

Big and Small Currencies: The Regional Connection

Agnès Bénassy-Quéré^(*) and Benoît Cœuré^(**)

^(*) University of Paris X – Nanterre (THEMA), and CEPII, Paris, France.

^(**) École Polytechnique, Paris, France.

Abstract

We study the regional dimension of the international monetary system in the light of the debate on the so-called « two-corner solutions » for exchange rate regimes in emerging economies. After the crises in emerging economies of the late 1990s, freely floating exchange rates on the one hand, hard pegs (full dollarisations, monetary unions and currency boards) on the other hand, were considered preferable to exchange rate intermediate regimes. But in reality, the proportion of currencies which are de fact pegged to the US dollar is much higher and persistent than what countries declare to the IMF. There is a set of conditions under which intermediate regimes remain adequate and sustainable for emerging economies. These conditions include a framework for regional cooperation and the perspective of further monetary integration in the long run. Regional monetary cooperation can also be viewed as a way for emerging countries to protect themselves against the instability of the three key currencies: the dollar, the euro, and the yen.

Keywords: exchange rate regime, monetary blocks, international monetary system.

JEL: F31, F33

Introduction

It is now widely recognised that the liberalisation of capital flows casts doubts on the sustainability of the so-called “intermediate” or “middle-of-the road” exchange rate regimes, i.e. of those regimes lying inbetween free floating, and “hard” pegs (currency boards, full dollarisation or currency unions). This new consensus follows the currency crises experienced in Europe and in a number of emerging countries throughout the 1990s. This is the “two-corner approach” to the choice of exchange rate regimes (see, for instance, Eichengreen, 1999).

Indeed, a number of policy moves have followed this approach. A number of countries have rejected intermediate regimes in favor of one or the other of the “corner” solution. The European exchange rate mechanism gave way to the euro; full dollarisation was undertaken in Ecuador; and various countries such as Brazil, Russia and some Asian countries moved to free floats.

Reality is mixed however. The breakdown of the Argentine currency board at the end of 2001 has shown that hard pegs can be vulnerable too. At the other range of the spectrum, a series of empirical studies have shown that most countries with officially floating exchange rates do in fact intervene on foreign exchange markets to stabilise their currencies.

In this paper, we argue that the “two-corner” approach omits a crucial dimension of exchange rate regimes: the regional dimension. Hard pegs can fail when they are not consistent with other regimes in the region, as was the case in Argentina. Stabilising the exchange rate against the dollar is the simplest way to coordinate exchange rate

policies within a region. Lastly, the survival of intermediate regimes depends crucially on regional monetary cooperation.

The next section describes the recent evolution of the international monetary system. Then the regional dimension is introduced, before examining how to implement regional co-operation or co-ordination. We

Recent evolution of the international monetary System (IMS)

During the 1990s, the IMS was hit by three major shocks. The first one was the expansion of international capital flows at a much higher speed than the development of trade, the arrival of powerful players, such as hedge funds, whose balance sheets may exceed those of central banks, and as a consequence the greater autonomy of the “bottom” of the balance of payments (foreign direct investment, portfolio investment) from the “top” of the balance (trade in goods and services). The second shock, which partly results from the first one, was the financial crises in emerging economies (1994 in Mexico, 1997 in Asia, 1998-1999 in Brazil and Russia, 2001 in Turkey and Argentina), and the floating of many currencies previously pegged to the US dollar. The third one was the creation of the euro, which is now a key currency of the IMS.

Focussing on the second shock, we investigate this force by comparing the evolution of exchange rate regimes before and after the crises.

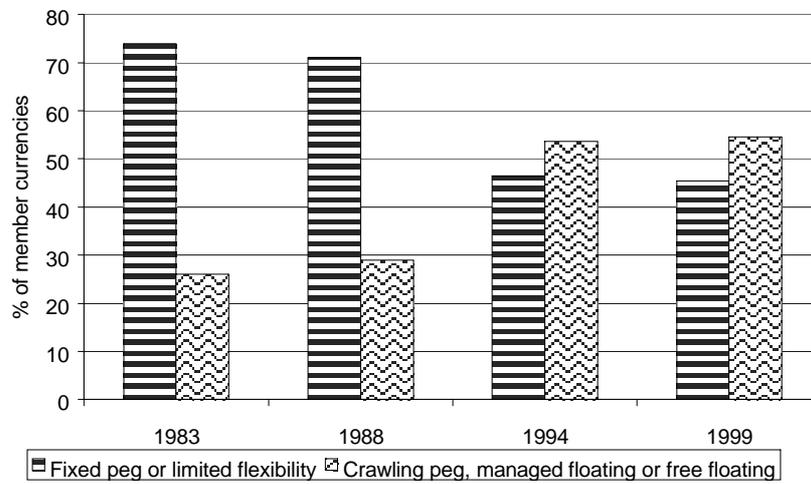
Official exchange rate regimes

A comprehensive view of exchange rate regimes is provided by the International Monetary Fund (IMF), which classifies member countries according to the degree of flexibility of their currency. According to the IMF, since the 1970s, the share of developing countries with a fixed exchange rate has declined steadily (from 90 per cent in 1975 to 45 per cent in 1997), whereas the share of flexible exchange rates has risen (from 10 per cent in 1975 to 55 per cent in 1997). Figure 1 below extends this diagnosis to all member countries over 1983-1999.¹ It also shows that most switches occurred in the late 1980s-early 1990s. The relative share of both groups of regimes have stabilised since then, despite EMU (which mechanically reduced the proportion of limited flexibility regimes) and financial crises in emerging countries (which reduced the share of fixed pegs, see *infra*).

However this diagnosis is insufficient. First, these two groups mix exchange rate regimes which are quite different. Second, the anchor currencies are not identified. Table 1 provides some more detail on the scissor-like evolution illustrated in Figure 1. It confirms the striking extension of free floating regimes at the expense mainly of pegs on baskets of foreign currencies.² Fixed pegs on single currencies have better survived, due to the longevity of the French franc zone and of regional arrangements around the South-African rand and the Indian rupee, together with the creation of several currency boards in the 1990s. However the share of crawling pegs and managed floating regimes has resisted too, and it actually rose between 1994 and 1999.

The scissors effect evidenced in Figure 1 can best be described as a substitution of free and managed floating regimes to pegs on the US dollar and on currency baskets. No evolution towards a multi-polar system is apparent.

Figure 1: Share of fixed and flexible regimes among IMF member countries
(end of year)



Source: IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*, various issues.

*Table 1: share of various regimes among IMF member countries**(end of year)*

Exchange-rate regimes	1983	1988	1994	1999
Fixed pegs on single currencies, incl. currency boards	35.6	38.2	26.0	29.9
US dollar	23.3	25.7	13.8	15.0
FF, DM, euro	8.9	9.2	8.3	12.3
Others	3.4	3.3	3.9	2.7
Fixed pegs on baskets	27.4	25.7	13.3	9.6
SDR	8.9	5.3	1.7	3.2
ECU	0.7	0.7	0.6	-
Other baskets	17.8	19.7	11.0	6.4
Limited flexibility	11.0	7.2	7.2	5.9
European exchange-rate mechanism	4.8	4.6	5.0	1.1
Other arrangements with bands	6.2	2.6	2.2	4.8
Crawling pegs, managed floats	19.9	17.8	19.9	23.0
TOTAL	100.0	100.0	100.0	100.0
Number of currencies	146	152	181	187

Source: IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*, various issues.

De facto exchange rate regimes

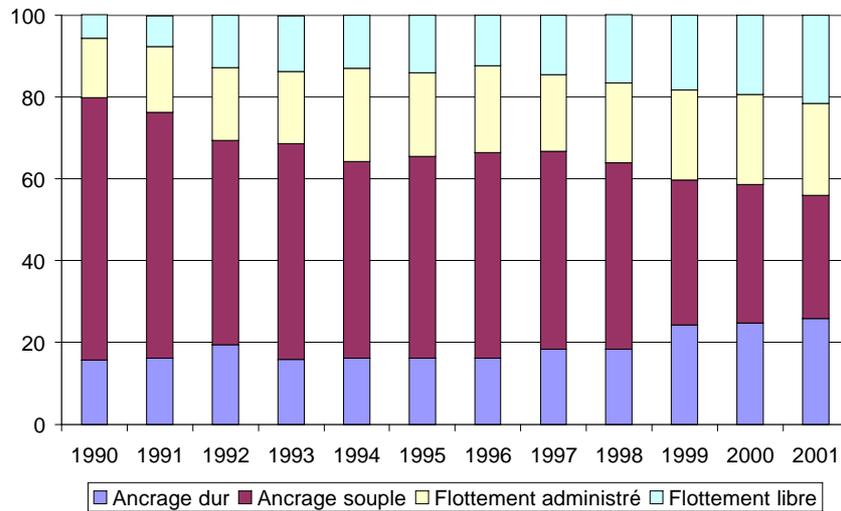
It is now widely acknowledged that official exchange rate regimes only partially reflect the actual behavior of monetary authorities. Several methods are used to identify de facto regimes.

Corrected official regimes

Since 1999, exchange rate regimes published by the IMF have been corrected to account for actual practice, on the basis of the evolution of nominal exchange rates and of official reserves. Corrected regimes have been reinterpolated back to 1990 to allow for comparisons (Bubula and Ötoker-Robe, 2002). The results, as summarised in Figure 2, tend to confirm the rising share of flexible regimes (free floats and managed floats). In addition, the distinction between hard pegs (monetary unions, full dollarisation and currency boards) and soft pegs (fixed but adjustable pegs, with or without target zones, crawling pegs) show the growing importance of the extremes at the expense of intermediate regimes.

Figure 2: the hollowing out of intermediate exchange rate regimes.

in %



Source : Bubula et Ötoker-Robe (2002).

Estimated regimes

Other studies have focussed on the evolution of exchange rates and official reserves. Levy Yeyati and Sturzenegger (2000) have run a cluster analysis based on the observed volatility of nominal exchange rates and of official reserves. They have found that the proportion of free floats has remained fairly stable over the 1990s, so as the shares of fixed exchange rate regimes and managed floats.

In Bénassy-Quéré and Coeuré (2000), we have proposed a method based on the stability of nominal exchange rates. We test the existence of a stable relationship between each currency i and the US dollar, the euro and the yen. The test is implemented for 119 currencies with weekly data over two periods: from May 1995 to June 1997 (between the Mexican crisis and the Asian crisis), and from October 1998 to December 1999 (after the Asian, Brazilian and Russian crises). One advantage of this method is that it allows us to identify anchor currencies. The results are summarised in Table 2. Strikingly, no massive shift towards free floats is observed. However, comparing *de facto* and *de jure* regime on a country-by-country basis shows that intermediate regimes, defined as fixed regimes which are not classified as hard pegs by the IMF, tend to decline to the benefit of hard pegs. We find the same result when using Levy Yeyati and Sturzenegger data. We also find that the US dollar remains the major anchor: the IMS has not yet moved towards a multipolar system.

Table 2: de facto exchange rate regimes

	Number of currencies	Free floats	Fixed regimes	of which :			
				USD	EUR	JPY	basket
1996	127	5%	95%	39%	8%	0%	48%
1999	142	8%	92%	39%	23%	0%	30%

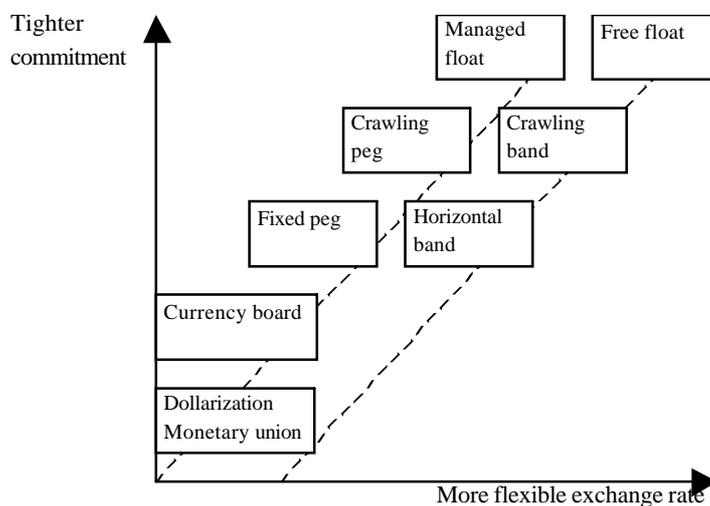
Source: Bénassy-Quéré et Coeuré (2001).

3. Mapping exchange rate regimes

A two-dimension approach: Flexibility and commitment

The IMF classification is based on two criteria: the degree of flexibility, and the existence or not of a commitment by monetary authorities. In Figure 3, we position exchange rate regimes along two dimensions: flexibility and policy commitment. Since the two criteria are obviously correlated, exchange rate regimes are aligned along diagonals, with corner solutions at the two extremes.

Figure 3: the two dimensions of exchange rate regimes.



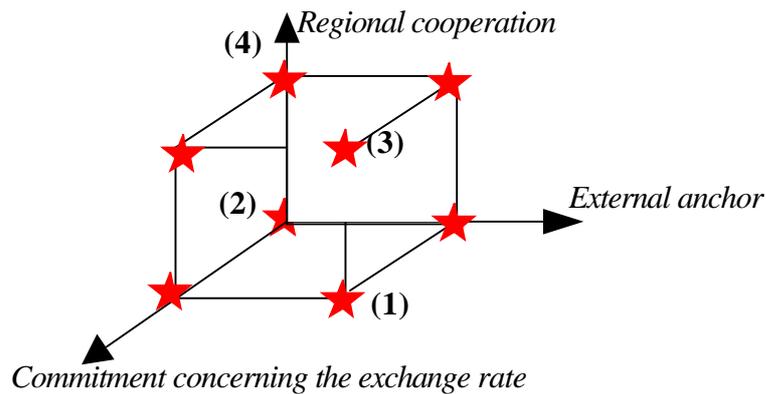
The “two-corner” approach can be rephrased as follows: only South-West and North-East corners are sustainable when capital mobility is high.

The missing regional dimension

When monetary authorities do not commit to a fixed exchange rate, the anchor can only be domestic: credibility is “earned”, not “borrowed” (Braga de Macedo et al., 2001). This is why some emerging countries have adopted inflation targeting when moving to flexible exchange rates. A prerequisite for such strategies is strong institutions: economically literate bureaucrats and politicians, an independent central bank, reliable statistics, etc. In the absence of such a framework, i.e. when credibility cannot be built from the inside, full dollarisation is usually thought as the only option. In this line of reasoning, dollarisation is considered the same way as monetary union, which is a multilateral, regional arrangement. This

neglects a crucial dimension. A supra-national central bank, which is by construction less dependent on political developments in any national component of the union, may prove more credible than a national central bank. Indeed, the European Central Bank is more credible than most national central banks ever were. Adding the regional, dimension, we identify eight “corners”, of which four only are serious options (Figure 4). This can be contrasted with the two possible corners of Figure 3.

Figure 4: The three dimensions of exchange rate regimes



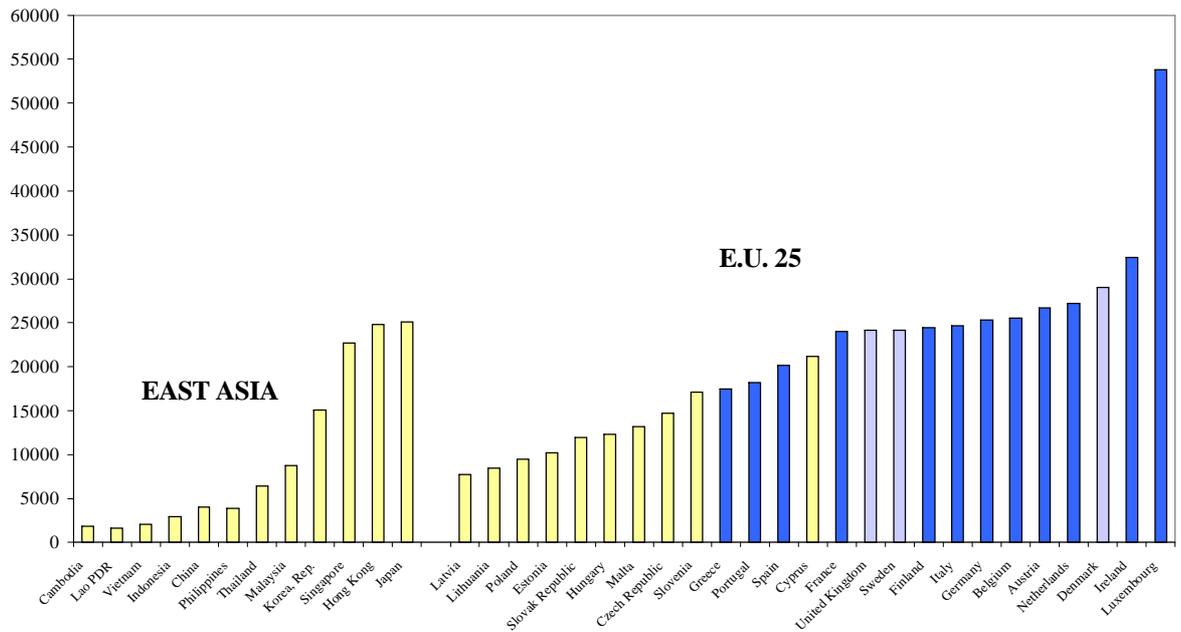
The two, traditional “corner solutions” are (1) the currency board or full dollarisation and (2) the free float. When regional cooperation is added, the equivalent of the currency board/dollarisation solution is the monetary union (3), and free floating now involves co-ordinating economic policies regionally (4). There are few examples of the latter regime however, perhaps because fixed exchange rates

work as leading forces of policy co-ordination. Although not on the regional basis, the aim of G7 co-ordination resembles corner (4). It is likely that such co-ordination could be made easier in a regional framework.

The regional corners

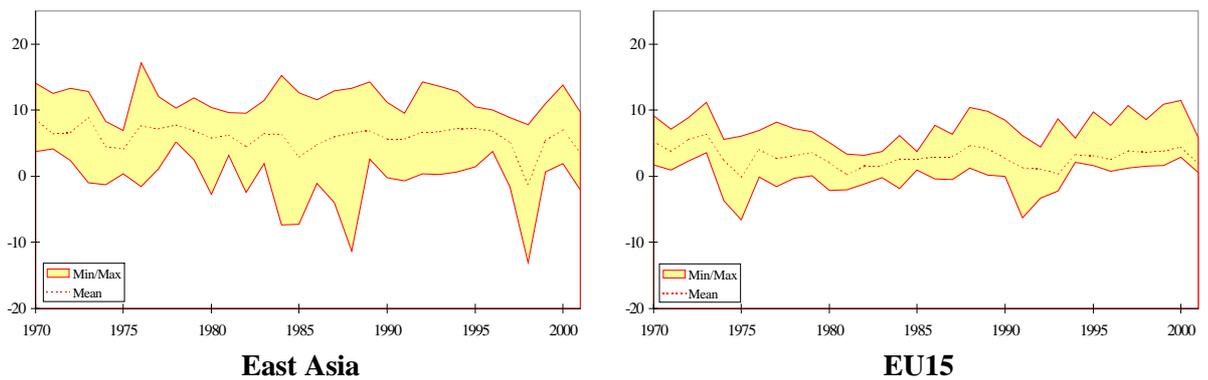
European monetary unification has inspired a number of studies looking at the pros and cons of forming monetary unions elsewhere in the world (e.g. in East Asia, in South America, in the Middle-East, in West Africa, etc).³ It is hard to find a region outside Europe displaying the optimum currency areas criteria (indeed, most studies, following Bayoumi and Eichengreen (1993) seminal analysis, already find the Eurozone not to be an optimum currency area...). In particular, such analyses stress the large intra-regional differences in income per capita or in product specialisation (especially as far as commodities are concerned), and the lack of intra-regional trade and investment. The heterogeneity of the East-Asian region as compared with Europe is illustrated in Figures 5 and 6. Leaving Luxembourg aside, GDP per capita is less heterogeneous in the EU25 than in East Asia. Of course, this feature is even more striking when considering the EU15 group or the Eurozone (EU12) group. Consistently, GDP growth is less heterogeneous in the EU15 than in the East Asia.

Figure 5: GDP per capita in purchasing power standard, Asia and Europe, year 2001 (in US dollars)



Source: World Bank, World Development Indicators 2003.

Figure 6: heterogeneity of yearly growth rates, Asia and Europe



Source: World Bank, World Development Indicators 2003.

However, monetary union may concern only a sub-group of countries (for instance, Singapore and Malaysia, or South Korea and Japan, see Yuen, 2000). More importantly, full monetary union is a long-term project⁴ which deserves a dynamic treatment; i.e. it is necessary to extrapolate the growing regionalisation of trade and the endogeneity of some optimum currency area criteria (see Frankel and Rose, 1998).

Even though monetary union cannot constitute but a long-run focal point for most regions, such perspective changes the terms of the choice of an exchange rate regime even in the short run: Firstly, the unilateral “two corner solutions” may not be advisable if the long run goal is a monetary union. On the one hand, it is well known that a free float is conducive to non-cooperative strategies which are sub-optimal in case of common shocks. On the other hand, whereas dollarisation is irreversible, currency boards are not and they lack an exit strategy, as exemplified by the Argentinian crisis. Hence, they are suited only when dollarisation or a monetary union with the anchor currency is expected in a near future, as it is the case for some CEECs.

Secondly, the perspective of a monetary union in the long run can make intermediate regimes more robust in the mean time, provided that these regimes are properly defined and managed in a regional framework. This point is studied in more detail in the next section.

Reaching the corners

We have found from the previous section that the “two corner solutions” may not be optimal in a dynamic perspective, once the regional dimension is taken into account.

We now turn to the transition towards regional corners.

Common pegs

The main objective of a regional monetary arrangement is to provide relatively stable exchange rates within the region, and an institutional framework for exchange rate realignments. It has been argued above that, in the short run, this can be achieved through the use of external anchors.

In a highly integrated region, the selection of a specific foreign anchor is of secondary importance. The most important thing is the mere existence of such a common anchor. In this vein, Williamson (1999) shows that a common basket peg for nine Asian countries would yield similar stability of effective exchange rates as would tailor-made baskets for each of the nine countries. However, adopting a common currency as a common peg is not optimal when the anchor country fails to be the prominent partner outside the region, as evidenced by the Asian crisis: the appreciation of the US dollar from 1995 to 1997 is often cited as one of the causes of the 1997 crisis (Ito, Ogawa and Sasaki, 1998). Finally, choosing a foreign anchor constrains monetary policy. Hence, there should not be too much asymmetry in

business cycles with the anchor country, and optimum currency criteria should be taken into account.

From the literature on the choice of an anchor currency, it can be concluded that the euro is *a priori* a more straightforward anchor than the US dollar. Indeed, CEECs and Northern African countries are good candidates for a euro peg since they carry out most of their trade with the euro zone; they also display business cycles and (for some of them) specialisation patterns which are rather close to those of the euro zone (Boone and Maurel, 1999; Bénassy-Quéré and Lahrière-Révil, 1999). In contrast, Asian and Latin American countries should peg their currencies to dollar/euro/yen baskets rather than to the sole US dollar, given the balanced distribution of their foreign trade (Williamson, 1999; Bénassy-Quéré, 1999; Ogawa and Ito, 2000).⁵ It can be argued however that this reasoning underestimates the importance of trade invoicing and debt denomination, both of which point to dollar pegs (Calvo and Reinhart, 2001).

Hence, using a common peg could be achieved without regional co-operation around the euro-zone, whereas the lack of regional co-operation constitutes a major impediment in Asia or in South America. Even though a common basket can be defined relatively easily, its use would necessitate a high degree of political commitment (see Bayoumi et al., 2000, and the next section). In the absence of regional co-operation, the dollar can be used as a second best option (Bénassy-Quéré, 1999; Ito et al., 2000). Consider a situation where each country chooses its exchange rate policy taking the policy of its neighbours as given. Theoretically, this gives birth to multiple equilibria (regional pegs on the yen, on the euro, on the dollar,

on a basket, etc). In practice, history, politics and the initial patterns of trade and debt denomination (the so-called “original sin”) have led most countries to focus on the US dollar.

As a conclusion, a soft peg on a single currency (contrasting with a peg on a common basket) remains an attractive system due to its low requirement in terms of co-operation. In addition, this type of peg is more easily verifiable by market participants, which grants it with more credibility (Frankel et al., 1999).

The tendency for countries that have been hit by crises to come back to *de facto* pegs on the dollar can be understood in this context. The use of the euro as a currency anchor has so far been limited by the inertia of the international monetary system. However, in regions like Asia or South America, pegs on the dollar are less advisable than regional co-operation which could be organised around common baskets of foreign currencies. We study below how such a co-operation could be organised.

Institutions for regional integration

Classical analyses of monetary regionalism, from the early work of Cooper (1975) to Canzoneri and Henderson (1991), highlighted the superiority of cooperation (*i.e.* joint optimisation of a common loss function) over coordination (*i.e.* the selection of a specific Nash equilibrium). Coordination only rests on information sharing, whereas cooperation rests on a commitment not to accommodate only domestic shocks.

It can be strongly argued that in order to be credible and to avoid renegotiation, such commitments have to be backed by binding agreements such as treaties or supranational bodies. One step further, some have argued that the essence of money is political and that monetary relations reflect permanent bargaining and, ultimately, the hierarchy of power between sovereign states (Cohen, 2000). At any rate, the political economy dimension is key to understand the dynamics of monetary integration.

From coordination to cooperation

The degree of formalisation and constraint of regional agreements can be adjusted according to the desired degree of coordination. Networks of personal relationships among monetary officials and bureaucrats, discussion fora convened on a regular basis, are first steps of cooperation and their usefulness should not be understated. However, in order to be operational, such coordination needs parallel steps to be made in terms of economic integration: tariff cuts, development of a regional financial market allowing the countries to avoid the “original sin” which consists in having the debt invoiced in foreign currencies. The irreversibility of economic integration then works in favor of stronger cooperation, as evidenced by the European case.

Until January 1st, 1999, the European exchange rate mechanism probably constituted the most ambitious example of regional monetary cooperation because it included all forms of coordination/cooperation, from the least formal to the most formal: information sharing and the building of a common doctrine in the framework of various committees, formal swap agreements, existence of federal institutions

(such as the European Commission and the European Monetary Institute) endorsing the role of technical assistance and of policy impulse.

History matters: the monetary issue in Asia

The weight of historical factors is evident in the case of Europe, where the process of economic, and where monetary integration is rooted in century-old political debates. As early as in the mid-nineteenth century, the French writer and politician Victor Hugo advocated a political union in Europe. After World War II, the so-called “founding fathers of Europe” had the ultimate goal to make a new war between France and Germany never to happen again.

Asia provides a different example of a cooperation process which is obviously neither planned nor comprehensive, but where instruments have nevertheless been developed over years (see Ito, 2001).

As early as in 1957 (the very year the Treaty of Rome was agreed in Europe), technical discussions were initiated among central banks from Asia and the Pacific region, the number of which has now reached twenty (SEANZA⁶). Meetings of South East Asian central banks (SEACEN) have been organised since 1966 and were complemented in 1991 by a twice-yearly forum for technical discussion among eleven countries (EMEAP⁷) and then, after the Mexican crisis, by a network of currency swap agreements between central banks. Informal fora for macroeconomic discussion also exist: a short-lived “Asian G6” was launched in 1996 a few months before the financial crisis, and meetings of APEC⁸ or ASEAN⁹ finance ministers

now take place on a regular basis. ASEAN countries also meet since 1999 together with the three regional powers, the People's republic of China, the Republic of Korea and Japan, in the so-called "ASEAN+3" framework.

The Chang Mai initiative launched in May 2000 was the first practical achievement of this "ASEAN+3" group in the monetary field. It consists in a network of bilateral swap agreements amongst the central banks of the group. The next step could be a regional monetary arrangement. Bayoumi, Eichengreen and Mauro (2000) underline the needs for a strong political commitment, which they see as a remote perspective. It seems however that such ideas have increasingly been tested by Asian politicians. Hong Kong Finance Secretary Donald Tsang suggested in October 1999 to create a common currency for Hong Kong and Singapore at a five or six year horizon. In addition, several Asian heads of state, among which the Malaysian prime minister Mahatir or the Philippines president Estrada, have favored at times a common currency in Asia. In the latter case, the main rationale does not seem to be an economic but rather a political one. Building on the European example, monetary union is seen as a catalyst to regional political cooperation.

Political impediments are more frequently quoted than economic pros and cons to explain why such projects are envisaged only for the very long run¹⁰. In particular, as pointed out by Eichengreen (1997), a prerequisite is the settlement of long lasting political conflicts, some of which are inherited from World War II (notably between Japan, Korea and China), and others are due to ethnic or religious patterns – for a discussion of the pro and cons of an Asian Monetary Union, see Coeuré (2004).

We conclude from this discussion that the commitment to an intermediate regime has to be stronger than in the past, along two lines:

First, give some guarantees of short term robustness, which can either be domestic (foreign exchange reserves, flexibility in exchange rate management so as to limit the likelihood of macroeconomic misalignments, control of short term inflows, surveillance of the financial system) or external (regional or international assistance in case of a speculative crisis).

Second, indicate clearly that the chosen exchange rate regime fits into an overall economic and political strategy, covering trade, the financial sector, and fiscal policies, among others.

With these two prerequisites, regional monetary cooperation is feasible, and it helps participating countries escape from the choice between dollarisation and free floating. Full-fledged regional currencies are unlikely to emerge in the short- and even in the medium-term. In the mean time, regional monetary cooperation will have to take the form of common pegs on baskets of extra-regional currencies. The impact of such arrangements on the stability of the global system can then be questioned.

Vertical integration of the International Monetary System

The impact of exchange rate fluctuations between key currencies on the sustainability of « small » currency regimes has been discussed extensively. In particular, the appreciation of the US dollar against the yen from 1995 to 1997 is

generally viewed as one major cause of the Asian crisis. The reverse impact of « small » currency regimes on the stability of key currencies is less frequently evoked.¹¹ Two views can be contrasted.

The first view is that of Kindleberger (1973), according to whom the Great Depression was due to the lack of economic leadership at that time, after the weakening of the United Kingdom and before the rise of the United States. For Kindleberger, the existence of a dominant power is stabilizing since the corresponding country can impose some co-operation to its partner while supporting most of its costs:

« In these circumstances, the international economic and monetary system needs a leadership, a country which is prepared, consciously or unconsciously, under some system of rules that it has internalised, to set standards of conduct for other countries; and to seek to get others to follow them, to take on an undue share of the burdens of the system, and in particular to take on its support in adversity by accepting its redundant commodities, maintaining a flow of investment capital and discounting its paper. Britain performed this role in the century to 1913; the United States in the period after Second World War to, say, the Interest Equalisation Tax in 1963. » (Kindleberger, 1973, p. 28).

According to Kindleberger, amongst the tasks of the leader, one is to implement a system of relatively stable exchange rates.

The second view is that of the “volatility transfer” (Fратиanni and Von Hagen, 1990). The idea is that the exchange rate is an adjustment variable: fixing it transfers the burden of the adjustment to other variables, especially on other exchange rates. Considering the balance-of-payments equilibrium, Collignon (1999)

shows that even the fundamental equilibrium exchange rate (FEER) is more volatile when some exchange rates are fixed, because remaining exchange rate fluctuations are less able to bring the current account back to balance.¹²

Hence, the building of monetary blocks around the US dollar, the euro and possibly the yen could have a destabilizing impact on euro/dollar and yen/dollar exchange rates. This reinforces the importance, for third countries, of the currency anchor(s). In this context, regional monetary cooperation could protect the participating countries from destabilizing effects of key currency fluctuations (intra-regional exchange rates would remain stable). The volatility of key currencies would then be supported by the United States, the Eurozone and Japan, which can more easily hedge due to more developed financial markets.

On the whole, there is no incompatibility between the two views: the building of currency blocks could raise inter-block instability, but the cost of this volatility would be mainly borne by leading countries.

Conclusion

We have argued that a practical way to escape the “two corner” debate is to recognise the regional dimension of exchange rate regime choice: the “good” regime for a given economy will depend both on its own characteristics and on the choices made by regional partners. Recent monetary history provides a number of illustrations of this reasoning. Regional monetary cooperation can constitute an

alternative to sub-optimal behaviour of emerging countries to focus their economic policy on controlling their bilateral exchange rate to the US dollar. One option is of course monetary union which, however, cannot constitute but a long run target. Another, more easily implementable option consists in stabilising national currencies against a common basket of foreign currencies and discussing exchange rate in a regional multilateral framework. Regional monetary cooperation is also a way for emerging market economies to protect themselves against the destabilising impact of the fluctuations of key currencies. Major economies should therefore continue to cushion the instability of the international monetary system while encouraging the building of regional currency blocks, before new “big”, possibly regional, currencies can emerge.

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Footnotes

¹ The IMF's system of classification changed in 1999. The data in Figure 1 and in Table 1 refer to the old classification. See below for the new classification.

² The retreat of limited flexibility regimes is essentially attributable to the merger of 11 currencies into the euro.

³ See, for instance, Anthony and Hughes Hallett (2000), Bayoumi and Eichengreen (1999), Masson and Pattillo (2001), Sadeh (1997).

⁴ There has been thirty years between the first monetary union project (the Werner plan) and the introduction of the euro.

⁵ In addition, Jadresic, Masson and Mauro (1999) underline that a common peg on a single foreign currency (the dollar) raises the vulnerability of each country to the crises in other countries, this effect being weaker with a common basket.

⁶ SEANZA stands for South East Asia, New Zealand and Australia.

⁷ Executive meeting of East Asia and Pacific central banks: Hong-Kong, Malaysia, Indonesia and Thailand, later joined by Japan, Singapore and the Philippines.

⁸ APEC is made of eleven Asian economies (Japan, Korea, the Philippines, Indonesia, Malaysia, Brunei, Singapore, Thailand, PR China, Taiwan and Hong Kong), three Pacific economies (Australia, New Zealand and Papuaasia-New Guinea) and four American economies (Canada, Mexico, Chile and the US).

⁹ ASEAN is made of ten economies: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

¹⁰ Bergsten (2000) is more optimistic concerning the timetable, viewing the building of regional institutions as the "new Asian challenge".

¹¹ The pros and cons of exchange rate stability are well reviewed by Honohan and Lane (1999). They do not apply in the same way for industrial countries and for emerging countries. Hence, one should be concerned by the potential transfer of volatility from one group of currencies to another.

¹² The FEER is defined as the exchange rate that is consistent with external and internal equilibrium (see Williamson, 1983). More volatility of the FEER would not necessarily transfer into higher short run volatility. This possibility is left for further research.