows - in fact induced heavier inflows due to the credibility effect vis-à-vis foreign investors), but it is also difficult to distinguish with certainty whether certain brands of capital are short-term or long-term. For a more detailed discussion, see IMF (1995).

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Malta's exchange rate arrangements - a medium-term perspective

David Pullicino and Alfred Demarco[1]

1. The Maltese economy

Malta has a population of around 380,000 living in a land area of just 316 square kilometres. Its GDP amounts to around US$ 3.5 billion in nominal terms, equivalent to about 0.04% of the GDP of the European Union. Because of its small size and lack of natural resources, the Maltese economy is highly open, with exports and imports amounting to approximately double GDP. The main industries are manufacturing and tourism, although the recently established financial services industry and port-related operations have assumed growing importance.

Malta applied for membership of the European Union in July 1990. It was officially recognised as a candidate country in December 1999 at the EU Summit in Helsinki, and has consistently met the Copenhagen accession criteria. The Government of Malta commenced negotiations with the EU Commission in March 2000 and by the end of June 2002 had closed 23 chapters including the one on economic and monetary union (EMU). As is the case with all other applicant countries, one of the requirements for EU membership is participation in EMU, initially with the status of "member with a derogation". Eventually, each new member state will be obliged to adopt the euro, after fulfilling all the necessary requirements, in particular the Maastricht convergence criteria. This obligation will entail a review of exchange rate strategies to ensure a smooth transition to the euro. In Malta it is the Central Bank of Malta that is responsible for recommending to the government any changes in exchange rate policy.

2. Historical background on Malta's exchange rate arrangements

As a British colony, Malta had a strong trading relationship with Britain, and the Maltese currency, known as the Malta pound at that time, was pegged at par to sterling at independence in 1964. However, after the breakdown of the Bretton Woods system in August 1971, and the continued depreciation of sterling in international markets, a decision was taken to peg the Malta pound to a basket of currencies which, besides sterling, included the major continental European currencies and the US dollar. The basket was designed to reflect Malta's international trading patterns in both goods and services. The inclusion of both exports and imports in the determination of the basket weights in part reflected the desire to seek, as much as possible, a balance between a weighting scheme aimed at controlling imported inflation, and one that tends to favour exporters.

Essentially this same exchange arrangement remains in effect today, with some modifications. For example, in the late 1980s the Special Drawing Right (SDR) was included in the basket for a brief period until 1989 when the component currencies were reviewed and reduced to three – the US dollar, sterling and the European currency unit (later replaced by the euro). The weights of the components were adjusted accordingly: the euro's weight was established at 56%, while the US dollar and sterling were assigned equal weights of 22%.

Up to the late 1980s the exchange rate peg was maintained successfully, though to a large extent supported by tight capital controls and restrictions on merchandise imports. From the late 1980s onwards the government adopted significant market reforms and liberalisation policies, including a privatisation programme. In the external sector all restrictions on current payments were removed and

[1] Deputy Governor and Deputy General Manager respectively of the Central Bank of Malta.

Malta accepted the obligations of Article VIII of the IMF's Articles of Agreement. Capital controls were gradually eased, though at present there still remain a number of restrictions on capital and financial transactions, particularly in respect of short-term flows. In spite of these far-reaching reforms, the fixed exchange rate policy was maintained successfully and there were no undue pressures on the currency. In fact the level of external reserves remained high and well in excess of the monetary base. The value of the currency was adjusted on only one occasion, in late 1992, when the lira was devalued by 10% in the wake of the ERM crisis and a number of currencies of competitor countries bordering the Mediterranean region also devalued.

3. Why Malta has opted for a fixed exchange rate arrangement

In theory, countries can choose from a wide range of exchange rate regimes. Studies based on the recent experience of emerging market economies seem to indicate, however, that in practice only the two most extreme forms of exchange rate arrangements are viable, namely a credible hard peg, usually associated with a currency board system, or a freely floating regime.

The criteria for exchange rate regime choice emerged from the theory of optimum currency areas, which essentially focuses on a comparison of the two main types of regimes, namely the fixed peg versus the floating exchange rate. The main criteria in this regard can be summarised as follows:

(i) the size and degree of openness of the economy to trade in goods and services;

(ii) the degree of labour mobility and nominal flexibility of wages and prices;

(iii) the similarity in national economic structures;

(iv) the degree of fiscal policy flexibility;

(v) the adequacy of external reserves.

These criteria are considered separately from a local perspective.

Size, openness and direction of trade

The determining factor that qualifies a country as "large" or "small" is the degree of market power it wields. Thus, a large country is one that has the ability to influence its external terms of trade and world interest rates, while a small country does not have such influence and may be defined as a price taker in world markets. A small country, therefore, cannot vary its nominal exchange rate to affect its international terms of trade. Malta belongs to the latter category of countries.

Another important consideration is the degree of openness of an economy to trade. A fixed exchange rate regime tends to reduce transaction costs for countries with a high level of trade. In this regard, Malta's share of trade in GDP is one of the highest in the world, and is likely to become even higher as its economy integrates further with the global economy. This is another argument for maintaining a fixed exchange rate system.

Labour mobility and nominal wage and price flexibility

Another important condition for an optimum currency area is a high degree of labour mobility, both across sectors within a country, and also between partner countries, as this would be an effective substitute for nominal exchange rate adjustment to counteract asymmetric shocks. Past experience has shown that labour mobility in the European Union has been rather low, particularly when compared with the United States. This is not the case with Malta, given its small physical size, although retraining programmes and other institutional changes are sometimes necessary to encourage labour mobility across sectors. Malta's experience of emigration during the 1950s and 1960s has shown that significant net emigration to countries with higher per capita income levels does occur if job opportunities in these countries are available. Thus, EU membership is likely to increase further labour mobility in Malta, given the differences in per capita incomes between Malta and current EU members.

Nominal price and wage flexibility would be necessary if the exchange rate is prevented from adjusting by the type of arrangement adopted. Furthermore, it has often been observed that a high degree of openness tends to increase the responsiveness of prices and wages to changes in the real exchange rate. Since the drive towards EU membership is likely to increase the degree of openness of the Maltese economy, the arguments for maintaining or strengthening the peg are reinforced by this condition.

Similarity in economic structures

A high degree of openness makes an economy more vulnerable to trade shocks if the exchange rate instrument is abandoned. This vulnerability is reduced the more a country's production base and exports are diversified. Thus, in the face of symmetric shocks, similarity in the economic structure of a country to that of its trading partners makes a fixed exchange rate more attractive since it reduces adjustment costs.

In this regard, a comparison of Malta's economic structure, in terms of sectoral distribution of value added and employment, to that of the European Union does not reveal any striking divergences. Even the sectoral distribution of exports and imports does not present glaring differences, except in respect of electronic components, which are somewhat higher for Malta, and chemicals, which have a relatively low share in Malta's trade. On the other hand, the share of private services, excluding wholesale and retail trade, in total employment is somewhat lower than the EU average, partly as a result of a large public sector and perhaps the stage of economic development in Malta. This notwithstanding, the available evidence seems to indicate that a fixed peg arrangement is more appropriate in the face of symmetric shocks.

Degree of fiscal policy flexibility

Under a fixed exchange rate system autonomy over monetary policy is forgone once capital controls are removed. There would therefore be a need for greater flexibility in the fiscal policy stance. The credibility of the exchange rate peg is crucial during an economic reform process, and this necessitates a disciplined approach to fiscal policy. This would strengthen confidence in the peg and discourage speculative attacks on the currency. Under a flexible exchange rate system fiscal policy would not be conditioned to the same extent. Yet a flexible rate may in effect provide a disincentive for change in the fiscal stance even though this may be an underlying cause of macroeconomic instability.

Until fairly recently fiscal deficits in Malta were very high. In 1999, however, a five-year plan was launched with a view to reducing the deficit to 3-4% of GDP by 2004. Since then the preset targets have been achieved. To a large extent, therefore, the fiscal policy stance in Malta appears to be flexible and consistent with the workings of a fixed exchange rate system.

Adequacy of external reserves

Empirical evidence shows that countries with exchange rate regimes that lie between the two extremes of a pure float and a completely fixed exchange rate have become more exposed to exchange rate pressures, particularly in the presence of increased capital mobility. Thus an adequate level of external reserves is an important factor in support of a fixed exchange rate arrangement. In Malta, the gradual easing of capital controls has had some effect on the level of reserves. However, as stated earlier, the stock of reserves has remained high, both in relation to imports and the monetary base, and so far there have been no significant pressures on the exchange rate.

From the foregoing discussion, it appears that a fixed exchange rate is the most appropriate choice for Malta.

4. Future exchange rate policy options

The key question concerns the appropriate exchange rate regime for Malta as it proceeds along its course to Economic and Monetary Union (EMU). The choice lies between further strengthening the peg to the currency basket through a larger euro weight, or adopting a more flexible arrangement

before finally shifting once again to a fixed exchange rate regime in its most permanent form, that is, a currency union when Malta adopts the euro.

Three options are available:

(i) a currency board, which would imply a stronger commitment compared to a simple exchange rate peg;

(ii) an exchange rate peg to the euro with a zero band, before participation in the Exchange Rate Mechanism (ERM 2), which is a necessary condition for eligibility to EMU; and

(iii) a more flexible arrangement in the form of an exchange rate peg to the euro, but with a fluctuation margin ranging up to ±15%, which is the maximum permissible under the ERM 2 arrangement.

These are examined separately.

Currency board

The popularity of currency boards arose from the need to address specific economic challenges, in particular historically high rates of inflation. The introduction of currency boards in some central European countries, for example, was mainly underpinned by the need for a relatively smooth transition away from a centrally planned economic system, while in other countries, such as Argentina, it was adopted to control hyperinflation. Indeed, the main objective of currency boards is that of providing credibility to the monetary system and achieving low inflation, as well as preventing monetary financing of government budget deficits.

Malta's economic circumstances are very different, particularly in respect of inflation and the extent to which a market-oriented economic structure is in place. Over the past 20 years inflation has been maintained at relatively low levels, while the fixed exchange rate has never been exposed to undue downward pressure. In fact, inflation has averaged just 2.6% in the past five years, indicating a considerable measure of nominal convergence with Malta's major trading partners, and with the euro area in particular. Furthermore, the prohibition of monetary financing of fiscal deficits, which has been in force for a number of years, has now been written into the Central Bank of Malta Act. Given these circumstances and the purpose for which a currency board is normally established, there does not seem to be a compelling argument for Malta to switch to such a regime.

Link to the euro without a band

In deciding on the type of exchange rate regime to be adopted prior to and after accession it should be borne in mind that during this period Malta's economic policies will be focused more and more on convergence with those of the European Union. Both real and nominal convergence will have to be pursued. Difficulties may, however, be encountered in achieving, simultaneously, the targets set by the Maastricht criteria. For example, the criteria on nominal interest rates and inflation clearly imply a constraint on real interest rates. Similarly, the criteria on the nominal exchange rate and inflation restrict movements in the real exchange rate.

Consequently, one of the major factors influencing the choice of exchange rate regime during the ERM 2 phase is the productivity level in the tradable sector. For an open economy like Malta, the Balassa-Samuelson effect is unlikely to be strong, since about 80% of manufacturing output is exported and, therefore, already competes in international markets, and the tourism sector has long been exposed to international competition. This implies that these sectors may have already achieved the high productivity levels that are necessary to compete in the markets of EU member states. Furthermore, it is estimated that the difference between real GDP measured at respectively market exchange rates and PPP exchange rates is very small. This indicates that the relative price of non-traded goods to traded goods in Malta is similar to that of the European Union, and therefore differences in productivity levels in the traded goods sector are small. In this regard, a fixed exchange rate arrangement with a zero band appears to be a feasible option for Malta.

Link to the euro within an established band

An argument often put forward in favour of a more flexible arrangement, such as the adoption of the ±15% band, is that this would provide a test for the sustainability of the exchange rate, particularly during the ERM 2 phase prior to full monetary union. Furthermore, this would ensure that a country does not enter the euro area at the wrong parity. Even with an exchange rate peg, such tests are still possible, although perhaps not directly observable in terms of exchange rate movements. Other economic and financial indicators do throw light on whether the exchange rate is at the appropriate level. Such indicators normally include current account performance, monetary aggregates, trends in GDP growth, and more importantly the level of reserves and interest rates.

As noted earlier, the level of Malta's external reserves as a proportion of the monetary base has remained relatively stable over the past 20 years, and still remains well in excess of the monetary base, indicating that there is no undue pressure on the exchange rate. Furthermore, the differential between long-term market interest rates in Malta and a synthetic rate based on the Maltese currency basket has remained relatively stable, with a premium of well below 100 basis points on the Maltese lira rate. This is an acceptable country risk premium. These arguments support the view that a fixed exchange rate system without a band still remains a viable proposition for Malta once it enters the ERM 2.

5. Economic policies necessary to support the fixed exchange rate

For the reasons stated above, it is the intention of the Maltese authorities to retain the fixed exchange rate arrangement based on a currency basket centred on the euro. The authorities are clearly aware that the ability to preserve this arrangement depends on the simultaneous implementation of an appropriate mix of monetary and fiscal policies and of the necessary structural reforms. These policies are discussed briefly below.

Monetary policy

The Central Bank of Malta pursues its price stability objective by using the fixed exchange rate as its intermediate target or nominal anchor. The Bank is, therefore, constantly on the lookout for any signs of incipient pressures on the exchange rate in the form of persistent, large movements in its external reserves. Since changes in the reserves reflect developments in the balance of payments, high and continuing current account deficits are usually indicative of an unsustainable payments position. If this translates into downward pressure on the currency, the Bank stands ready to raise interest rates to defend it. Moreover, as capital controls are gradually dismantled, the Bank's ability to pursue an independent monetary policy will be diminished further. It is also understood that as long as Malta maintains a fixed exchange rate arrangement, monetary policy will be inevitably influenced by that of its major trading partners, in other words the European Union.

Fiscal policy

Apart from a flexible monetary policy, the adoption of a fixed exchange rate system within an environment of a liberalised capital account necessitates a prudent approach to fiscal policy. Sound fiscal policies are crucial for macroeconomic stability. Indeed, monetary policy by itself, irrespective of the nominal anchor variable selected, will inevitably fail to deliver low inflation in the absence of fiscal discipline.

A responsible fiscal policy approach is even more crucial for the credibility of an exchange rate peg when the economy is highly open. This can be illustrated by reference to recent experience. For a number of years Malta has run large fiscal deficits. Since government expenditure largely takes the form of wages, salaries and social security benefits, it inevitably gives rise to substantial spending on imports. Unless the private sector compensates for excessive government consumption by saving more, the fiscal deficit thus aggravates the current account deficit, leading to downward pressures on the Maltese lira. Thus, by restraining domestic absorption, tighter fiscal policy will enhance the credibility of the exchange rate peg.

The current aim of the government's fiscal policy is indeed to reduce the deficit-to-GDP ratio to around 3% by 2004 from 5.3% in 2001 and over 10% in the late 1990s. Perhaps equally important, the deficit reduction is now being pursued through measures aimed at seeking efficiency and stimulating economic activity by enhancing the productive capabilities of the economy.

The evidence, therefore, suggests that both monetary and fiscal policies are on track to produce the more sustainable degree of internal and external balance required to sustain the exchange rate peg. But that does not necessarily mean that the overall policy framework is robust enough to guarantee durable economic growth. The latter also requires the implementation of structural policies aimed at raising the productivity of the economy and hence its growth potential, at the same time as international competitiveness is improved.

Structural reform policies

To support the fixed exchange regime, not only should a sound macroeconomic framework be in place but the economy should be in a position to respond to external shocks. This will depend on the degree of flexibility in the economy as a whole. Unlike most accession countries, Malta has always had a functioning market economy, driven by private ownership of productive assets and with much of it exposed to international competition. In general, therefore, the private sector has already proved that it can cope with adverse shocks. In this regard, the flexibility of the labour market has been especially important. This flexibility must, however, be enhanced in order to safeguard competitiveness.

The EU accession process itself has stimulated important structural reforms in product and factor markets, ranging from the removal of barriers to trade to the liberalisation of the telecommunications industry. The privatisation of state-owned firms has also triggered important inflows of foreign direct investment. This notwithstanding, the pace of reform has to be sustained to enable the economy to secure the productivity gains that would increase competitiveness in the tradable sector, buttress the exchange rate peg and bring about real convergence.

A final crucial precondition for maintaining the exchange rate peg and ensuring a smooth transition to the single currency is financial sector stability. In this respect, a regulatory and supervisory framework based on high international standards is already in place. Maltese legislation in this area in fact incorporates almost all the features of the corresponding EU directives, and legislative amendments currently before the parliament will bring about almost total harmonisation. Institutional responsibilities are divided between the Malta Financial Services Centre, which is responsible for the regulation and supervision of banking, insurance and investment services, and the central bank, which is charged with ensuring the stability of the system as a whole. The central bank is also responsible for the domestic payment system, which is being upgraded in line with developments in the euro area.

6. Conclusion

There is strong evidence to suggest that Malta should maintain its fixed exchange rate regime, though increasing its link to the euro before participating in ERM 2. The current exchange rate strategy has made a valuable contribution to the economy in the shape of stable prices and a predictable trading environment. Stability also enhances the country's attraction as a centre for business and investment, which, in turn, facilitates growth and a more rapid integration into the global economy. However, it is clearly understood that this exchange rate strategy cannot succeed if it is not supported by strong macroeconomic fundamentals. These can only be delivered by a monetary policy that is consistent with the exchange rate target and by a prudent fiscal stance. An equally vital ingredient in the policy mix is the implementation of structural reforms designed to raise productivity levels throughout the economy and thus strengthen its competitive edge. Finally, the maintenance of a sound financial system remains a necessary ingredient for macroeconomic balance and a stable exchange rate.

It is also relevant to mention that the prospect of EMU membership will reinforce the Central Bank of Malta's current commitment to price stability through the use of an exchange rate peg. The adoption of the euro would thus represent a logical step for an economy already closely integrated with that of the European Union and influenced by its monetary policy. This goal, however, will not be achieved without a clear commitment to the continued pursuit of fiscal consolidation, structural reform and financial stability.

The Gulf Cooperation Council monetary union: a Bahraini perspective

Khalid Al-Bassam

1. Bahrain and monetary union in the Gulf

The Gulf Cooperation Council (GCC) was formed on 25 May 1981 to encourage policy coordination, integration and unity among the member states.[1]

The Bahraini dinar has been pegged to the US dollar at the rate of $1 = BHD 0.377 since 1980. Interest rates track US dollar rates with a small margin. The experience of Bahrain in pegging to the dollar, and the benefits it has provided, have long influenced our thinking towards supporting monetary integration within the region.

2. Factors supporting Gulf monetary union

Experience has proved that countries with fewer disparities in their economic structures and systems are more likely to succeed in achieving economic integration and monetary union. Viewed in this context, the GCC countries readily recommend themselves for organisation into a Gulf monetary union. There are many similarities among them:

- The six countries form a contiguous chain of neighbouring states bordering the Arabian Gulf.
- Their peoples share a common language, religion and traditions.
- Oil exports, which are priced in US dollars,[2] are a major source of government revenue for all, accounting for 92% of government revenue for Kuwait, 81% for Saudi Arabia, 77% for Oman, 76% for the United Arab Emirates, 74% for Bahrain and 56% for Qatar (which has extensive natural gas revenues).
- Generally speaking, the GCC countries impose no, or very low, income taxes. Central government budgets are generally maintained in balance or with small deficits. Customs duties are low on most products.
- While inflationary experience has varied among the GCC countries, all of them have been following anti-inflation policies, such as a fixed exchange rate against the US dollar. There are no exchange controls or restrictions on investments and capital flows. Governments in the GCC countries follow open economic policies and allow the free flow of capital and convertibility of currencies.

Examination of the structure and operation of the economies reveals substantial similarities. Likewise, the economic and financial policies followed by the respective governments and monetary authorities are quite consistent. There appear to be no major conflicts about policy objectives. Internally, domestic fiscal and monetary practices are generally conducive to investment. Externally, the authorities follow policies to promote an open trade system.

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[1] Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

[2] This means that local currency devaluation is unlikely to boost exports.

3. The benefits to the GCC's members of economic and monetary integration

The most important direct benefits of economic and monetary integration are similar to the ones which favoured the creation of the euro:

- The elimination of currency transaction costs will result in savings in both time and money. For small and medium-sized companies operating across the Gulf but lacking the necessary expertise in cash management services, it eliminates the cost of converting money from one national currency to another.
- The elimination of exchange rate risk would encourage increased intra-Gulf trade and investment.
- Greater transparency in pricing, improved business competitiveness and simplification of procedures and operational issues would generate benefits for the Gulf's consumers.
- Fiscal discipline by member countries would contribute towards a lower inflation and interest rate environment within the GCC. Within the euro area, monetary union has encouraged a trend towards declining budget deficits and more prudent fiscal policies.
- At the micro level, the Gulf currency would have a long-term impact on major regional banks. The impact would be felt on cash and treasury businesses. A single currency encourages more efficient use of cash. The costs of hedging against exchange rate volatility would be vastly reduced.
- An enlarged, unified GCC market, whose present GDP exceeds $300 billion, would offer new trading and investment opportunities. This, in turn, would attract more foreign direct investment, especially from multinational corporations targeting regional manufacturing and services sectors.
- The Gulf monetary zone would represent what is potentially the Middle East's largest and most liquid capital market. Foreign and local institutional investors would be able to target the Gulf market as a whole. Thus, portfolio managers and private investors wanting greater exposure to the region will be able to choose freely from stocks without having to take on additional currency risk.

4. The Muscat summit of 2001

The GCC held its 22nd summit in Muscat on 21 December 2001. The final session began with the leaders signing an agreement for economic union among the member countries. The agreement was reached in order to activate economic integration between the GCC states and to enhance the progress being made towards establishing a common market and monetary and economic union. The agreement represents a significant step forward and supersedes the economic agreement ratified by the GCC in 1981.

The new agreement called for the establishment of a customs union for the GCC states that would come into effect in January 2003, rather than 2005 as previously agreed. It stipulated that the standard customs tariff should be 5% on all commodities imported from outside the customs union. The establishment of the GCC Customs Union will coincide with the implementation of the World Trade Agreement in 2003. Five GCC states have already joined the international agreement and the sixth is on its way to joining. The Customs Union will make the GCC states a single homogeneous entity with which other economic groupings can deal. It will help to activate intra-GCC trade, facilitate the transfer of goods and services between GCC states and attract foreign investors into the region by offering better economic returns on their investments.

The new agreement also contains clauses relating to the establishment of a monetary union of GCC members and the launch of a single currency. It specified a timetable for the monetary union, by instructing the Commission of the Governors of Monetary Institutions and Central Banks to apply the previous decision relating to the adoption of the US dollar as a common basis for GCC currencies by the end of 2002. It also directed the Financial and Economic Cooperation Committee to agree on the

measures of economic performance needed for the monetary union to succeed by the end of 2005 with a view to launching a single currency in January 2010. All the GCC states, with the exception of Kuwait, have currencies currently pegged to the US dollar. We believe that linking the GCC currencies to the US dollar paves the way for a single currency that would promote intra-GCC trade and boost the GCC economies. It would also create favourable conditions for dealing with international economic blocs.

Monetary policy in Qatar and Qatar's attitude towards the proposed single currency for the Gulf Cooperation Council

Fahad Faisal Al-Thani

1. Monetary policy in Qatar, 1940s-2002

A review of the monetary situation, 1940s-1993

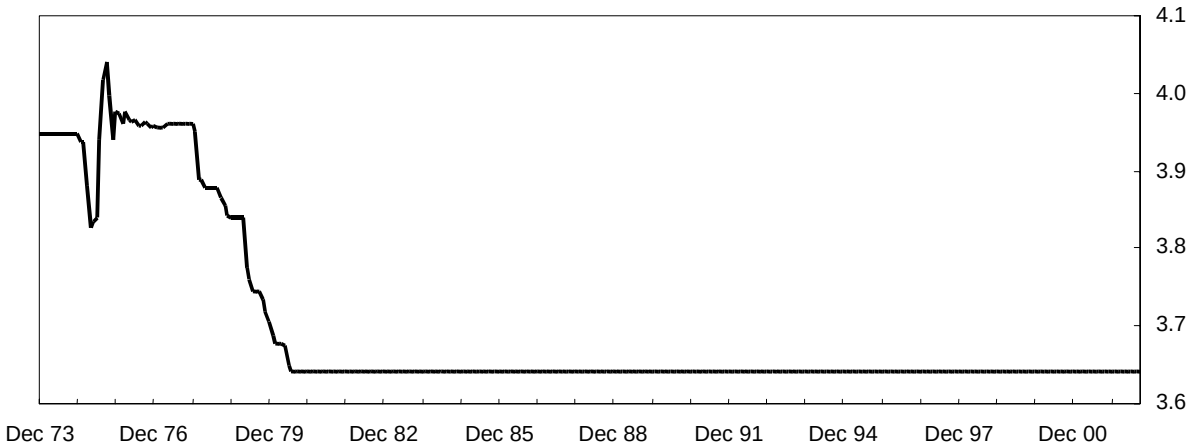
Until the early 1970s Qatar was under British influence, and so had all the economic features of the countries linked to the sterling currency area. For most of this period, Qatar did not have its own national currency and remained dependent on foreign banks. The first such bank was a branch of the Eastern Bank (now known as Standard Chartered), which opened in 1950. The situation changed in 1965 when the first domestic bank, Qatar National Bank, was established. Subsequently:

- In March 1966 a currency agreement signed between Qatar and Dubai established the Qatar and Dubai Currency Board. A new currency, the Qatar-Dubai riyal, replaced the foreign currencies in circulation in the second half of 1966.
- In September 1971 Qatar gained independence. When Dubai merged with the United Arab Emirates in May 1973, the government issued Law no 7 establishing the Qatar Monetary Agency and granting it the powers of a central bank. The Qatari riyal replaced the Qatar-Dubai riyal as the national currency.
- In April 1974, Decree no 72 declared that the Qatari riyal would continue to be pegged to the US dollar in the same manner as the Qatar-Dubai riyal.
- In March 1975 the basis for the riyal peg was changed from the US dollar to the Special Drawing Right (SDR) at a rate of 4.7619 riyal per SDR with a marginal variation of ±2.25%. The exchange rate against the US dollar was determined on the basis of its exchange value against the SDR as determined by the IMF. The exchange rate of the riyal against other currencies was fixed according to their exchange rates against the dollar in international money markets.

Graph 1

Riyal exchange rate

Against the US dollar



- In the latter half of 1975 the SDR depreciated against the dollar, and the marginal variation was increased to ±7.25%. The Monetary Agency determined the daily value of the riyal using the US dollar as an intervention currency.
- Since 1980, the riyal has been fixed at 3.64 to the US dollar.
- In August 1993 the Qatar Central Bank (QCB) was established.

Monetary policy after 1993

Monetary policy objectives

According to the law establishing it, QCB's main monetary policy objectives are to:

- direct monetary policy and banking credit in order to realise the objectives of state economic policies;
- issue the currency;
- take actions necessary to stabilise the value of the currency and its free conversion to other foreign currencies;
- regulate and supervise banks and financial institutions;
- function as a banker for the government;[1]
- act as a bank for all the banks operating in the state; and
- manage the reserves allocated as cover for the currency.

In practice, QCB handles most central banking functions including currency board arrangements. QCB is required to maintain 100% foreign reserve cover for domestic currency issued.[2] Since the reserve cover has remained above 100%, QCB has been able to adopt a relatively active monetary policy, with domestic interest rates higher than world rates. A new law is being drafted, giving QCB more independence.

The structure of the banking system is shown in Table 1. The banking sector comprises the central bank (QCB) and 15 commercial banks: seven branches of foreign banks, five domestic commercial banks, two Islamic banks and the government-owned Qatar Industrial Development Bank, which funds small and medium-sized business projects.

Monetary policy instruments

Exchange rate policy

As noted above, the riyal has been fixed at 3.64 to the US dollar since June 1980. This de facto peg was formalised in July 2001, replacing the earlier formal peg to the SDR within relatively wide margins. The dollar peg has provided an anchor for macroeconomic policy and a reference point for stability and confidence.

Interest rate policy

Up to mid-1995, QCB imposed limits on deposit and loan rates by applying a base rate structure. In August 1995, QCB removed the limits that used to be imposed on interest rates on loans, allowing rates to be market-determined. In April 1997, QCB raised the discount and rediscount rate from 5.5% to 5.75% and encouraged commercial banks to consider this rate as a benchmark for interest rates on

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[1] In practice, Qatar National Bank, half-owned by the government, handles most government operations.

[2] The cover can be lowered for up to six months.

deposits so that the maximum rate would not increase more than 1% above the new discount rate. In April 1998, QCB freed interest rates on deposits with maturity of 15 months and longer. In December 1998, the cap on interest rates on deposits with maturity ranging between 12 and 15 months was eliminated. And starting from February 2000, interest rates on both deposits and loans became fully market-determined. However, long-term rates for small projects are subsidised.

The fixed exchange rate vis-à-vis the US dollar has kept domestic interest rates closely in line with those prevailing in the United States with a modest positive differential (around 75 basis points). The base interest rate (the central bank repo rate) was reduced on successive occasions during 2001 to 2.50% and was further reduced in 2002 (Table 2).

Table 1

Commercial banks operating in Qatar, May 2002

Bank	Head office, branches and foreign exchange offices	Year established
Domestic banks		
Qatar National Bank SAQ	30	1964
Doha Bank Ltd	15	1978
Commercial Bank of Qatar QSC	13	1975
Qatar Islamic Bank SAQ	11	1982
Al-Ahli Bank of Qatar QSC	9	1984
Qatar International Islamic Bank	7	1990
Grindlays Qatar Bank[1]	1	2000
Qatar Industrial Development Bank	1	1997
Foreign banks		
Arab Bank PLC	3	1958
Mashreq Bank PSC	1	1971
Bank Paribas	1	1973
HSBC	3	1954
Standard Chartered Bank PLC	1	1950
United Bank Ltd	1	1970
Bank Sederat Iran	1	1970
Total	**98**	

[1] Owned 60% by local shareholders and 40% by Standard Chartered Bank.

Source: Qatar Central Bank.

Credit policy

Credit policy in Qatar is very well regulated. Regulations are listed in special directions from QCB to banks. The most important of these are:

- banks are not allowed to lend more than 20% of the total value of a real estate project;
- bank credit to any one country should not exceed 20% of the bank's capital and reserves;
- lending limit to a single board member is set at 7% of capital base, with an aggregate of 35% for all board members;
- lending to external auditors is prohibited;

- commercial lending to senior officials is not allowed; and
- lending limits for major shareholders are set at 5% of capital.

Non-performing loan classification criteria have been tightened and banks are required to appoint independent auditors to assess provisioning levels. Industrial credits are provided by the Industrial Development Bank, the only specialised bank in Qatar.

There is no limit on lending to the government in the QCB law. However, QCB's balance sheet shows that there is no direct lending from the QCB to the government. The only claims on the government that appear on its balance sheet are the subscriptions to international financial institutions. Therefore, most of the government's financing is obtained from the commercial banks. Banks hold most of the government's domestic debt in the form of treasury bills and bonds (about 89% in April 2002). The share of commercial banks' credit to the government rose from 38% in 1996 to about 50% in April 2002. About 80% of the total credit comes from Qatar National Bank (50% of whose capital is held by the government).

QCB lends to banks through repo operations and recently through the Qatar monetary market rate mechanism. When the stability of the banking system is at risk, QCB acts as a guarantor to the banking system (cases of Mashreq Bank in the mid-1980s, and Al-Ahli Bank in the beginning of 2000).

Open market operations

Repo operations have been the main monetary instrument employed recently and are mainly used to inject liquidity into the banking system. The main tools used to conduct the repo operations are government bonds, as QCB has not issued its own paper. Government bonds were previously sold by QCB, on behalf of the Ministry of Finance, to commercial banks. The main purpose behind the issuance of these securities was to securitise some parts of the commercial banks' debt to the government. Although the ***four*** issues were pure government debt management operations,[3] commercial banks used these securities to conduct repo operations. The terms and conditions of the first issue (June 1999) made it clear that these securities are tradable between banks operating in Qatar during the first year and among individuals, companies and banks afterwards. A primary dealer structure was introduced within the market. However, securities were neither traded between banks or among individuals and companies.

The repo operation is a process where QCB repurchases government securities from commercial banks, under a condition that these banks are committed to repurchase these securities again after 14 or 30 days. Repo operations are used at the initiative of individual commercial banks. The size of any operation is limited by a ceiling set by QCB. The repo rate is linked to the US federal funds rate as the Qatari riyal is pegged to the US dollar. When there is a change in the federal funds rate, the repo rate is changed accordingly. Table 2 shows the development of the QCB rate during the last three years.

Required reserve ratio

The required reserve ratio (RRR) has been mainly used by QCB for prudential purposes, and recently as a supporting instrument to complement and reinforce repo operations and the recently introduced QMR (discussed below). Until September 1995, banks were required to hold uniform reserve requirements of 1.5% on foreign and domestic currency time and savings deposits, remunerated at 2% below QCB's base rate. The reserve requirements on demand deposits were set at 10% and were unremunerated, while Islamic banks were required to hold 15% which, based on Islamic law, also remained unremunerated.

Effective September 1995, the current and call accounts (demand deposits) of all commercial and Islamic banks were redefined and a unified reserve requirement of 19% was applied to all demand deposits, with reserve requirements on time and savings deposits eliminated.

[3] In order for the bond issue to be considered a monetary operation, the incoming funds have to be under the control of QCB, rather than available to the government for spending, which is the case in Qatar.

Table 2

Qatar: Main economic indicators

	1999	2000	2001	2001	2002		
				Q4	Q1	Q2	Q3
Population (thousands)	562	579	597	–	–	618	–
Inflation (%)	2.2	1.7	1.4	0.8	0.4	0.4	–0.1
Gross Domestic Product[1]							
million QR	45,111	59,893	58,794	13,730	13,795	17,840	19,300
(% change)	20.8	32.8	–1.8	–7.2	1.8	27.7	8.2
oil sector	20,644	34,950	33,180	7,430	7,430	10,800	12,000
non-oil sectors	24,467	24,943	25,614	6,300	6,545	7,040	7,300
Public finance (mn QR)							
Total revenue	15,256	23,428	19,318	–	–	–	–
Total expenditure	17,336	18,294	19,268	–	–	–	–
Balance	–2,080	5,134	50	–	–	–	–
Monetary							
QCB rate (%)	5.50	6.65	2.50	2.50	2.50	2.40	2.20
Money supply (M1)(mn QR)	4,179	4,449	5,219	5,219	5,649	6,697	6,310
(% change)	–0.9	6.5	17.3	9.5	8.2	18.6	–5.8
M2 (mn QR)	25,982	28,756	28,754	28,754	28,863	29,569	30,481
(% change)	11.4	10.7	0.0	1.5	0.4	2.4	3.1
Foreign assets (net)	5,497	13,276	14,098	14,098	16,330	16,825	16,618
Total deposits	30,809	36,345	42,518	42,518	45,070	44,251	43,430
Private deposits	*24,268*	*27,083*	*27,014*	*27,014*	*27,148*	*27,703*	*28,712*
Total credit	28,541	27,913	34,011	34,011	35,935	34,549	33,907
Private credit	*15,640*	*17,252*	*17,481*	*17,481*	*17,513*	*17,949*	*18,632*
Balance of payments[1]							
Trade balance	18,062	31,538	27,243	9,126	5,212	6,843	7,028
Exports (FOB)	26,258	42,202	39,567	12,401	8,776	9,832	10,067
Imports (FOB)	–8,196	–10,664	–12,324	–3,275	–3564	–2,989	–3,039
Current account balance	7,903	19,925	15,520	5,860	3,411	4,542	4,802
Capital account balance	1,043	–6,858	–5,558	–818	4,031	–252	–1,306
Overall balance	8,946	13,067	9,962	5,042	–620	4,290	3,496
Doha Securities Market							
Shares number (thousands)	28,167	31,611	51,015	13,805	17,804	29,547	20,498
Shares value	1,232	868	1,504	507	701	1,127	827
Number of deals	13,964	12,225	15,771	4,469	4,929	7,977	9,951
Index	1,341.0	1,233.3	1,692.2	1,692.2	1,690.6	2,087.2	2,237.8

In February 2000, the RRR was set at only 2.75% of deposits. RRR is calculated based on an average and reserve shortfalls are penalised at a rate of triple the repo rate. This has induced banks to hold on average higher excess reserves. Currently, required reserves are unremunerated in Qatar.

Prudential ratios

QCB uses different prudential ratios, the most important of which are the loans to deposit ratio and the liquidity ratio. These ratios are mainly used to penalise excessive lending. The liquidity ratio has recently been set at 100%, and the loans to deposit ratio is set at 95%. The loans to deposit ratio is below QCB's guideline, while the liquidity ratio is above QCB's minimum specified limits.

The Qatar monetary market rate

The QMR is a very recent monetary instrument, implemented in April 2002. Through this instrument, banks can borrow from and deposit funds at QCB at rates set by it. The QMR will be an outlet for surplus funds of banks when liquidity is excessive; in this way banks are allowed to deposit surplus liquidity at the central bank at a rate specified by QCB. Also, it is a source of liquidity to banks when the money market is tight. This mechanism is expected to bring about a market rate that reflects the supply of and demand for excess reserves. As such, it is a function of many macroeconomic and monetary variables.

The discount window

The discount window, one of the least used tools of monetary policy, is available to QCB according to the 1993 legislation establishing it. QCB determines the conditions under which credits are to be extended to banks in general and shall declare from time to time its rates for discounts, rediscounts, loans and advances. This tool is currently not operating.

Qatar's payment system

The payment system consists of the set of rules, institutions, and technical mechanisms for the transfer of money. It comprises a network of banks, central banks, securities firms, service providers, and industry-owned utilities that ensures both the smooth transfer of funds for business and financial transactions and the timely settlement of securities transactions. The main features of the payment system in Qatar are:

- QCB introduced the RTGS payment system (as the premier system for handling large-value and same day payments) in January 2001, using a SWIFT message switching platform complying with SWIFT standards.
- QCB's main applications of SWIFT are systems for clearing and settlement, book-entry security, issuing currency, investment and foreign exchange.
- National ATM and Point of Sale Switch (NAPS) reconciliation transactions consist of two forms of local and regional settlement systems employed in Qatar; the first is ATM transactions, and the second is point of sale transactions. NAPS is available in all GCC countries, Egypt and Lebanon.
- Debt management transactions (bidding, settlements) and transfers of securities ownership are executed using SWIFT.
- Some banks have introduced a fully automated e-banking service for customers in Qatar.
- Some banks in Qatar have introduced a WAP (wireless through mobile) service.

The main instruments used in the Qatar payment system are cash, cheques, credit transfers, direct debits and payment cards (credit and debit cards).

The role of QCB in the operation of the payment system depends upon the four functions (user, member, provider, guardian of the public interest) of QCB in the system. These have a major role to play in the successful implementation of the key responsibility of QCB of achieving and maintaining monetary stability.

2. Qatar's attitude towards the proposed single currency for the GCC

Since the early 1980s, the GCC countries have taken important steps towards economic and financial integration, resulting in the free movement of national goods, labour and capital across these countries. The GCC authorities have indicated similar policy preferences in a number of areas over the years. In particular, they have shown a desire for maintaining price and nominal exchange rate stability as well as for an open trade regime and liberal capital flows.

Since the 1990-91 regional conflict, increased attention has been devoted to fiscal adjustment supported by structural and institutional reforms to encourage diversification and sustained growth. Nonetheless, some important differences, particularly in the fiscal area, have appeared in economic performance and policy preference.

In October 2001, the GCC countries decided to peg their currencies to the US dollar by the end of 2002. The Qatari Government has officially pegged its currency to the US dollar since July 2001.

However, it is not decided yet whether the common currency peg would be a hard or a soft peg, or even whether to extend the present currency board-type arrangement in place in most of these countries to the common central bank to support a hard peg. The second step is to decide upon the initial exchange rate of the common currency to the US dollar.

A unified regional customs tariff at a single rate of 5% will become effective in January 2003. Qatar imposes a 4% tariff duty on most imports, none on food, 100% on alcohol and 50% on tobacco.

Economic performance criteria and institutional requirements will be established by no later than 2005 for the needed policy convergence to support effective monetary union among the GCC countries. The European Central Bank will provide help on this issue. Policy coordination in key areas is essential to avoid an undesirable policy mix between individual member countries' fiscal policies and regional monetary stance.

A Technical Committee (from the central banks and finance ministries of the GCC countries) has been established, to follow up all the requirements of issuing the common currency on time. This Committee reports to the Governors' Committee.[4]

Finally, given Qatar's excellent economic outlook in light of the deepened regional integration, the Qatari authorities fully support the economic and financial integration among the GCC countries.

[4] The first meeting of the Technical Committee with the European Central Bank was held in October 2002.

A common currency area for the Gulf region

Muhammad Al-Jasser and Abdulrahman Al-Hamidy[1]

Creation of a common currency area has been one of the cherished goals of the Gulf Cooperation Council (GCC) countries[2] right from the beginning. This goal was formally declared soon after the foundation of the GCC in 1981 through Article 22 of the Council's Unified Economic Agreement of June 1982, which stipulates that "The member states shall seek to coordinate their financial, monetary and banking policies and enhance cooperation between monetary agencies and central banks, including an endeavour to establish a common currency in order to further their desired economic integration".

The GCC countries have great potential for becoming a viable unified currency area. Beside constituting an almost contiguous area, these countries have many similarities in history, culture and economic characteristics (Table 1). The majority of these countries are highly dependent on the export of oil. They are trying to diversify their economies and increase the participation of the private sector in the development efforts. These countries believe in free enterprise. Barring a few items, imports and exports are free. Capital movements to and from these countries are also unrestricted. Their currencies are fully convertible and there are no taxes or subsidies on the purchase or sale of foreign exchange. Their exchange rate policies have long been well coordinated, with the cross rates of their currencies showing remarkable stability.

The GCC countries have taken a numbr of steps to integrate their economic and financial systems. They have made the movement of national goods, labour and capital across their borders completely free. Also, they have agreed to adopt a common tariff and harmonise customs administration and procedures by 2003. They have instituted steps to resolve cross-border trade disputes and agreed to accord national treatment for tax to each other's individuals and corporations. They have liberalised land ownership for each other's nationals, both for building a second home and for business purposes. They have also taken measures to promote foreign direct investment and intraregional capital flows, harmonise investment codes and stock exchange regulations, interlink electricity grids and develop a common gas grid. To integrate their financial systems, they have adopted unified bank supervision procedures, as well as allowing each other's banks to open branches in their jurisdictions. They have interlinked their ATM machines. In addition, they have initiated measures to interlink their stock markets so as to allow cross listing and trade in stocks of companies registered in member countries. They have also satisfied certain convergence criteria, including low inflation, stable bilateral exchange rates (as already mentioned) and close nominal interest rates through the implementation of a similar pegged exchange rate regime.

To quicken the pace of economic and financial integration, the GCC heads of state have now set up a timetable according to which the GCC countries will establish a customs union by 2003 and integrate their exchange rates by the same date; reach an agreement on convergence criteria to be achieved by 2005; and adopt a common currency by 2010.

For accomplishing the planned customs union, the GCC countries agreed to a common external tariff rate of 5% by January 2003. Bahrain and Saudi Arabia have already adjusted the tariff rates to the agreed level. Recently, the GCC countries also agreed to the one entry point system of imports and the distribution of revenue on the basis of the final destination of imports. They drafted a common customs law for implementation before January 2003. They have also agreed to establish a commission to monitor the implementation of the common external tariff.

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[1] Vice Governor and Director General of the Research and Statistics Department, respectively, of the Saudi Arabian Monetary Agency.

[2] The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

Table 1

Selected economic indicators of GCC countries (as of 2000)

Indicators	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	United Arab Emirates
GDP at current prices (in billions of US dollars)	8	36	20	16	189[1]	47[3]
Per capita income (in thousands of US dollars)	11.5	16.3	8.3	28.9	9.1	16.7[3]
Real GDP index (1995 = 100)	123.6	103.8	117.7	–	111.3	–
Consumer price index (1995 = 100)	99.6	109.5	98.7	117.7	–	–
Budget balance (as a percentage to GDP)	–2.3	27.8	–4.8	–	3.2	–0.3[3]
Exports (as a percentage of GDP)	72	54	39[3]	58[4]	41	19[2]
Imports (as a percentage of GDP)	58	20	25	20[4]	16	53[3]
Current account balance (as a percentage to GDP)	1.4	41.0	16.9	–	7.6	–
Foreign exchange reserves (in billions of US dollars)	1.4	6.5	2.3	1.1	18.0	13.3
Nominal effective exchange rate index (1995 = 100)	118.9	–	117.5	122.6	121.7	125.0
Population (in millions)	0.7	2.2	2.5	0.6	20.9	2.7

Note: Flow data are for the year while stock data are for end-year.

[1] National source. [2] 1992. [3] 1998. [4] 1999.

Source: IMF, *International Financial Statistics*, September 2002.

The exchange rate integration will require all the GCC countries to officially peg their currencies to a common denominator, namely the US dollar, in order to maintain stability in the cross exchange rates. The choice of US dollar to serve as a common denominator is based on two main considerations. First, the US dollar is the intervention currency of all the GCC countries and their foreign reserves for currency cover and balance of payments purposes are largely held in dollars. Moreover, a stable relationship of their currencies with the US dollar is of crucial importance not only for fiscal management but also for the GCC traders in their business planning. Second, the GCC currencies have already been effectively pegged to the US dollar for a long time (Table 2). Currently, four out of six GCC currencies are formally pegged to the US dollar - the Omani riyal since 1970s, the Qatari riyal since mid 2001 and the Bahraini dinar and the UAE dirham since early 2002. The Qatari riyal, Bahraini dinar and UAE dirham were previously pegged formally to the special drawing right (SDR) but in effect they have maintained a fixed relationship with the US dollar since around 1980 (other than a slight change in 1997 in the case of the UAE dirham). The Saudi riyal is formally pegged to the SDR but it has been virtually fixed to the dollar since June 1986. The Kuwaiti dinar is linked to a special basket of currencies, but since the US dollar has been assigned a very large weight in this basket, the exchange rate of the Kuwaiti dinar vis-à-vis the dollar has remained broadly stable over time.

Table 2

Official exchange rates of GCC currencies against the US dollar

(per US dollar at year-end)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Bahrain	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376
Kuwait	0.303	0.298	0.300	0.299	0.300	0.305	0.302	0.304	0.305	0.307	0.300
Oman	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
Qatar	3.640	3.640	3.640	3.640	3.640	3.640	3.640	3.640	3.640	3.640	3.640
Saudi Arabia	3.745	3.745	3.745	3.745	3.745	3.745	3.745	3.745	3.745	3.745	3.745
UAE	3.671	3.671	3.671	3.671	3.671	3.673	3.673	3.673	3.673	3.673	3.673

Source: IMF, *International Financial Statistics*, Year Book 2001 and April 2003.

The Council of Ministers of Saudi Arabia ordained in July 2002 that the relevant authorities should undertake necessary measures to implement the timetable set by the GCC heads of state for achieving the goal of monetary union and a unified currency for the region. Kuwait announced in October 2002 that the Kuwaiti dinar would be officially pegged to the US dollar from January 2003.

It may be asked why there is a need for formally pegging all the GCC currencies to the US dollar when already these currencies have, in actual practice, been maintaining a virtually fixed relationship with the dollar. But the formal pegging of all the GCC currencies will be more than a formalisation of the existing arrangements. It will make the GCC countries a completely cohesive group in regard to their exchange rate arrangements. Moreover, in the existing arrangements there is always the possibility that one or more of these countries could unilaterally change their exchange rate peg. This tends to impair the intraregional trade and investment activities of risk-averse agents. Such an uncertainty will be largely removed when countries enter into an agreement to commit themselves formally to adhere to fixed exchange rates vis-à-vis the dollar.

Pegging will stabilise the GCC currencies vis-à-vis the US dollar, make them move in unison against other international currencies and generate a grid of bilateral parities between the GCC currencies which will promote intraregional exchange rate stability as well. This arrangement will differ from the Exchange Rate Mechanism of the European Monetary System (EMS) that was in place before the adoption of the euro. The sole objective of the EMS was to achieve intra-European exchange rate stability through fixation of parities with the ECU which was a basket of currencies of the EU countries themselves. This arrangement linked the EMS currencies intraregionally but at the same time made them float jointly vis-à-vis the rest of the world. In contrast, the exchange rate integration among the GCC countries will seek to promote exchange rate stability not only intraregionally but also internationally by fixing parities with a non-regional denominator, namely the US dollar.

The transition from the integrated exchange rate system to a common currency by 2010 is expected to be smooth. As mentioned earlier, the GCC countries have already made considerable progress. As a matter of fact, the level of economic coordination achieved by them compares favourably with the state of affairs which existed in Europe at the time of establishing the EMS. They are very close to establishing their customs union. Their national economic objectives, growth rates, inflation rates, monetary and fiscal policies, interest rates and banking policies are in broad harmony. They are diversifying their economies to reduce dependence on oil, which has often been a factor in dislocating fiscal sustainability and straining their balance of payments. Encouragement of the private sector is the major plank of their development strategy. They have undertaken privatisation programmes to reduce the role of the government and enlarge the scope of the private sector. It is hoped that during the run-up to the establishment of the integrated exchange rate system, and even after that, the GCC countries will make more concerted efforts to harmonise their policies and remove whatever structural and macroeconomic imbalances still remain.

The name of the new currency and its exchange rate arrangement has not as yet been decided. The new currency may be linked to the US dollar, the SDR or a special basket of currencies. A decision in this regard will be taken by the GCC authorities on the eve of the launching of the common currency,

taking into account the regional and international economic conditions prevailing at that time. Since, in the interim period, all the GCC currencies will be officially linked to the US dollar, the probability is that the new currency will also be linked to the US dollar. This will greatly facilitate the transition. The authorities would simply have to set the initial exchange rate of the common currency to the dollar. This rate could be set at one to one or a multiple thereof. Once a decision in this regard has been taken, the bilateral rates at which national currencies would become convertible into the common currency will be irrevocably fixed. This conversion facility will be available for a limited period of time, say six months, during which the public will be able to get accustomed to the use of the new currency (for the introduction of the euro this facility was available for seven months).

The adoption of a common currency by the GCC countries will bring a number of economic benefits. It will eliminate the currency conversion costs involved in intraregional transactions and remove the disturbances in relative prices arising from nominal exchange rate fluctuations. The lowering of transaction costs and removal of exchange rate uncertainty will contribute to raising intraregional trade, to which GCC countries attach considerable importance. As mentioned earlier, they have already taken a number of measures to that end and a common currency will give an additional boost. Some empirical studies have shown that bilateral trade between two countries that use the same currency tends to be much larger than the bilateral trade between countries that use different currencies. It should, therefore, be reasonable to expect that the increase in the GCC's intraregional trade following the introduction of a common currency would be quite substantial.

In addition, since intraregional trade is mostly non-oil related (Table 3), its enlargement, in turn, will contribute significantly to the development of the non-oil sectors of the regional economies, to which they attach great importance for achieving their diversification objectives. The adoption of a common currency, with the resultant reduction in currency conversion costs and elimination of exchange risks, should promote intraregional investments. It will also be conducive to investment by foreigners in the region.

Moreover, the introduction of a common currency will serve as a catalyst for stronger integration and deepening of GCC financial markets. It will foster the integration of money markets across the region and lead to a uniform short-term interest rate structure. It will also contribute to the integration and development of the region's bond and equity markets and thereby facilitate savings and investments in the region.

The introduction of a common currency will also be associated with the pursuit of a common monetary policy, and more disciplined fiscal policies by the member countries. This will considerably enhance the credibility of the economic policies pursued in the region.

Set against the above benefits, the introduction of a common currency will involve a loss of independence in pursuing monetary and exchange rate policies by the GCC countries individually. However, this will not be of much significance as these countries have already been coordinating their monetary, financial and other policies and their exchange rates have remained almost unchanged for a prolonged period under a similar pegged exchange rate regime.

Table 3

Intraregional and total exports of GCC countries, 1996

In millions of US dollars

	All exports		Non-oil exports[1]	
	Value	**Percentage of total**	**Value**	**Percentage of total**
Bahrain				
Within the GCC	385	8.4	352	24.2
Total exports	4,610		1,453	
Kuwait				
Within the GCC	288	1.9	288	62.4
Total exports	15,367		462	
Oman				
Within the GCC	711	9.9	668	47.3
Total exports	7,221		1,413	
Qatar				
Within the GCC	363	9.0	363	58.9
Total exports	4,055		617	
Saudi Arabia				
Within the GCC	1,571	2.6	1,571	27.0
Total exports	60,108		5,846	
United Arab Emirates[2]				
Within the GCC	610	3.1	581	39.9
Total exports	19,673		1,457	
Total GCC				
Within the GCC	3,931	3.5	3,832	34.1
Total Exports	111,037		11,249	

[1] Refers to all trade and products exported except crude and refined oil products. [2] All export figures for the United Arab Emirates are for 1993.

Source: Table 2 in E Jadresic, "On a common currency for the GCC countries", *IMF Policy Discussion Paper*, no 02/12, December 2002.

Concrete steps towards the establishment of a monetary union for the Gulf Cooperation Council countries

Mohammed Ali Bin Zayed Al Falasi

The United Arab Emirates (UAE) has a population of about 4 million, with a per capita GDP in 2001 of $17,000. The country has one of the most diversified economies in the Gulf region. Indeed, the share of the oil and gas sector has been limited to around 30%.

The dedication of the leadership to development and economic freedom are at the origin of this success story. The country is now host to 16 "free zones" where businesses can be established without complicated administrative procedures. Indeed, about 3,500 companies from all over the world have set up in these zones. Jebel Ali is now the world's largest free zone with over 2,400 companies from over 80 countries. Innovative development projects include the Dubai internet and media cities, the Dubai International Financial Centre and a new metal and commodities centre.

The UAE economy was ranked 14th worldwide in 2001, according to the Heritage Foundation's Index of Economic Freedom. Fund transfers abroad are totally free. Foreign banks are active in the UAE. The UAE joined the World Trade Organization in 1996, and is confident that its economy is in a position to face the challenges of international competition.

Sequencing of economic and monetary integration in the Gulf

In the GCC countries,[1] economic and monetary integration are proceeding hand in hand. Indeed, the adoption of the single currency is conceived as a way to enhance economic and monetary integration. In the GCC case, monetary union is preceding economic integration.

The anchor currency

A decision was already taken in December 2001 to adopt a fixed peg to the US dollar for all GCC countries. Indeed, this currency has been a de facto anchor in the past for all GCC members except Kuwait, whose currency does not fluctuate much against the dollar either. The fixed peg of the GCC currencies to the dollar has served the economies quite well. First, as exports are priced in dollars, fluctuations of the dollar against other major currencies will have a minor impact on the GCC currencies. Second, the peg to the dollar is a stabilising influence for government budgets as oil and gas are major sources of revenue. These reasons would indicate that the dollar will be the anchor currency when the currency union is established in 2010. But they do not exclude a later shift to another anchor (such as the euro) or a float of the currency.

Convergence criteria

According to the agreed agenda, the observance of convergence criteria will start in 2005. The process of choosing these criteria and studying the appropriate way to implement them is currently underway. The criterion for the budget deficit could refer to a fixed maximum limit as a percentage to GDP. Alternatively it could be expressed as a permissible limit (1 or 2 percentage points) above the average ratio of the other members. A target for the public debt could be expressed as a declining range, with a final target in the order of 60-70% of GDP. With a fixed peg to the dollar, interest rates should be aligned to the interest rates in the United States.

[1] Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE.

Institutions

A special commission of the Governors of the GCC central banks and monetary authorities was set up to coordinate and follow up on all matters pertaining to the monetary union, including the convergence criteria.

It is likely that the relationship between the future Gulf Central Bank and the central banks of the member countries will be similar to that now existing between the corresponding institutions within the euro area.

Conclusion

The adoption of a monetary union in the GCC is a very specific experiment, in that all members already rely on oil and gas as their major export. They all strive to diversify their economies, and they have all adopted a fixed peg to the dollar years before the adoption of a single currency. The challenge now is to take advantage of all these elements and accelerate the process of monetary and economic integration.

Botswana's exchange rate policy

Kealeboga Masalila and Oduetse Motshidisi

1. Introduction

In the construction of a market-based development strategy, a key policy consideration is the selection of an appropriate exchange rate regime, which should be consistent with the attainment of macroeconomic stability. In particular, the policymaker's preferences are external competitiveness and price stability. At the extremes, the choice lies between a fixed exchange rate regime, achieved through an anchor to a single currency or a basket of currencies, and a flexible exchange rate regime. The choice of either of the two extremes or an intermediate arrangement reflects preferences with respect to macroeconomic objectives. In Botswana, the desire is to foster sustainable growth through diversification and export competitiveness. The currency, the pula, is pegged to a basket of currencies that reflects the country's trading patterns and comprises the South African rand and the Special Drawing Right (SDR). The objective is to stabilise the trade-weighted real exchange rate. The performance of the pula exchange rate as well as, broadly, the monetary policy framework has largely reflected this objective.

2. Exchange rate regimes

Exchange rates are typically categorised as floating or fixed. A fixed exchange rate is one in which the value of one currency vis-à-vis another currency is held constant by government intervention in the foreign exchange market. The general case in favour of a fixed exchange rate is that it can serve as a nominal anchor against inflation if the exchange rate is fixed against the currency of a country with relatively low inflation. Pegged exchange rates also benefit from a discipline effect since there are generally political costs associated with abandoning the peg, as there may be a need to adjust other policies. In addition, there is a confidence effect whereby the connection of the exchange rate with a stable foreign currency engenders a willingness to hold the domestic currency or assets denominated in the domestic currency. Fixed exchange rates in developing countries have also been justified in instances where the financial sector is not well developed and because of the large role of the public sector as a supplier of foreign exchange. Although keeping the exchange rate fixed may help stabilise the price level, it is not viable in the presence of a large current account deficit and a foreign exchange or external borrowing constraint.

A floating exchange rate is one in which the value of the currency in terms of another is determined by demand and supply in the foreign exchange market. A floating exchange rate does not, however, imply that the authorities are unconcerned about the level of the exchange rate. Rather, the authorities employ domestic policy instruments - especially interest rates - to realise their objective with respect to the exchange rate. This is particularly important given the fact that although, in a floating exchange rate regime, a nominal depreciation may improve the trade balance and the balance of payments, it might lead to inflation, thus eroding competitiveness. Therefore, there should be other instruments available to stabilise inflation.

In practice, there is a range of intermediate exchange rate regimes. Intermediate exchange rate arrangements provide scope for short-term flexibility within exchange rate margins and medium-term parity adjustments. The variability of any exchange rate regime is determined by the structural characteristics of an economy and the environment within which policy is operated. For example, the choice of a basket as opposed to a peg to a single currency, apart from being necessitated by trading patterns, is also intended to dampen the impact of external sources of exchange rate instability arising from large fluctuations among the real exchange rates of industrial countries. Alternatively, the crawling or adjustable peg is an attempt to avoid domestic sources of instability, in particular to alleviate periodic overvaluations and exchange rate crises associated with a fixed peg where there is high inflation. A crawling peg can be subject to discretionary change with a future path announced or

not announced. It can also be subject to a non-discretionary feedback rule that may or may not be made public.

Alternatively, the credibility of a fixed exchange rate regime may be derived from belonging to a monetary union; effectively surrendering the power to alter the exchange rate through a common currency. This arrangement establishes the credibility of an anti-inflationary policy while there are institutional features that make it costly to alter the exchange rate. There are, however, costs associated with forgoing the use of the exchange rate as a policy instrument, particularly in the presence of large external shocks.

3. Botswana's exchange rate regime and policy objective

Whether fixed, floating or an intermediate arrangement, the objective of any regime is the realisation of a stable exchange rate. As indicated above, exchange rate policy is usually driven by two distinct, and sometimes competing, objectives: external competitiveness and maintenance of price stability. The first objective is aimed at improving the balance of payments while the second objective is pursued insofar as low inflation is desirable from the point of view of macroeconomic stability, and to the extent that it also contributes to efficiency in resource allocation.

In Botswana, the exchange rate policy reflects the emphasis given to the strategy of economic diversification, the need to promote the competitive position of Botswana's non-traditional exports and import substitution activities. In the endeavour to reach these goals, most of the nation's exchange rate history has seen the government, through the Bank of Botswana, pursue a policy best described as that of exchange rate protection.[1] This policy has sought to counteract a potential squeeze[2] on the tradable sector by facilitating a shift out of the non-tradable goods sector and into the tradable goods sector; hence boosting the prospects for employment, output and profits of the latter.

In an attempt to mitigate the susceptibility to volatility of an independent float and the straitjacket of a fixed exchange rate, Botswana, like several other developing countries, has chosen an intermediate exchange rate regime, which enables it to benefit from the positive aspects of the two extreme exchange rate mechanisms. Significantly, in a situation where there is a large inflow of diamond revenues, a free float might lead to an appreciation of the exchange rate to levels that would make non-diamond production unprofitable (the so-called "Dutch disease"), which would be inconsistent with the country's development and diversification objectives.

Botswana has since the introduction of the pula[3] in 1976 adopted a fixed but adjustable peg system. Initially, the pula was pegged to the US dollar and, prior to 1980, the peg was revalued on one occasion for anti-inflationary reasons. The single currency peg coincided with a period in which the South African rand was also pegged to the US dollar. Specifically, the exchange rate at which the pula was pegged to the US dollar was equivalent to that of the rand against the dollar. This implied equality between the pula and the rand. This effect expired when the rand was taken off the US dollar peg and allowed to float. To subdue the effects of exchange rate volatility between the pula and the rand, the pula basket was introduced in 1980. From 1980 to 1991, the exchange rate of the pula was subject to both discrete changes to the composition of the basket as well as devaluation and revaluation (Table 1). However, since the last publicly announced devaluation in 1991, the management of the exchange rate has involved technical adjustments of the basket composition aimed at maintaining real exchange rate stability.

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[1] Exchange rate protection occurs when a country protects its traded goods sector (export and import-competing activities) relative to the non-traded goods sector by depreciating the exchange rate or preventing an exchange rate appreciation.

[2] A tradable squeeze refers to the negative impact of a strong domestic currency on domestic export activities. Typically, this effect arises when a boom in a country's mineral (or more generally natural resource) sector produces a decline in other export industries. The mechanisms that produce this result are normally a combination of a nominal appreciation of the domestic currency and continuous increases in nominal wages.

[3] From independence in 1966 up to 1976, Botswana retained its membership of the Rand Monetary Area, a regional monetary union controlled by South Africa and including Lesotho, Namibia and Swaziland, which are still members. See the paper in this volume by van Zyl for further information.

Table 1

Chronology of exchange rate events from 1996

Date	Action	Comments
1966-76	Participation in rand monetary union.	No independent exchange rate or monetary policy.
August 1976	Introduction of the pula, pegged at USD 1.15.	Rand pegged to US dollar at same rate ensuring parity between pula and rand.
April 1977	5% pula revaluation.	Anti-inflation measure.
January 1979	Rand taken off US dollar peg and floated.	Rand appreciates against US dollar as gold price rises.
June 1980	Pula taken off US dollar peg. Introduction of pula basket comprising SDR and rand.	To reduce volatility of rand/pula exchange rate.
November 1980	5% pula revaluation.	Anti-inflation measure as imported inflation rises following pula depreciation against rand.
May 1982	10% pula devaluation.	Part of stabilisation measures in response to 1981-82 balance of payments crisis.
February 1984	Foreign debt standstill for South Africa and run on the rand.	Rapid depreciation of the pula against the dollar as rand continues to depreciate.
July 1984	5% pula devaluation.	Competitiveness measure following rand collapse and rapid pula appreciation against the rand.
August 1984	Rand weight in pula basket adjusted.	To reduce drift of pula from rand.
January 1985	15% pula devaluation.	Additional competitiveness measure in response to rapid pula appreciation against rand.
January 1986	New pula basket introduced.	Due to rapid rand appreciation.
June 1989	5% pula revaluation.	Anti-inflation measure.
August 1990	5% pula devaluation.	Competitiveness measure.
August 1991	5% pula devaluation.	Competitiveness measure.
June 1994 to date	Technical adjustments.	Changes to the basket to reflect trade patterns and reversal of weight drift aimed at maintaining competitiveness and real exchange rate stability.

Source: Bank of Botswana.

The choice of to which currencies to peg the pula was guided by trade patterns and the vehicle currencies used in international trade and payments. Botswana has an undiversified trade pattern, whereby the bulk of the traditional exports (diamonds, copper and nickel, soda ash and beef) are denominated in US dollars and sterling while non-traditional exports and most imports are denominated or invoiced in South African rand. The pula is, therefore, pegged to a trade-weighted basket of currencies - comprising the rand and SDR - so as to smooth exchange rate fluctuations among the trading partners.[4] The rand has a greater share in the basket reflecting the need to protect the interests of the majority of Botswana's domestic firms, whose consumption, expenditure and revenue decisions have a significant rand-denominated component.

In addition, for a long time the adjustable peg adopted by Botswana was such that the rand/pula exchange rate was monitored closely in order to maintain stability. Adjustments were, therefore,

[4] The appropriate weights (which are not publicly disclosed) of the respective currencies used in the pula basket are determined in part by the bilateral share of trade of the respective country. In Botswana's case, the trade weighting abstracts from diamond sales, since those exports are basically insensitive to exchange rate fluctuations.

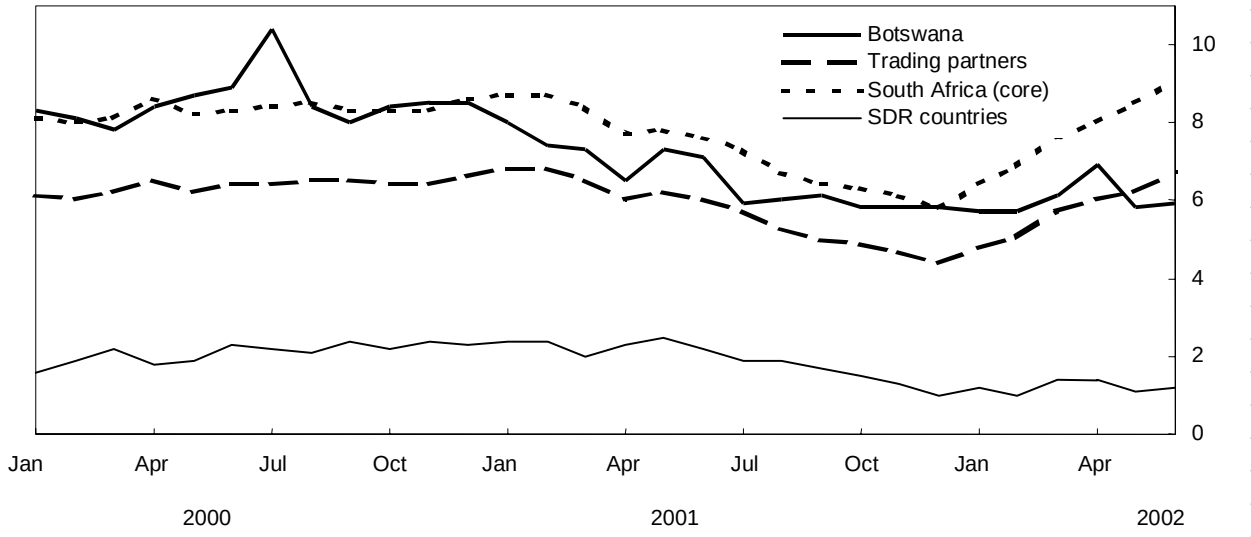
occasionally made to the peg if it was considered that the rand/pula exchange rate had fluctuated too much. In effect, this implied that the country maintained a managed exchange rate vis-à-vis the South African rand. Thus, for most of the time the exchange rate moved in line with the South African rand although the magnitudes were moderated by the presence of the SDR component.

An important goal of exchange rate policy is stabilisation of the real exchange rate in relation to Botswana's main trading partners. In line with this objective, it follows that the authorities closely monitor relative inflation performance between Botswana, South Africa and SDR countries. More generally, if the price level in Botswana is rising relative to that of trading partner countries, the equilibrium value of the pula will be falling in relation to the basket, and vice versa. If the inflation differential is considered inimical to the attainment of real exchange rate stability, then corrective interventions are effected by the authorities, in order to restore the given exchange rate objective. Corrective measures are, however, not limited to the exchange rate mechanism but include monetary policy action to achieve an inflation objective that given the inflation in trading partner countries is consistent with maintaining real pula exchange rate stability. In general, monetary policy action is preferred while discretionary devaluation or revaluation has not been used for some time now. As evident from Graph 1, although Botswana's inflation has tended to be higher than that of its trading partners, recently this difference has narrowed.

Graph 1

International inflation

In percentages



Source: Bank of Botswana.

4. Recent developments in the exchange rate

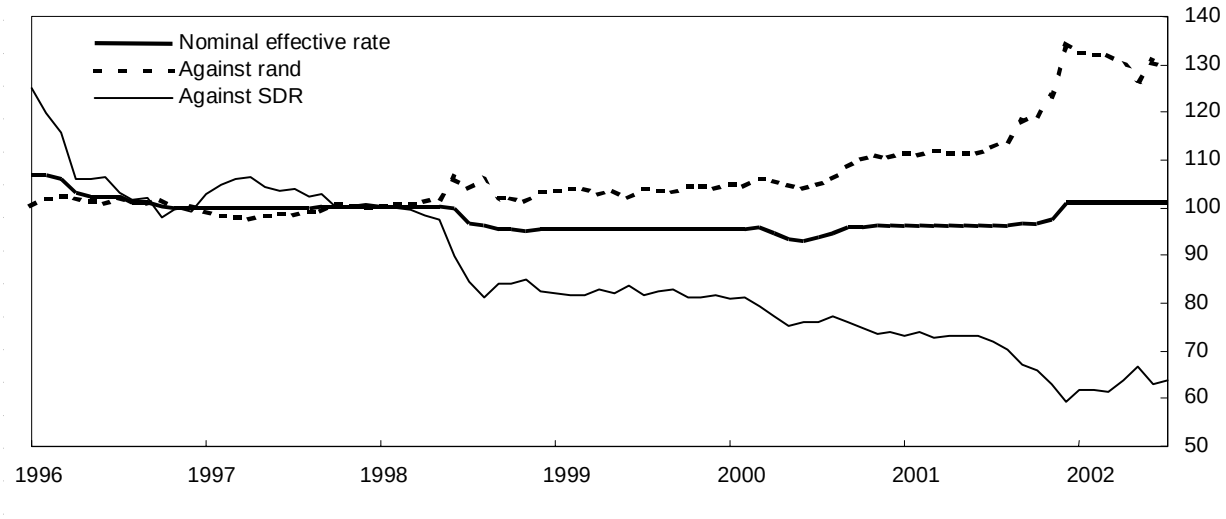
The adjustable peg regime presently in use in Botswana provides the authorities with a certain degree of flexibility to manipulate the exchange rate in a manner complementary to the exchange rate policy objective. To date, Botswana's authorities have by and large avoided overvaluation of the pula, by not keeping the exchange rate too rigid in the face of differential inflation or allowing the currency to move upwards too much so as to threaten export competitiveness.

Up to the middle of 2000, the movements of the pula reflected the relatively high weight of the rand in the basket as well as the fact that its fluctuation vis-à-vis the rand was closely managed. Thus, the pula tended to depreciate and was unstable against the major international currencies as the rand weakened but was relatively stable in nominal terms against the rand (see Graph 2).

Graph 2

Nominal exchange rate indices

November 1996 = 100



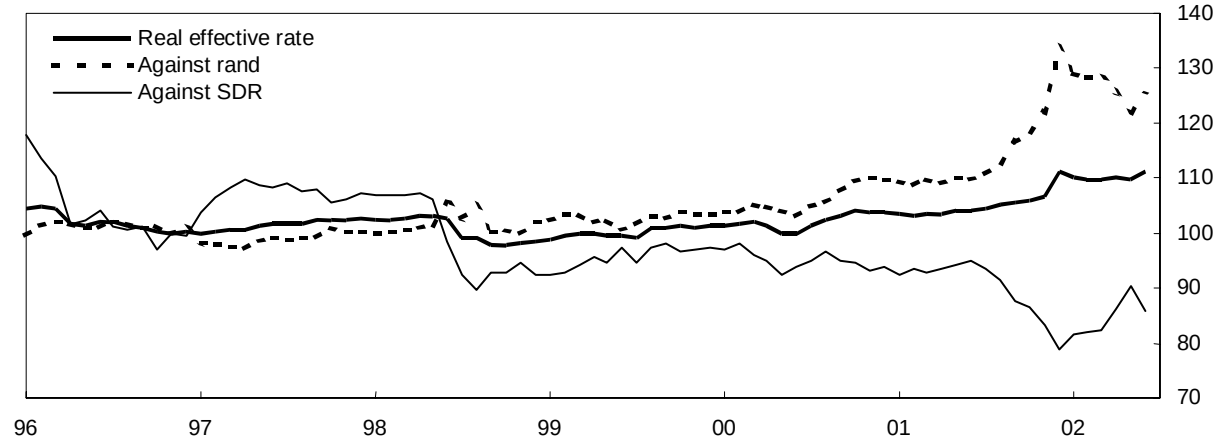
Source: Bank of Botswana.

From the middle of 2000, a greater focus on real exchange rate stability vis-à-vis the basket and removal of the band surrounding the rand meant that the nominal exchange rate of the pula against the rand appreciated beyond what had hitherto been experienced. In particular, the pula has gradually appreciated against the rand, while that currency has fallen in international foreign exchange markets. Targeting the stability of the pula vis-à-vis a trade-weighted index implies that the emphasis is on maintaining nominal effective exchange rate stability (as opposed to focusing on bilateral exchange rates), in an attempt to diversify the nation's export base (in terms of both products and markets). The policy of keeping the nominal effective exchange rate stable also implies that competitiveness is most appropriately measured by the real effective exchange rate (Graph 3). Hence, exchange rate policy, in tandem with monetary policy, is designed to keep Botswana's inflation rate no higher than the weighted average of the inflation rates of major trading partners.

Graph 3

Real exchange rate indices

November 1996 = 100



Source: Bank of Botswana.

5. Conclusion

The exchange rate regime in Botswana can be characterised as an adjustable peg, which over time has had elements of both unannounced discretionary change as well as a non-discretionary feedback rule. The policy, consistent with other government policies, supports the development objectives of export competitiveness, diversification and growth within a stable macroeconomic environment. In particular, the discretionary approach to the exchange rate and the monetary policy framework aim to achieve real effective exchange rate stability. Botswana's inflation has not been substantially higher than that of its trading partners, contributing to real exchange rate stability. Over time, the performance of the trade-weighted real exchange rate has largely reflected the stability objective, albeit appreciating somewhat. The trade balance and overall balance of payments have been positive while there has been growth and diversification of non-traditional exports and broadly satisfactory non-mining output expansion.

Regional currency areas and the use of foreign currencies: Lesotho's experience

Tabo Foulo[1]

1. Background

Lesotho is situated in southern Africa and is completely surrounded by the Republic of South Africa (RSA). The country obtained its independence from Britain in October 1966. With a per capita income of USD 1,854, adult literacy rate of 83%, life expectancy of 48 years and infant mortality rate of 125 per 1,000 live births in 1999, the United Nations Development Programme classified Lesotho as a country with a medium human-development level.

Strong trade and labour market links between Lesotho and the RSA existed long before Lesotho gained independence. As a result, the South African rand became widely accepted as a medium of exchange in Lesotho. After Lesotho's independence, this situation continued so that the two countries could be said to have been a de facto currency union until at least 1980. In 1974, however, the governments of the two countries, together with the government of the Kingdom of Swaziland, formalised this arrangement through the signing of the Trilateral Monetary Area Agreement.[2] Under the terms of the Agreement, the South African rand would continue to be legal tender in Lesotho and Swaziland although Lesotho and Swaziland would each have the right to issue their own national currencies. There would be a free flow of capital between the countries and member countries would adopt a common exchange control regime with third countries. In January 1980, Lesotho established its own Monetary Authority, and on the same date issued its own currency - maloti (singular: loti). The exchange rate between the loti and the rand was fixed at one-to-one. It could be said that on that day Lesotho and South Africa essentially moved from having a de facto currency union to having a de jure common monetary area. This arrangement remains in force.

Although the common monetary area arrangement between Lesotho and the RSA has been in existence for about 22 years, recent experience shows that similar arrangements are not always sustainable or successful.[3] In the late 1990s a number of emerging market countries that had adopted currency area arrangements of one form or another, but primarily using the US dollar as a reference currency, found that these arrangements could not be sustained. The breakdown of these arrangements sparked off financial crises in various parts of the world. More recently, Argentina de-linked its currency from the US dollar when it became clear that the peg could not be sustained. On the other hand, experience shows that even if these arrangements may be sustainable, they may not always be beneficial. The decision by the government of Botswana to move away from linking its currency to the South African rand, to an arrangement where that country's currency is linked to a basket of currencies, is perhaps illustrative in this regard.

Given these rather varying experiences, two issues of immense policy importance for Lesotho arise. The first is whether from Lesotho's point of view the benefits of staying within the arrangement outweigh the costs. The second issue could be whether the arrangement would be sustainable even if the authorities were to decide that the arrangement is more beneficial. The purpose of this paper is to

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1 The views expressed in this paper are solely those of the author and do not necessarily represent the official policy stance of the Central Bank of Lesotho.

2 As with Lesotho, the rand had started circulating in Swaziland long before the formal signing of the agreement.

3 Experience shows that, around the world, there is a wide array of currency arrangements. At one extreme, a country unilaterally decides to peg the exchange rate of its currency to that of a reference currency. Such an arrangement need not be formalised through a treaty. The other extreme is a formalised arrangement where a group of countries adopt a common currency through a treaty. In between these extremes there are numerous permutations that include: a country pegging its value to a basket of currencies, or a country allowing its currency to trade within a narrow band of a reference currency. There is, however, a commonality in all these arrangements. This is that exchange rates of various currencies are allowed to follow predetermined patterns.

examine these issues in some detail. The issue of the current benefits versus costs of the arrangement is examined first (Section 2 of the paper). This is followed by an examination of whether the arrangement would be sustainable going forward (Section 3). The final section of the paper outlines some possible future policy directions for Lesotho.

2. Lesotho's experience

The first issue at hand is whether the 22-year old arrangement has, in the main, generated more benefits than costs for Lesotho.

Macroeconomic stability

The policy of linking one's currency to another currency can contribute to the attainment of macroeconomic stability. Under a flexible exchange rate regime, prices of tradable goods are rendered unstable. Each time the exchange rate changes, prices of traded goods change. Such changes may ultimately create a destabilising effect, particularly if the currency is depreciating. This may ultimately lead to instability in the general price level. However, once the exchange rate is fixed, any macroeconomic imbalances that arise from time to time will have to be accommodated through changes in the level of foreign reserves rather than through changes in the exchange rate. Of course, pegging one's currency to some reference currency is only a part of the stabilisation story. The ability of the authorities to stabilise the economy will also depend on whether they are able to sustain and defend the peg.

The fixed exchange rate between Lesotho and the RSA has contributed to stabilising prices of tradables between the two countries. Lesotho has probably been the bigger beneficiary in this regard given that about 80% of goods imported into Lesotho come from the RSA. *Had the exchange rate been flexible, prices of Lesotho goods imported from the RSA would change every time there is a change in the exchange rate even if the price of the same goods in the RSA remained unchanged.* Even cases of frequent but small depreciations of the loti against the rand would ultimately destabilise the general price level in Lesotho. Under such circumstances, a policy of fixing the Lesotho/RSA exchange rate has arguably contributed to price stability in Lesotho.

The fixed exchange rate arrangement has enabled Lesotho to anchor its inflation rate to that of South Africa. The benefits of such an arrangement would be further enhanced if the RSA inflation rate itself were to be low and stable. Happily, the RSA's inflation rate history has been relatively favourable, especially when compared to that of other emerging market countries or other sub-Saharan African countries.

Of course, fixing the exchange rate between the loti and the rand does not solve the problem entirely. There is still the question of the other 20% of the goods imported into Lesotho from countries other than the RSA. In this regard, Lesotho would derive maximum benefit from this arrangement if it also turned out that the rand was stable with respect to third currencies.

This tends to suggest that the benefits to be derived from a fixed exchange rate arrangement are likely to be heavily dependent on two factors. The first is the level of trade between the two countries and the second is the stability of the value of the anchor currency (internal as well as external value). This latter requirement raises another important policy issue. This is that the prerogative to defend the value of the anchor currency rests with the central bank of the anchor currency. It may therefore be necessary that the two countries should share broadly similar views as to the appropriate/tolerable rate of inflation in the region.

Convenience in obtaining rand

Under the arrangement between Lesotho and the RSA, the rand is legal tender in Lesotho. For historical reasons as well as for reasons of strong trade and labour market links between the two countries, the rand is available widely in Lesotho. Every public trading place, be it a supermarket, a petrol station, etc, has a mix of rand and loti in its cash till. This situation is of great convenience to cash shoppers wishing to do shopping in the RSA. They do not have to visit authorised foreign exchange dealers to convert maloti into rand. Each one of these public trading places provides this

service free of charge to shoppers. Had the rand not been circulating widely in Lesotho, shoppers would have to make trips to dealers, mostly commercial banks, every time they want to go to the RSA for shopping. This would severely restrict the amount of cross-border trade between the two countries. Thus, in addition to the convenience, the arrangement has contributed to increased cross-border trade between the two countries.

Although the loti is formally not legal tender in the RSA, it is also widely accepted as a medium of exchange in towns on the border with Lesotho. Lately, the growth in the amount of maloti collected from the RSA by the Central Bank of Lesotho has been far in excess of the growth in currency issued by the South African Reserve Bank. This indicates increasing acceptance of loti in these towns. The fact that loti is widely accepted as a medium of exchange in these towns is a further indication of the benefits associated with using foreign currencies.

Elimination of exchange rate uncertainty

The fixing of the exchange rate between the loti and the rand also eliminates exchange rate uncertainty between the two countries. However, this should not be construed as meaning that it guarantees that the peg will remain in force forever. Rather, it means that as long as Lesotho's balance of payments situation is healthy, there will be no unexpected changes in the value of the loti against the rand. The Central Bank will be in a position to defend the peg. Should large payments imbalances arise, the peg will be difficult to sustain and may ultimately break down. But as long as such imbalances are not present, the fixed exchange rate arrangement eliminates exchange rate uncertainty.

If Lesotho had adopted a flexible exchange rate system with the RSA, there would be hourly, daily, weekly, etc movements in the value of the loti against the rand. The magnitude of these variations would depend on several factors, including the liquidity in the foreign exchange market, the magnitude and direction of speculative capital flows, and the policy stance of the Central Bank of Lesotho. A highly illiquid Lesotho foreign exchange market would lead to a highly volatile currency as trading in the currency would be thin. Similarly, large inflows of capital into Lesotho would lead to temporary appreciation of the loti against the rand. However, the Central Bank of Lesotho might decide to intervene in the foreign exchange market from time to time in order to smooth out the disturbances in the value of the currency but not necessarily to seek to change the direction of the currency movement. Such interventions would introduce a measure of stability in the exchange rate.

It is difficult on an a priori basis to determine how volatile the loti would be against the rand if it was allowed to fluctuate. However, Table 1 sheds some light on this issue. It shows that the weekly percentage volatility of some selected African currencies against the rand ranges from nearly 7% for the Uganda shilling during 1996-98, to 37% in the case of the Zimbabwe dollar during the same period.

Table 1

Volatility of selected African currencies against the rand

Weekly percentage volatility

Period	Zambia kwacha	Uganda shilling	Zimbabwe dollar
1993-1995	18.3	16.5	9.0
1996-1998	8.6	6.9	36.9
1999-2000	11.4	10.8	9.3

Source: Bloomberg.

Exchange rate volatility makes business decisions somewhat difficult. Cross-border trade and investment decisions between Lesotho and the RSA would be carried out in an environment of increased uncertainty. However, this volatility has now been avoided by adopting the policy of a fixed exchange rate between the loti and the rand. Under this arrangement, comparison of prices across the two countries is made easier. For example, an RSA investor contemplating investing in Lesotho can

make direct comparisons between wage levels in the RSA and Lesotho without having to worry about where the exchange rate would be over his planning horizon. Obviously, the more volatile the currency, the more difficult it is to predict where it will be in the future. The long planning horizon inherent in investment decisions exacerbates the situation. However, a fixed exchange rate environment eliminates the former source of risk and thereby greatly facilitates long-term decision-making by businesses. This certainty greatly contributes to cross-border investment activity.

The currency as a national symbol

Until 1980, some 14 years after Lesotho's independence, the RSA rand was the sole medium of exchange in the country. The people of Lesotho did not have a currency of their own or a central bank. During this period, Lesotho and the RSA could be said to have been in a de facto currency union since the two shared a single common currency and the South African Reserve Bank essentially implemented monetary policy for the region. However, there was no formal treaty specifying this arrangement until 1974. The Lesotho Monetary Authority, which later assumed the status of a central bank, was established in January 1980 and at this time the country issued its own national currency.

It is interesting to note that, although a national currency was issued, a conscious policy decision was taken to preserve the essential elements of a currency area: the loti would change hands on a one-to-one basis with the rand, which would continue to be legal tender in Lesotho. In addition, in order to preserve the exchange rate parity, any maloti circulating in Lesotho would be backed 100% by the rand (later, this was amended to include any other major convertible currency). The Lesotho Monetary Authority was essentially to operate as a currency board.

The fact that the essential elements of a currency area were preserved, even as the country decided to issue its own national currency, leads one to speculate that perhaps the primary motive for issuing the national currency was more for political considerations than for economic reasons. Under normal circumstances, a national currency would be issued as a first step to de-linking the currency from a reference currency, allowing the exchange rate to fluctuate, and thereby reclaiming monetary policy autonomy. In the case of Lesotho these features were not introduced. Rather, a conscious policy decision was taken to preserve the old order. The only new variable in the new scheme of things was the national currency.

An important point to note here is that at the time when Lesotho took a decision to issue its own national currency, it was common for countries that had just attained independence to assert their new found freedom by, among other things, issuing their own national currencies. The debate for or against formalised currency unions belonged largely to academia. Therefore at the time it seemed logical for Lesotho to issue its own currency *as a national symbol*. Also, it has to be remembered that, at the time, the RSA government was going through a period of political and economic isolation for its policy of apartheid. It was therefore important for Lesotho to maintain as much "political distance" from the RSA as possible. The issuance of a national currency may have been seen as a step for Lesotho to distinguish itself from RSA. For those who are politically inclined, it could be said that an important benefit of the present arrangement is that it has allowed Lesotho to issue its own national currency and yet still reap the benefits of having a unified exchange rate with the RSA.

Loss of monetary policy independence

The downside of the present arrangement is that the Central Bank of Lesotho has lost the ability to implement its monetary policy independently of the policy adopted by the South African Reserve Bank. If, for example, the South African Reserve Bank wished to increase interest rates at a time when economic conditions in Lesotho suggested that Lesotho rates should be lowered, the Central Bank of Lesotho would find it difficult to lower interest rates. Any such lowering of rates would be futile as there would be a massive outflow of capital from Lesotho to the RSA which would eventually lead to Lesotho rates moving back up to restore equilibrium.

At present, monetary policymaking in Lesotho essentially involves reacting to monetary changes by the South African Reserve Bank. What typically happens is that if the South African Reserve Bank decides to increase rates in its country, the Central Bank of Lesotho will intervene in its domestic money market in order to steer interest rates in the same direction as that taken by the RSA. In short, the Central Bank of Lesotho is an implementing agency of the South African Reserve Bank monetary policy stance.

It is, however, important to note that the need for monetary policy independence arises only when the two countries are affected differently by various shocks. This may be the case for example when economic growth in the RSA gains momentum that brings in inflationary risks at a time when the Lesotho economy may be experiencing a recession. If the two countries' booms and recessions are naturally synchronised, the issue of monetary policy independence would not arise.

3. Is the arrangement sustainable?

A vexing issue is whether the arrangement is sustainable. In particular, can Lesotho sustain the peg between the loti and the rand? This issue has become much more current in recent years following the breakdown of similar arrangements in Southeast Asia, which sparked off what is now commonly referred to as the 1997 financial crisis. More recently the breakdown of the fixed exchange rate arrangement between the Argentine peso and the US dollar during the latter part of 2001, or early 2002, has forced academics and central bankers to rethink the issues surrounding currency areas.

The Lesotho-RSA currency arrangement has been in place for 22 years. During this period the peg has never broken down. There is no evidence of parallel markets for rand in Lesotho, and maloti continue to be converted into rand at the official exchange rate of one-to-one in shops, department stores, petrol stations and other public trading places. There is no evidence that individuals are hoarding rand. More interestingly, even though maloti are not formally legal tender in the RSA, traders in RSA border towns are increasingly accepting them. Cross-border trade and investment between the two countries has grown from strength to strength.

So, why has this arrangement held its own in the face of similar arrangements elsewhere experiencing problems? Or are we to see another currency crisis waiting to happen? The reason for the apparent success, it would seem, lies in two important but unrelated developments. The first is that the external or internal shocks hitting the Lesotho economy have so far been cancelling each other out in terms of their impact on the country's balance of payments position. The first real shock to hit the Lesotho economy occurred in the 1990s when the country's major source of foreign exchange - cash remittance by mineworkers from Lesotho working in the RSA - fell considerably. These cash remittances fell from 53% of Lesotho's imports in 1989 to 30% by 1998. This was mainly due to the fall in the number of mineworkers from Lesotho employed in the RSA from a peak of 127,000 to only 80,000 during the same period. One would have expected that such a huge decline in the country's prime foreign exchange earner would lead to huge payments imbalances. Luckily, during the same period, there was a major boom in capital inflows related to the construction of a series of dams and water transfer tunnels that was financed by the RSA. These capital inflows rose from a small 12% of imports to nearly 30% of imports by 1998. These capital inflows served to almost cancel out any fall in cash remittances by mineworkers. Had this not happened, a huge payments imbalance would have arisen and the exchange rate parity would probably have broken down.

The second contributory factor has been the fact that the rand itself has been depreciating in recent years, particularly against the US dollar. Between early 1998 and end-2001 the rand depreciated by around 60% against the US dollar. During the same period Lesotho's exports to the United States rose from 19% of total exports to 47%, evidently benefiting from, among other things, the depreciation of the rand (and hence the loti) against the dollar. It is doubtful whether Lesotho's exports would have made such major inroads into US markets if the currencies had not been depreciating rapidly. The export boom during this period has contributed to the maintenance of the parity between the loti and the rand. Had the rand been appreciating against the dollar, payment imbalances between Lesotho and the RSA would have emerged by now and the peg would have been difficult to sustain.

To be sure, sound macroeconomic (including fiscal) management has also contributed to the maintenance of the parity between the loti and the rand. Had macroeconomic management been imprudent during much of the 1990s, a large payment imbalance would have emerged. The rapid increase in long-term investment from abroad would have been barely sufficient to maintain the peg. The maintenance of budgetary surpluses by the government of Lesotho during much of the same period served to reinforce the positive effect of capital inflows.

4. Suggestions for the future

The foregoing analysis tends to suggest that although the macroeconomic management in Lesotho has been relatively sound, favourable global developments have been perhaps the biggest contributor to the success of the fixed exchange rate arrangement between the loti and the rand. The question that then arises is whether prudent fiscal management on its own, without the help of favourable global developments, can be enough to undo the damage caused by unfavourable shocks. Recent experience from Argentina tends to suggest that this may be an uphill battle. If this conclusion is valid, then it would seem that the future success of the arrangement cannot be guaranteed. To avoid the possibility of the parity breaking down, the authorities in Lesotho may wish to expedite the move to a currency union with the RSA. However, this would have to be accompanied by a liberalisation of labour markets between the two countries. The latter reform measure would ensure that restrictive monetary policy by the South African Reserve Bank, at a time when the Lesotho economy is in recession, does not lead to undue hardship for residents of Lesotho.

South Africa's experience of regional currency areas and the use of foreign currencies

Lambertus van Zyl[1]

1. Introduction

This paper focuses almost exclusively on South Africa's current and potential experience of regional currency areas in the Common Monetary Area (CMA) and the Southern African Development Community (SADC). There is no evidence that foreign currency is being used in any meaningful way inside South Africa. Thus no official and very little unofficial dollarisation has taken place in South Africa notwithstanding significant exchange control liberalisation in recent years. On the contrary, the South African rand is used extensively as legal tender in other countries comprising the CMA while anecdotal evidence points to the rand being accepted as payment in some other countries in SADC. However, no statistics are available to corroborate the extent to which the rand is used outside the CMA.

There are various regional integration initiatives involving the southern African region, each with its own programme of action. South Africa is not directly involved in all these initiatives. South Africa, for instance, is not a member of the Common Market for Eastern and Southern Africa or the Cross-border Initiative. However, as their objectives are focused on regional economic integration, they overlap with the objectives of regional initiatives to which South Africa actively subscribes, such as the recent decision by African heads of state on the creation of an African Union and a common monetary bloc as well as the Southern African Customs Union.

Of most relevance to this paper, however, is South Africa's membership of the CMA with Lesotho, Swaziland and Namibia. Some attention is also given to SADC. The Declaration and Treaty establishing the SADC in 1992 does not specifically refer to a regional currency area. Nonetheless, monetary integration may be one way in which economic integration could be furthered. This could culminate in the creation of a regional monetary union. While monetary integration in SADC may be regarded as a long-run objective, for reasons that will be explained, the importance of this initiative merits some attention.

2. The Common Monetary Area

Background

The present close monetary cooperation between South Africa, Lesotho, Namibia and Swaziland is based on the Multilateral Monetary Agreement (MMA) creating a common monetary area between these countries. This agreement has had a long historical development which started even before the Union of South Africa was formed in 1910. After the establishment of the South African Reserve Bank (SARB) in 1921, the South African pound became the sole circulating medium and legal tender in the geographical area that is today called the CMA, but including Bechuanaland (Botswana).

The advantages for the countries involved in this informal arrangement included stability of exchange rates, which helped to foster the high level of trade in the area. There were, however, significant drawbacks such as the lack of monetary policy discretion for the smaller countries and no formal

[1] The author thanks M Belle, A Bruce-Brand, W Brummerhoff, R Gidlow, S Kahn, E Masilela and J van den Heever for their assistance.

framework for consultation. The other member countries also did not share with South Africa in the seigniorage involved.

After protracted negotiations, a formal monetary agreement was signed in December 1974 between South Africa, Swaziland and Lesotho, known as the Rand Monetary Area agreement, and the rand remained legal tender in all these countries. At that time, Botswana decided not to join the formalised arrangements, opting instead to pursue an independent monetary stance with its own national currency and central bank. The Common Monetary Area (CMA) replaced the Rand Monetary Area in July 1986 under the terms of a Trilateral Monetary Area Agreement between the three countries accommodating changes in the position of Swaziland. This trilateral agreement was replaced by the present MMA in February 1992, when Namibia formally joined the CMA, of which it had been a de facto member from the beginning.

The objectives of the Multilateral Monetary Agreement

Besides describing the monetary arrangements in the CMA, the main objectives of the MMA can be summarised as the sustained economic development of the CMA with special emphasis on the advancement of the less developed member states and the acquisition of equitable benefits for all members. It is particularly interesting to note that the MMA recognises that each of the contracting parties is responsible for its own monetary policy and the control of its financial institutions.

The salient features of the Common Monetary Area

Some of the major features of the CMA are the following:

- All four member countries have their own central banks and are responsible for monetary policy. While some deviations in interest rates and inflation rates are possible, however, the SARB effectively formulates monetary policy for the CMA. The other members consequently also indirectly adhere to an inflation targeting monetary policy framework owing to South Africa's adoption of inflation targeting in 2000.
- The monetary arrangements explicitly provide for consultation. The contracting parties hold regular consultations to facilitate and ensure continued compliance with the MMA and reconcile different interests in the formulation and implementation of monetary and foreign exchange policies for the CMA. For this purpose, and any matter arising from the MMA, a Common Monetary Area Commission was established consisting of a representative and some advisers from each member country. Prior to meetings of the SARB's Monetary Policy Committee, senior research officials from the four countries meet to exchange economic information.
- There are no restrictions on the transfer of funds, whether for current or for capital purposes, between the areas of the contracting parties. The free movement of capital within the CMA is potentially one of the major benefits that the smaller states can derive from membership. It means that there is no restriction on cross-border investments from South Africa and so contributes to economic development and economic integration.
- All four members of the CMA (as well as Botswana) belong to the Southern African Customs Union. As a consequence, capital and goods are highly mobile across the CMA region. This is less true for labour mobility, as normal immigration procedures and requirements are in place among the CMA members.
- As Lesotho, Namibia and Swaziland depend heavily on trade with South Africa, a major benefit from the CMA arrangements is the fixed and predictable exchange rate with the rand.
- The South African rand serves as legal tender that is widely used and accepted in the participating countries. Under the terms of the MMA, the other member states are entitled to issue their own national currency and all three countries have made use of this provision. These currencies serve as legal tender only in the issuing country.
- The currencies of these countries have been pegged to the South African rand at par since their introduction and their banknotes are freely convertible into rand but are not legal tender in South Africa. Swaziland cancelled the legal requirement of a 1:1 linkage between the rand and the lilangeni in 1986. In practice, this link has, however, been maintained. Since 1986, the rand has also not been de jure legal tender in Swaziland.

- Although Namibia and Lesotho issue their own currencies, these issues have to be fully backed by prescribed rand assets. This is currently not true for Swaziland.
- Under the MMA, the government of South Africa must make compensatory payments to the other contracting parties. These payments represent an imputed return on the rand currency estimated to be circulating as legal tender in their areas. As Swaziland suspended the use of rand as legal tender in 1986, it has since not been entitled to any payment under this arrangement. Thus in accordance with the objectives of the MMA, Namibia and Lesotho also share in seigniorage to the extent that the rand is used as legal tender in their territories.
- As is evident from the features discussed above, the MMA is characterised by flexibility to accommodate the changing needs of the contracting parties. Various bilateral agreements have been entered into over time, mostly between South Africa and one of the other member states, to provide for greater autonomy for the other countries within the framework of continued monetary cooperation in the region. The coexistence of bilateral and multilateral arrangements is an important aspect of the CMA.
- Owing to the parity maintained against the rand by currencies of other contracting parties, all countries in the CMA have the same exchange rate against outside currencies. The small CMA members, with the exception of Swaziland, do not have the option of changing their exchange rates to attain or maintain external competitiveness.
- The contracting parties to a large extent share a common pool of foreign exchange reserves under the control of the SARB and, to an increasing extent, under the control of the South African authorised dealers in foreign exchange (banks). The central banks and authorised dealers in foreign exchange in the member countries have access to the foreign exchange market in South Africa. Under the MMA, the SARB will on request make the required foreign exchange available.
- The system of exchange control in force in South Africa, as amended from time to time, is in all material aspects substantially in agreement with measures applied by the other three member states relative to non-CMA countries. The contracting parties are obliged to enter into consultation on related matters, particularly where control provisions of another contracting party are evaded.
- Institutions in the public and private sector in Lesotho, Namibia and Swaziland, subject to relevant financial laws and policies applicable to counterparts in South Africa, have the right of access to the South African capital and money markets.
- The member countries will permit, through normal clearing systems, the repatriation of notes and coin issued by them which may circulate in another CMA country.
- A feature of the CMA, which is obviously not encapsulated in the MMA, is that the economies of Namibia, Lesotho and Swaziland are small in comparison to that of South Africa. These three countries combined produce less than 4% of the total GDP of the CMA region. At the same time, their financial systems lack the high level of sophistication of the South African financial system.
- The data in Table 1 indicate considerable macroeconomic convergence among the four members of the CMA. In the case of inflation, some of the differences that do occur can be explained by different weights in the indices used.

Some issues relevant to the Common Monetary Area

From the preceding summary of the history and salient features of the CMA, a few important issues can be discerned:

- The CMA arrangements have developed over many years and the MMA is a formalisation of a de facto situation. As has been explained, the monetary arrangements have been flexible enough to allow one member, Swaziland, to change its relationship with the CMA. It should in principle be possible for Swaziland to fully participate again, should it so wish. For a new country without the shared history, however, to join the CMA would be a more complicated process.

- The CMA is to a large extent dominated by South Africa owing to the size of its economy and its sophisticated financial system. Nonetheless, the national sovereignty of the other member states has been respected by their having their own central banks and currencies. Should the CMA be expanded, however, by allowing other countries to join, it remains to be seen whether the extensive consultation inherent in the CMA arrangements will remain adequate. Any new member country might want to have a more direct input into monetary policy for the region.
- While the smaller member states derive significant benefits from the current arrangements, it should be acknowledged that the South African rand has been very volatile in the international currency markets for a number of years. The smaller member states have automatically been exposed to this volatility, although a large proportion of their foreign trade is with South Africa and is therefore isolated from such volatility.

Table 1

Statistics on SADC countries (2001)

	Real GDP[1]	Inflation[2]	Bank rate[3]	Government budget balance[4]	Monetary growth[5]	Current account balance[6]
Angola	5.2	116.1	150.0	–6.7[7]	159.0	–571
Botswana	9.6	6.6	14.3	8.8	22.4	440
Dem Rep of Congo[8]	–4.4	135.1	120.0[7]			–205
Lesotho	3.3[7]	6.9	15.0[7]	–2.2	14.0	–57
Malawi	1.8	27.5	46.8	–4.9[9]		–257[7]
Mauritius	6.3	5.4	10.5	–6.5[7]		–46[7]
Mozambique	1.5[7]	21.9	9.9	–1.1[9]	29.7	–586
Namibia	3.3[7]	9.3[7]	9.3	–5.3		50
Seychelles	2.9[9]	6.0	5.5	–9.9[7]		–52[7]
South Africa	2.2	5.7	9.5	–1.1	16.7	–196
Swaziland	2.2[7]	7.5	9.5	–1.5		45[7]
Tanzania	5.6	5.1	8.7	–0.1[9]	17.7	–414
Zambia	3.5[7]	25.9[7]	44.0[7]	–2.4[7]	67.5[7]	–578[7]
Zimbabwe	–6.8[7]	71.9	57.2	–21.8[7]		–201

[1] Annual percentage change. [2] Annual percentage change in CPI. [3] End-year. [4] As a percentage to GDP. [5] Annual percentage change in M3. [6] In millions of US dollars. [7] 2000. [8] Formerly Zaire. [9] 1999.

3. The Southern African Development Community

General overview

As was mentioned at the outset, creating a regional currency is not one of the immediate objectives of the SADC. Over time, however, it is to be expected that more attention will be given to the possibility of pursuing monetary integration. This will have implications for the CMA arrangements and consequently some discussion of the SADC seems warranted.

The SADC was founded in August 1992 as a successor to the former Southern African Development Co-ordination Conference that had been established in April 1980 to enhance coordination of development programmes and projects of member states with a view to reducing their economic dependence on South Africa. The SADC aims to achieve development and economic growth through

regional economic integration. This objective is to be achieved by harmonising and coordinating the economic policies of member states and by creating appropriate regional institutions.

South Africa joined the SADC in 1994, and the following countries are currently members: Angola, Botswana, the Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, the Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

Each member state accepts responsibility for the management and development of a specific economic sector. The Heads of State of the SADC countries are the main policy decision-making body. In addition, a Council of Ministers meets regularly to review progress.

In 1995, a separate Finance and Investment Sector was created and allocated to South Africa. The Committee of Central Bank Governors in the SADC was also established in 1995. It reports to the Sectoral Committee of Ministers of Finance and deals with the development of well managed financial institutions and markets, cooperation regarding international and regional financial relations, and monetary, investment and foreign exchange policies.

Objectives such as promoting regional macroeconomic stability and prudent fiscal and monetary policies are important to the financial sector. The Committee of Central Bank Governors has adopted its own terms of reference and developed a number of initiatives and work programmes to be pursued. It was accepted from the outset that sound financial structures and markets were to be developed in each of the member states before the more challenging issues of macroeconomic development or financial integration could be addressed. Some of the projects and initiatives identified by the committee to pursue its objectives are:

- a statistical database containing comparable economic and financial statistics;
- a databank including detailed information on structures, polices and markets;
- solving possible problems relevant to the repatriation of banknotes and coins among SADC countries;
- development of national payment, clearing and settlement systems in SADC countries;
- monitoring of the required process of removing remaining exchange controls in SADC;
- coordination of training of central bank officials;
- implementation of compatible information technology systems;
- pursuing comparability in legal and operation frameworks of SADC central banks;
- harmonising of banking supervisory practices;
- closer cooperation between stock exchanges in the region;
- striving for uniformity of banking legislation and practices with the help of the SADC Banking Association; and
- a research study on the development of money markets in the SADC.

Some issues relevant to the SADC

Against the background of this rather brief overview, a few issues relevant to the SADC and relating to the topic of this volume stand out:

- The data in Table 1 provide clear evidence that macroeconomic convergence in the SADC still has a long way to go. Reference to just one indicator of stability, inflation, should suffice to show that the prospects of a regional currency area encompassing all countries in the SADC in the next few years are remote. Notwithstanding serious efforts on various fronts by the member states, much macroeconomic convergence needs to occur before monetary cooperation for the region can progress significantly.
- The economy of the SADC region is also characterised by the preponderance of South Africa. It should be mentioned, however, that while South Africa is responsible for some 65% of the GDP of SADC, Botswana, Mauritius and the Seychelles have a higher GDP per capita.

- In comparison to the other members of the SADC, South Africa has a highly developed financial system.

4. Conclusion

While stronger monetary cooperation within the SADC will be a slow process, this integration initiative will eventually create a major challenge for the CMA. It remains to be seen whether the CMA has a pivotal role to play in the larger SADC initiative. Monetary cooperation in the SADC could eventually entail an entirely different framework or it could come about by extension of the CMA arrangements to include more SADC countries as and when they are willing and able to join.

Expanding the membership of the CMA would be more complicated than in the past, because new members would not share the history of the South African currency being legal tender. The CMA arrangements have, however, in the past proved to be very flexible and this could be a big advantage.

Regional currency areas and use of foreign currencies: the experience of West Africa

Michael Ojo

1. Introduction

In order to foster close economic interaction among the countries of West Africa, the Economic Community of West African States (ECOWAS) was established in 1975. ECOWAS pursued the objective of economic integration in the subregion vigorously but intraregional trade could not be stimulated. As a result, the West African Clearing House (WACH) was established to provide a multilateral clearing mechanism for trade within the subregion. Under this arrangement the use of foreign exchange was to be curtailed through the application of an artificial currency unit, the West African Unit of Account (WAUA).

The objective of this paper is to review developments in monetary cooperation in West Africa and highlight current initiatives aimed at facilitating the monetary cooperation programme of the subregion. The rest of the paper is organised into five parts. Multilateral clearing and payment arrangements in ECOWAS are discussed in Section 2, while the ECOWAS Monetary Cooperation Programme (EMCP) is the subject of Section 3. Progress of the EMCP is examined in Section 4, while the framework for a monetary union in the West African Monetary Zone (WAMZ) is presented in Section 5. Some concluding remarks are given in Section 6.

2. Multilateral clearing and payments arrangements in ECOWAS

As a means of providing a firm basis for monetary cooperation in ECOWAS and improving intraregional trade, the West African Clearing House (WACH) was established in 1975. The objectives of the WACH, which commenced operations in July 1976, were to promote the use of the currencies of member countries in subregional trade and to encourage the members of the Clearing House to liberalise trade and promote monetary and economic consultation among themselves. In the drive to simplify further the process of undertaking and measuring transactions under the WAUA was introduced. The WAUA is linked to the special drawing right of the International Monetary Fund. The WAUA is the benchmark for determining the relative strength of the currencies in the WACH payment and clearing mechanism. The smooth functioning of the WACH was contingent on the undertaking by member countries to generate unrestricted conversion of their national currencies into the WAUA for eligible transactions. This undertaking was intended to eliminate the problem of currency inconvertibility in the subregion, a phenomenon that had hindered intraregional trade and made the use for foreign exchange a primary means of settlement in the subregion.

In order to strengthen the multilateral settlement and clearing system in ECOWAS, make the subregional payment system more efficient, and eventually pave the way for the emergence of a single monetary zone in the subregion, the WACH was transformed into the West African Monetary Agency (WAMA) in 1996. Other factors that necessitated the establishment of the Agency were the operational inadequacies of the WACH, which hindered the attainment of the objectives agreed at its establishment after more than two decades. Moreover, the WACH mechanism was not very effective. The factors which constrained its performance included delays in crediting exporters' accounts owing to cumbersome documentation requirements by central banks; the absence of a short-term financing facility; the absence of trade promotion instruments like bills of exchange, traveller's cheques, etc. The most dismal aspect of the WACH's performance was its inability to promote the use of national currencies in intraregional trade.

Other schemes that were put in place to support monetary cooperation in the subregion included the ECOWAS exchange rate mechanism, designed to facilitate the achievement of a single monetary zone, ECOWAS traveller's cheques and a credit guarantee fund scheme. The exchange rate mechanism was to be implemented by the Monetary Agency. In order to ensure rapid regional

monetary cooperation, central banks in the subregion were expected to: ensure timely implementation of stipulated convergence criteria (market-determined exchange and interest rates and single digit inflation); remove all non-tariff barriers of a monetary nature; establish a credit guarantee fund and introduce ECOWAS traveller's cheques for transactions; develop an integrated regional capital market; resolve the settlement arrears in the clearing system and promote currency convertibility in the subregion. But these objectives have not been realised.

3. ECOWAS Monetary Cooperation Programme

To facilitate the establishment of a single monetary zone in ECOWAS, a viable monetary union was to be nurtured under the auspices of the ECOWAS Monetary Cooperation Programme (EMCP). The EMCP was adopted in 1987, with the general objective of a harmonised monetary system and the strengthening of the economies of member states in the process. The introduction and implementation of a set of convergence criteria was expected to pave the way for a system of exchange rate management that would culminate in the establishment of a single monetary zone and a common central bank that would implement the common monetary policy of the subregion.

Thus, under the EMCP, the West African Clearing House was to be transformed into a specialised monetary agency of ECOWAS to improve its payment mechanism and enhance intraregional trade. The achievement of regional currency convertibility is the intermediate objective of the EMCP, while the ultimate objective is the establishment of a single monetary zone for ECOWAS. A common convertible currency would subsequently be managed by a common central bank that would be the sole monetary authority in the subregion. In order to achieve these objectives, a number of measures were to be implemented. These included exchange rate realignment and harmonisation; adoption of an ECOWAS exchange rate mechanism; liberalisation of exchange controls and maintenance of fiscal discipline; and adoption of a market-oriented approach to monetary management. In specific terms, a set of primary and secondary convergence criteria was to be satisfied by member countries before they could join the monetary union. The primary convergence criteria are the maintenance of exchange rate variability between 5 and 10%; single digit inflation; budget deficit to GDP ratio of 3-5%; and a ceiling of 5-10% of the previous year's tax revenue on central bank financing of budget deficits.

The EMCP had suffered from a number of problems, which delayed its consistent implementation. The major problems were the inability of member countries to adopt the desired policy frameworks that would lead to convergence, owing to inadequate political commitment to the EMCP; and the different stages of monetary harmonisation marked by the realities of the existence of the CFA franc zone group of eight countries. As a result the target date for the single monetary zone was shifted three times from 1992 to 1994, 2000 and 2004.

The target date for the realisation of ECOWAS Single Monetary Zone was once more shifted in January 2003 at the 26th Session of the Authority of Heads of State and Government of ECOWAS, in Dakar, Senegal. The exact date for launching the ECOWAS Single Monetary Zone would be determined in December 2005 at the Summit of the Authority of Heads of State and Government. At the Summit, the Heads of State and Government would review the progress made in the Second Monetary Zone and thereafter set a target date for ECOWAS Single Monetary Zone. The Heads of State and Government emphasised the need to enhance the convergence process through appropriate macroeconomic policies by the member states to build up the credibility of the proposed ECOWAS Single Monetary Zone, and ensure that its foundation was strong and would be enduring. In this regard, they urged member states to intensify efforts at meeting the convergence criteria, guided by the principles of good governance, through public finance reforms and the introduction of the appropriate structural reforms needed for the expansion of domestic production.

4. Accelerating the ECOWAS Monetary Cooperation Programme

In December 1999, the heads of state and government adopted a revised set of macroeconomic convergence criteria in furtherance of the objective of monetary integration. Member countries were urged to apply the necessary measures to ensure compliance before the 2004 target date for the establishment of a single monetary zone for the subregion, to the effect that any group of countries could implement the agreed policy measures under the EMCP at a faster pace without waiting for

everyone to be ready. The aim was to accelerate the pace of monetary integration. A comparable monetary zone to the existing WAEMU was to be created to push the process. It was also considered unfair to arrange a merger between an organised zone that is working and an unorganised coalition of countries.

On the basis of the Lomé Agreement of December 1999, Nigeria and Ghana entered into a bilateral strategic cooperation arrangement at a meeting held in Accra, Ghana in December 1999. The initiative referred to as the "fast track approach" to integration was meant to quicken the pace of integration of the two economies through cooperation in four critical areas: creation of a second monetary zone; free trade and borderless zone in the subregion; development of common infrastructures; and promotion of private sector participation in the integration process. The rationale behind a second monetary zone is that it would be easier to merge the two currencies of WAEMU and WAMZ than the present eight currencies existing in the subregion.

The West African Monetary Institute (WAMI), which commenced operations in Accra in March 2001, is to prepare the member countries for monetary union. In the process, it is to undertake technical preparations for the establishment of a common central bank and the introduction of a common currency. This entails monitoring macroeconomic performance and movement towards convergence of member countries, harmonisation of laws governing financial institutions in the member countries, sensitisation of the stakeholders of the WAMZ and analysis of the technical issues relating to: the design of an exchange rate mechanism; the design of a foreign exchange reserve management system; the design of a payment system; the design of and technical preparation for the introduction of a common currency; and the establishment of the common central bank as well as prescription of modalities for operating the Stabilisation and Cooperation Fund.

5. Framework of the monetary union

Preparation for monetary union has been tackled through the design of the policy and institutional frameworks and surveillance of member countries' economies to assess the state of macroeconomic convergence. The design of the relevant policy frameworks has progressed as scheduled. WAMI has been able to put in place the building blocks of monetary union through its comprehensive work programme. During the first 15 months of its operations, WAMI has designed the following major policy frameworks, which the relevant authorities of the WAMZ have adopted.

Monetary policy frameworks

The objective of monetary policy for the proposed common central bank, the West African Central Bank (WACB), would be price stability. As a result of the underdeveloped nature of the money markets and enormous data problems, the Bank would initially apply the traditional monetary targeting approach, with focus on control of reserve money. In the intervening period the necessary infrastructure would be developed to enable the process to move eventually to an inflation-targeting framework. Thus, an implicit inflation target would be the aim of policy in the short term while in the medium to long term, an explicit inflation-targeting regime would be applied.

Reserve management by the WACB would focus on the need for liquidity, safety and income in that order so that enough resources would be available to the Bank to intervene in the foreign exchange market to stabilise the exchange rate of the common currency and prevent it from appreciating in real terms. External reserves to be managed by the WACB would be pooled from member countries. The Bank would be required to undertake optimal selection of assets in a portfolio so that within a risk-return model, overall yield would be positive and contagion losses avoided.

A ***supervisory institution***, to be known as the West African Financial Supervisory Agency would undertake banking and financial supervision in the WAMZ. However, an evolutionary approach would be adopted before the externalised model of banking supervision is adopted, at which period the agency would be established. The current system of banking supervision, warehoused in the central bank would be retained and would evolve to pave the way for the new agency.

The ***payments system*** for the WAMZ has two components, the development of national payment systems and multilateral (cross-border) payments among the member countries of the WAMZ. In order to improve the payment system, a real-time gross settlement system has been recommended for

adoption by member countries. In addition, telecommunications infrastructure would be upgraded. National and zonal payment committees have been established to address the problems of the payment systems in the various countries and bring them to the same standard.

In order to establish a regime of stable exchange rates and provide adequate support to efforts at macroeconomic adjustment, an ***exchange rate mechanism*** was put in place in April 2002. The ERM has an initial fluctuation band of ±15%. Market exchange rates are applied, while the reference currency is the dollar. The dollar was chosen because it is the currency of denomination for external transactions by member countries and their external reserves are also held in dollars. The ERM would be the basis for the WAMZ unit of account, which would be the numeraire for valuing transactions in the WAMZ. Its external value would be determined in terms of the dollar.

Central to the operations of the ***West African Central Bank*** (WACB), the future common central bank of the WAMZ, is pursuit of the objective of price stability, issuance of a common legal tender currency that would circulate throughout the zone and be well managed so as not to lose competitiveness. The currency would be backed by strong economic fundamentals once the convergence process is sustained and fiscal rules are applied to stem the phenomenon of fiscal dominance. Above all, monetary policy would be the sole responsibility of the WACB.

The WAMZ envisages the introduction of a ***regional currency*** to be legal tender in all member countries. This currency would be issued by the WACB or the common central bank that may evolve from the EMCP. The idea at the moment is to agree on a common name for the ECOWAS single currency. This would involve negotiation with the BCEAO/CFA franc zone in West Africa. As a result, the WAMZ may adopt a virtual currency model in the interim. The common currency idea was intended to eliminate the use of foreign exchange in intraregional trade. The use of foreign exchange for transactions outside the banking system is limited to the WAMZ. The practice is not widespread, although speculators hold foreign exchange to hedge against inflation. The currency board arrangement was not contemplated for the WAMZ because it falls short of the desired monetary union envisaged for the WAMZ. Furthermore, the discipline required in a currency board arrangement may be difficult to attain in the WAMZ at the moment. The 100% backing for money base would constrain economic growth and development and the member countries do not have enough foreign exchange to meet a wide range of national objectives. The scarcity of foreign exchange, the need to finance priority projects and make room for some growth makes the currency board option unrealistic for the WAMZ.

Progress towards convergence

The progress towards macroeconomic convergence has not been encouraging in the WAMZ. The member countries have failed to meet the prescribed macroeconomic convergence criteria. The assessment of compliance with the convergence criteria at the end of 2001 showed that two countries met three of the criteria, while two countries satisfied two criteria and one satisfied only one criterion. Although member countries have made efforts, there is need to do more if the process of convergence is to show sustained improvement. As a result of the status of convergence, which is not encouraging, movement to monetary union cannot be sustained. Since meeting the convergence criteria is a necessary condition for monetary union, all the stakeholders must show commitment to applying the right policy measures to achieve convergence so that the building blocks that have been prepared by WAMI can be implemented in a not too distant period.

6. Concluding remarks

With the existence of political will and the continuous application of structural adjustment and market-friendly policies, it is expected that member countries of the WAMZ will move gradually towards convergence in both policy areas and in the context of the quantitative convergence criteria. The consciousness that the subregional groups in Africa should be organised into functional monetary unions has been heightened by recent trends in globalisation and regionalism, the quest for African Union and the New Partnership for Africa's Development initiative. The subregional groups in Africa are to serve as the building blocks for the African Monetary Union. This and the new initiatives to develop Africa are contingent on sound macroeconomic fundamentals that should be nurtured at the subregional level.

Indeed, the African Monetary Cooperation Programme to be realised in 2016 is predicated on subregional monetary cooperation. In this context, the WAMZ and WAEMU, and indeed the ECOWAS Monetary Cooperation Programme if successfully implemented, would provide an impetus for monetary cooperation at the continental level. The initiative of the African Central Bank, a laudable long-term objective, can only be realised through monetary cooperation at the subregional level.

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Regional currency areas: lessons from the West African sub-region and Nigeria's policy stance

Ernest Ebi[1]

1. Introduction

Regional economic integration, simply defined, is an agreement among contiguous nations to allow for the free flow of ideas, investment funds, technology, goods and services, and free movement of persons within the region in which a single large market subsists with the benefits of comparative advantage and economies of scale. Regional economic cooperation has gained momentum partly as a strategy to cope with global economic problems and partly to enhance domestic economic growth and development. As many countries are not strong enough on their own to cope with the rapid changes in the global economy, groups of countries use regional integration to achieve the necessary conditions for sustainable growth and development.

The major potential cost of economic integration is the uneven sharing of gains from the integration process, but compensation schemes are usually designed to equalise the gains over time. Other costs include loss of discretionary use of macroeconomic policy instruments for stabilisation purposes by individual members of the union and a partial loss of sovereignty. In the case of Nigeria, macroeconomic policy is tailored to accommodate the sub-regional objectives of regional integration and the introduction of a single currency while considering national interests vis-à-vis the convergence criteria.

Monetary integration as a major policy in the economic integration process usually involves the establishment of convergence criteria, a common central bank, a unified monetary policy, and a single currency (or at least a mechanism by which all the national currencies of the group are made convertible to each other).

The objective of this paper is to discuss the experience of regional integration efforts in the West African sub-region and Nigeria's policy approach. Section 2 discusses international experience in monetary integration while Section 3 presents regional integration efforts in West Africa, focusing on the planned second monetary zone of the Economic Community of West African States (ECOWAS). Section 4 highlights Nigeria's monetary and financial policies towards achieving the agreed convergence criteria. The paper ends with some concluding remarks.

2. International experience in monetary integration

In the past, several monetary unions have been formed and while some were successful, others failed. Currently, the euro area is the most well known monetary union. This area, comprising Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain, evolved over a long period, from 1957 when it was only a customs union. With the direction provided by the Treaty of Rome, the union progressed with the formation of the European monetary system and an exchange rate mechanism in 1979. It was strengthened with the signing of the Maastricht Treaty in 1992, which mandated member countries to comply with a number of convergence criteria in order to enhance macroeconomic stability.[2]

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[1] Deputy Governor, Central Bank of Nigeria.

[2] See the paper by Strauss-Kahn in this volume, and in particular the chronology on page 55, for further information.

3. Regional integration in West Africa

There are two prominent monetary unions in Africa. The West African CFA zone, known as WAEMU, comprises Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo. WAEMU and the Central African CFA zone, known as CAEMC, comprises Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, and the Republic of the Congo. They operate almost identically. They were established by France and survived after independence, unlike their counterpart in the anglophone countries, which was broken up after the independence of the members.

The WAEMU and CAEMC countries each use a single currency (a variant of the CFA franc) and have a common central bank, Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO) and Banque des Etats de l'Afrique Centrale (BEAC), respectively. The CFA franc was pegged to the French franc prior to 1999 and is now pegged to the euro. WAEMU has a common pool of reserves which under an agreement are kept with and managed by the French Treasury. WAEMU is required to hold external assets at least equal to 20% of its sight deposits. Policy actions are required if that threshold is not being met. A regional council of ministers and the BCEAO decide on monetary targets based on input from national monetary authorities. Monetary financing of governments is limited to 20% of the previous year's budgetary revenues while both current and capital account convertibility is operated in principle but with occasional restrictions. Capital mobility is low in practice.

The Economic Community of West African States (ECOWAS)

ECOWAS was founded in 1975 by all the West African countries, and includes both the francophone (WAEMU) countries, the anglophone countries (the Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone) and Portuguese-speaking Cape Verde. The ECOWAS Monetary Cooperation Programme (EMCP) is the most prominent scheme for monetary integration in the west African sub-region. It was originally scheduled for between 1991 and 1994, but was extended to the year 2000. It was further extended in December 1999 to 2004.

The specific objectives of the EMCP were to be implemented in three phases. In the short term, the aim was to strengthen the existing payment mechanism of the West African Clearing House through the settlement of outstanding payment arrears in the clearing mechanism; introducing new payment instruments such as the traveller's cheque; introducing a credit guarantee fund facility to support the clearing mechanism; and removing all non-tariff barriers that tend to restrict the use of national currencies to effect payments for some current transactions such as hotel bills and air tickets.

In the medium term, the EMCP was expected to achieve limited regional convertibility of national currencies by removing existing restrictions on their use. In the long run however, the ultimate goal of the EMCP is the establishment of a single ECOWAS monetary area involving the use of a common convertible currency, the establishment of a common central bank, the pooling of foreign exchange reserves and the negotiation of an external convertibility guarantee with an appropriate international agency. To facilitate these objectives, member states were to embark on an economic policy reform programme to achieve macroeconomic convergence. The policy reform programme was to embrace:

- realignment of exchange rates and the adoption of a market-based exchange rate policy;
- removal of exchange control regimes; and
- minimising of fiscal deficits and their financing through the rationalisation of government expenditure and tax reform.

The short-term objectives of the EMCP have not been fully achieved, as exemplified by the failure to clear the arrears in the clearing house mechanism, the delay in introducing new payment instruments, the problems with the newly introduced ECOWAS traveller's cheques and the unwillingness of members to remove non-tariff barriers to intraregional trade and other transactions. The medium- to long-term objectives of the EMCP have also not been fully attained, leading to the deferral of the establishment of the single monetary zone.

Achieving the ECOWAS single monetary zone: the second monetary zone option

The failure of the ECOWAS integration process to make significant progress since its inception in 1975 was one of the motivating factors behind the "fast track" approach to monetary integration in the

sub-region. It was generally felt that the non-existence of parallel and competing monetary arrangements in the sub-region had been a major factor militating against the movement towards a single monetary zone.

On the one hand, the CFA zone has appeared to be a solid arrangement, especially with the backing of France and the European Union. On the other hand, the countries outside the CFA zone have different national currencies. The challenge of accelerated integration in the sub-region has therefore fallen more on these latter countries. Consequently, the political commitment to renewed economic cooperation spearheaded by Ghana and Nigeria since December 1999, and accepted by Guinea, the Gambia, Sierra Leone and Liberia, made the idea of the fast track approach to integration a feasible proposition. The idea has crystallised into the formation of the West African Monetary Zone (WAMZ) with the aim of merging it with the CFA zone in 2004.

At a mini-summit of heads of state and government of member countries in Bamako in late 2000, the critical decisions were adopted with the intention to formally establish the West African Monetary Zone, with a common central bank, and to introduce a single currency in the zone by 2003. The West African Monetary Institute (WAMI), domiciled in Accra, Ghana, was set up as an institutional vehicle to establish the WAMZ and make necessary preparations for the emergence of the common central bank and the introduction of a single currency as planned. It became operational in January 2001.

Some recent decisions on the West African Monetary Zone

At the meeting of the Convergence Council of Ministers and Central Bank Governors of the WAMZ in Accra, Ghana, on 20 June 2002, the following decisions/recommendations were made to move the WAMZ project forward:

- A strong West African central bank system should be established with authority to undertake monetary policy for the Zone.
- The foreign exchange reserves and liabilities of the member countries of the WAMZ should be fully pooled to back the common currency of the WAMZ when it is introduced.
- Member countries should take steps to accede to the IMF General Data Dissemination Standard to harmonise statistical data and methodologies.
- As the criterion on central bank financing of government budget deficits is critical, with implications for fiscal discipline and the conduct of monetary policy of the WAMZ, WAMI should conclude its study on the subject for consideration at its next meeting.
- As the movement in exchange rates is an indication of economic fundamentals and the performance of an economy, WAMI should undertake a study on the exchange rate parities existing among the member countries' currencies, to determine if they could guarantee competitiveness of the component economies of the WAMZ.
- When a review of the WAMZ exchange rate mechanism band is undertaken (after it has been operating for six months), a narrower band should be prescribed to provide the required discipline. All member countries that have not formally written to WAMI on the adoption of the exchange rate mechanism should do so without further delay.
- Member countries that have not paid their contributions to the Stabilisation and Cooperation Fund should do so by the end of June 2002.
- All member countries should redouble their efforts in sensitising the various interest groups to the WAMZ programme, as this is critical to the success of the WAMZ project.
- The earlier decision on ECO as the name of WAMZ common currency was reiterated. This is without prejudice to the ongoing efforts on the name of a common currency for ECOWAS.
- The option of a single central bank for the WAMZ, with the present central banks becoming branches, was reaffirmed. It was noted that the Governors would closely study the draft amendment to the Statute of the WACB for discussion at its next meeting.

- The country that would be eventually selected by political considerations to host the headquarters of the WACB (Ghana, Nigeria and Guinea have applied) was urged to be committed to implementing open sky policy as defined in the Yamoussoukro Agreement.

Rationale for the West African Monetary Zone

The need for the second monetary union arose largely as a result of inadequate political will to forge a strong monetary integration between the CFA zone and the non-CFA zone under the aegis of the EMCP. The emergence of the WAMZ as a successful monetary union is thus likely to prevent a total collapse of the EMCP. It may indeed facilitate the movement towards a single monetary zone in the sub-region since negotiations will take place between two groups of countries in contrast to the current situation characterised by uncertainties about the integration process of the sub-region. Even if the eventual merger of the two monetary zones takes more time to materialise than presently envisaged, the convergence of the two groups of countries will be less cumbersome than the convergence of many countries with various currencies.

The primary economic policy objectives of WAMZ are to ensure price stability, sound fiscal and monetary conditions and a sustainable balance of payments in the member states. To this end, the WAMZ is enjoined to adopt a regional economic policy for the zone through effective coordination of member states' economic policies, conduct the regional economic policy in the context of an open market economy and specifically design and implement common monetary and exchange rate policies in the zone.

The WAMZ is also to put into force a multilateral surveillance system to ensure close coordination of member states' economic policies and sustained convergence of economic indicators of member states. To undertake this function, the key institutions of the WAMZ - the Convergence Council, Technical Committee, WAMI and the West African Central Bank - are to formulate broad guidelines for the design of economic policies of member states.

Macroeconomic convergence criteria of the West African Monetary Zone

It is planned that the WAMZ would merge with the CFA zone in January 2004 in accordance with the EMCP, thus creating the long-awaited single monetary zone in the sub-region.

However, before this goal is realised, the member states of the WAMZ are to comply with some convergence criteria, which will ensure macroeconomic stability and reasonable growth in the member states. The quantitative primary convergence criteria are:

- single digit inflation rate by 2000 and 5% by 2003;
- budget deficit (excluding grants) of not more than 5% of GDP by 2000 and 4% by 2002;
- central bank financing of budget deficit to be limited to 10% of previous year's tax revenue; and
- gross external reserves to cover at least three months of imports by end-2000 and six months by end-2003.

In addition, there are six secondary criteria, which will be observed in support of the primary criteria. These are:

- prohibition of new domestic debt arrears and liquidation of all existing arrears;
- tax revenue to be more than 20% of GDP;
- wage bill to be less than 35% of total tax revenue;
- public investment to be more than 20% of tax revenue;
- maintenance of real exchange rate stability in the context of an exchange rate mechanism; and
- maintenance of positive real interest rates.

4. Nigeria's policy for fulfilling the convergence criteria

The Central Bank of Nigeria, with effect from the 2002 fiscal year, adopted a medium-term monetary policy framework. Unlike earlier programmes, which were designed for one year, the new programme is for a two-year period, from January 2002 to December 2003. The shift is in recognition of the fact that monetary policy actions affect the ultimate objectives of policy with a substantial lag. Thus, the current shift will free monetary policy implementation from the problem of time inconsistency and minimise overreaction to temporary shocks.

The primary objective of monetary policy in 2002-03 is the achievement of price and exchange rate stability. Specifically, monetary policy shall seek to subdue inflation to a single digit figure over the two-year period. Consequently, the central focus includes the effective control of anticipated liquidity injections that may arise from excessive government spending during the pre-election years of 2002-03 in order to minimise their negative effects on domestic prices and the exchange rate.

The stance of the Bank's monetary policy is non-accommodating, while a more competitive financial environment is being fostered to enhance greater access to credit for the real sector. Furthermore, continued effort is being made to improve the payment system to strengthen further the effectiveness of monetary policy. The broad measure of money supply (M2) shall continue to be the intermediate target of monetary policy with an average growth rate of 15.2% during the two-year period. This translates to 15.3% in 2002 and 15.0% in 2003.

To achieve the objectives of its monetary policy, the Central Bank of Nigeria has continued to rely on market-based techniques in the management of the Bank's balance sheet. The primary instrument of policy will continue to be open market operations, supported by reserve requirements and discount window operations for enhanced effectiveness. Other policy instruments include the cash reserve requirement, the liquidity ratio, the discount window and the use of the Bank's certificates to mop up excess liquidity in the system.

Other policy issues of interest to Nigeria include the interest rate, remittance of value added tax and duty collections. In addition to these, other factors are the determination of banks' cost of funds and supporting poverty reduction initiatives of the government by ensuring adequate credit to the productive sectors, encouraging financial savings and private sector investment growth and improving the financial market environment.

To fulfil the convergence criteria of the WAMZ, macroeconomic policy is formulated to increase the rate of growth of real GDP, reduce unemployment, maintain price and exchange rate stability, promote a healthy balance of payments, reduce the lending rate and mobilise more savings.

Specifically, in order to reduce inflation to a single digit figure (as low as 5%), the central focus is on effective control of anticipated liquidity injections that may arise from excessive government spending. Periodically, the central bank determines target growth rates of money supply, which are compatible with overall policy goals. It relies mainly on open market operations and other policy instruments for liquidity management, primarily to control banks' reserves.

In order to keep the budget deficit (excluding grants) below 4% of GDP, some efforts have been geared towards boosting output and steps have equally been taken to rehabilitate the social and economic infrastructure. Also, interest rates have been fully deregulated, with the banks given the freedom to determine the structure of interest rates in consultation with their customers. The Central Bank of Nigeria, however, has retained its discretionary power to intervene in the money market to ensure orderly developments in interest rates that could enhance investment.

With regard to central bank financing of budget deficits, which has been limited to 10% of the previous year's tax revenue, the Bank has continued to insist that government borrowing from it should not exceed the statutory limit of 12.5% of the estimated current budget revenue and that should this occur, the market rate of interest should be applied. The policy of the Bank is against the inflationary financing of government deficits through the ways and means advances and, with the instrument autonomy granted to it, the Bank will continue to apply the traditional instruments to fine-tune the system to ensure compliance with this convergence criterion.

On the need to ensure that gross external reserves cover at least six months of imports, the Bank's policy has been based on quantitative rationing and risk management. These include: portfolio diversification; exchange rate policy; foreign exchange budgeting and balance of payments policies.

5. Concluding remarks

Regional economic cooperation among developing countries, especially in Africa, should be seen as a viable strategy to enhance domestic economic performance and as a credible means to economic survival in a globalising world economy. This explains why these countries embarked upon numerous regional economic cooperation arrangements, including monetary integration, in the past. Such arrangements were beset by many difficulties, which constrained the achievement of their basic objectives. Agreed policy packages and other actions were not usually executed with the political commitment required; as was the case in the execution of the EMCP. An added dimension in the execution of the programme was the inability to forge meaningful cooperation between the CFA franc zone and the rest of ECOWAS.

The initiative of the second monetary zone, by which these other countries would forge a monetary union which would later merge with the CFA franc zone, was therefore a welcome development. So far, it has been pursued with a reasonable degree of political commitment on the part of the member states. Apart from the political will demonstrated in the execution of the project, the economic potential of the zone is a great advantage. The zone accounts for over 70% of the population of ECOWAS, about 64% of its total GDP, about 66% of total exports and 60% of total imports of goods and services. Altogether, the zone accounts for about 76% of the gross foreign exchange reserves of the West Africa sub-region.

The challenges facing the establishment of the second monetary zone are daunting. As a result, member countries need to sustain their current economic policy reforms, implement faithfully the agreement and statutes of the zone and support the zone's institutions, particularly WAMI.

Nigeria, as a leading member of the zone, is trying hard to comply with the statutes of the zone and operate strictly on macroeconomic policies that will facilitate the realisation of the WAMZ and its eventual merger with the existing CFA zone.

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The ASEAN currency and exchange rate mechanism task force

Ooi Sang Kuang and Sukhdave Singh

The motivation for the ASEAN single currency initiative stems from the 1997-98 financial crisis, which highlighted a number of issues for ASEAN countries to consider in greater depth. It underscored the potential contagion among countries in the region and created an awareness of the need for fuller cooperation on important policy issues. ASEAN members felt compelled to explore mechanisms to avoid recurrences of the financial crisis as well as to minimise the adverse effects of any recurrence. One avenue to achieve this objective was to explore the option of promoting a more stable and durable exchange rate arrangement in the region. A common currency was considered a possible long-term objective for strengthening Asian regional cooperation.

In this regard, a study into the feasibility of establishing an ASEAN common currency and exchange rate system was one of the proposals endorsed at the ASEAN Summit on 15-16 December 1998 in Hanoi, under the Hanoi Plan of Action. Subsequently, the ASEAN Finance Ministers' Meeting in Hanoi on 19-20 March 1999 endorsed a proposal that Malaysia lead the project.

In 2000, an ASEAN Central Bank Forum Task Force was established to study the feasibility of a single currency and exchange rate system for the ASEAN countries. Chaired by Bank Negara Malaysia, the Task Force comprises ASEAN central bank officials conversant with exchange rate issues.

The Task Force of exchange rate experts from ASEAN provides a regional perspective to the common currency issue and ensures that the views of all member countries are taken into account. The Task Force provides a forum for the sharing of views, information and research among its members. It would also be an avenue for seeking external input from officials of multilateral institutions and academics.

As the first activity of the Task Force, Bank Negara Malaysia organised the "Seminar on Common Currency Arrangements and Exchange Rate Mechanisms in ASEAN" in Kuala Lumpur on 6-7 August 2001. Resource persons were invited from the International Monetary Fund, Asian Development Bank, European Central Bank, European Commission, Bank for International Settlements and (from the private sector) Salomon Smith Barney. Following the seminar, the Task Force had its inaugural meeting on 8 August 2001, also in Kuala Lumpur. The main focus of the discussions was the direction and work programme of the Task Force.

The Task Force completed the study in September 2002 and it was presented at the meeting of the ASEAN Central Bank and Finance Deputies in Myanmar in October 2002. The findings of the study were endorsed by the ASEAN Central Bank Deputies and were due to be presented to ASEAN central bank governors and finance ministers at their meetings in early 2003. However, these meetings have been postponed, so the study has not been discussed by them.

The use of foreign currencies: the United States perspective

David Howard

1. Introduction

Several countries have adopted the US dollar as legal tender and their official currency. Such countries are said to have "dollarised". In many other countries, the US dollar is held as an investment and/or used in market transactions alongside a local currency that serves as legal tender and the official currency. In the past few years, there has been an increase in interest in dollarisation. In 1999, Argentine officials publicly debated dollarising but in the end decided to maintain the country's currency board arrangement. (The currency board arrangement was abandoned in early 2002.) In 2000, Ecuador and El Salvador unveiled plans to dollarise their economies. Also that year, a bill to share US seigniorage revenues with dollarising countries was approved by the Senate Banking Committee, but was defeated in a House Banking Subcommittee. (Currently, there appears to be little or no interest in the US Congress in legislation for sharing seigniorage revenue.)

2. Economic issues associated with dollarisation

At present, there is no consensus in the economics profession regarding the net benefits that dollarisation might confer on the dollarising economy. Proponents argue that, by irrevocably fixing its exchange rate against the dollar and hence precluding future currency crises, a country will find it easier to contain inflation and inflationary expectations, face lower costs of credit in financial markets, and hence enjoy higher and more stable rates of growth. Dollarisation is viewed as a way of making a strong commitment to macroeconomic stability.

Critics of dollarisation note that adopting the dollar means giving up seigniorage revenues, some degree of political sovereignty and the ability to adjust monetary policy – including the capacity for the authorities to provide a lender of last resort facility – and exchange rates in response to economic shocks. Moreover, dollarisation does not preclude debt crises if a country borrows more than it can repay, nor does it preclude a country's abandoning dollarisation in favour of its own currency sometime in the future.

The likely effects of dollarisation, were it to become widespread, on the United States are uncertain. To the extent that dollarisation either raised or lowered growth abroad, there would be corresponding indirect effects on US trade and growth, although these effects would probably not be large. Dollarisation would be very likely to increase foreign holdings of dollars, leading the US government's seigniorage revenues to rise, but probably not by much relative to total US government revenue. Finally, to the extent that dollarisation made the dependence of foreign economies on the US economy more explicit, there is a risk that this could lead to some political and diplomatic pressures on US authorities in an attempt to influence US monetary and financial policies.

In terms of more systemic effects, dollarisation tends to lower the transaction costs of the dollarising economy's economic and financial dealings with the United States and other dollar markets. It thus tends to promote economic and financial integration with the US economy, although policies regarding trade and capital flows are likely to exert a much greater influence. Dollarisation should also foster enhanced links with the global economy more generally, including access to international financial markets.

3. US policy vis-à-vis dollarising countries

Historically, the US authorities have not objected when foreign countries have adopted the dollar as their official currency, but there has been no attempt to promote the use of the dollar in foreign

countries. During the Clinton Administration, Argentina's interest in dollarisation and some US Senate interest in using seigniorage sharing as an incentive to induce more countries to dollarise occasioned a systematic effort to formulate a US policy on dollarisation. In his 8 February 2000 Senate testimony, then Assistant Secretary of the Treasury for International Affairs Edwin Truman outlined the Clinton Administration's policy clearly:

> "We do not have a view on whether dollarisation is advisable in general. Each country, in principle, can dollarise unilaterally, and it must bear the responsibility to decide in light of its own economic and political circumstances if dollarisation is the appropriate policy to pursue.
>
> From the US perspective ... it would not be appropriate for US authorities to adjust the procedures or orientation of US monetary policy in light of another country's adoption of the dollar; to extend banking supervision to that country's banks; or to provide access by those banks to the Federal Reserve's discount window ....
>
> Obviously, countries can choose to adopt the dollar as legal tender without our assent. However, we hope and expect that countries would consult with us in advance as there are potential benefits as well as costs to the United States from the adoption of such a policy."

There is no reason to think that the Bush Administration has a different view on dollarisation. However, neither the Bush Administration nor Congress is bound to the policy articulated by the Clinton Administration. US policy on dollarisation could very well evolve over time as circumstances change.

4. Federal Reserve policy on dollarisation

In the context of recent discussions about dollarisation, the Federal Reserve has made its policy clear. The Federal Reserve neither encourages nor discourages countries that are considering dollarisation. The decision to dollarise depends on a complex set of factors that may vary significantly across countries. Accordingly, only the national authorities of a given country are in a position to assess adequately the competing considerations. The Federal Reserve considers seigniorage sharing to be a budgetary issue, which should be resolved by the Administration and Congress.

The decision of a country to dollarise creates no obligations on the part of the Federal Reserve towards that country. In particular, the Federal Reserve is not obliged to act as a lender of last resort to financial institutions of officially dollarised countries, supervise their financial institutions or take into account their economic and financial conditions when setting US monetary policy.

In terms of the mechanics and logistics of dollarisation, countries implementing dollarisation regimes are free to purchase the necessary currency through the commercial banking system. In addition, the Federal Reserve has facilities for selling currency directly to central banks and international institutions, provided such entities hold an account at the Federal Reserve Bank of New York. In all cases, those obtaining dollars are responsible for paying shipping, handling and other costs associated with the purchase and transport of the currency. In some foreign countries, the Federal Reserve maintains currency distribution facilities. In general, every effort is made to deliver the currency notes as needed, on a commercial basis.

The Federal Reserve System periodically provides technical assistance in an array of areas to other governments, subject to constraints on its resources. Requests to provide technical assistance to countries in the process of dollarisation will be considered along with other requests, with help given as feasible and appropriate. The Federal Reserve does not provide the equipment required to dollarise (for example, machines for counting currency and checking for counterfeits). However, the Federal Reserve will provide information on what types of equipment are available and where such equipment can be obtained. The US Secret Service stands ready to help foreign entities learn how to distinguish between genuine and counterfeit US currency notes.

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