Currency Board Arrangements (CBA's) As A Super-Fixed Alternative in Exchange Rate Regime Choice

Buks Wessels, University of the Free State, South Africa

INTRODUCTION

Disillusionment with volatile floating exchange rates since the mid 1970s has led to a renewed search for fixed exchange rate systems in order to obtain financial stability in times of globalisation and increased mobility in international capital flows. There has been a move away from hybrid exchange rate systems like pegged exchange rates, crawling bands and pegs and other semi-fixed exchange rate regimes. This migration in exchange rate regimes entails a movement towards (*inter alia*) super-fixed regimes such as dollarisation and CBA's. The latter establishes a fixed exchange rate, guaranteed currency convertibility, and 100 per cent coverage of domestic currency (or the monetary base) by foreign currency reserves. Some countries create CBA's not only to obtain credibility and exchange rate stability, but also to lower their inflation and interest rates.

The move towards CBA's was necessitated by a rise in central banking that has seduced some, especially emerging countries into higher inflation and restricted currency convertibility (Hanke and Schuler, 2003). These outcomes have restrained their growth and investment, and also discouraged capital inflows. Gulde *et al* (2000:4) mention further motivations for creating CBA's, such as country specific economic challenges and post-conflict reconstruction. Some other CBA's were introduced after severe political, economic and currency crises in order to reduce exchange rate speculation and enhance their macroeconomic stability. The popularity of such CBA's rests on their inherent commitment device and its derived credibility. They provide a monetary authority independent from government, which is moreover committed to a conservative monetary policy aimed at reducing the possibility of unexpected inflation.

This paper highlights both the positive and negative consequences for monetary authorities and governments wanting to implement a CBA. More specifically, the paper defines a CBA in the first section, clarifies its operational mechanics in the second section, its benefits in the third section, and its disadvantages in the fourth section. The fifth section focuses on the likely candidate countries for a CBA, while the last section concludes.

ORIGIN AND DEFINITION OF CBA's

CBA's date back to Mauritius in 1849 and were common in the colonial days of the British Empire. They were used in the dominions to provide monetary stability and fiscal income, but fell into disuse because of increasing opposition to colonialism. Schuler (2003b) mentions that CBA's peaked in the 1950s when approximately 50 countries instituted them because of their simplicity, transparency, and rule-bound nature. However, since the 1990's CBA's have received renewed attention. Their reappearance has been motivated by policy ideology, macroeconomic circumstances, and regime choice optimality (Ho, 2002: 2).

Besides Hong Kong in 1983, Estonia and Bulgaria also established CBA's in 1992 and 1997 respectively. The renewed interest in CBA's stems from the fact that they not only contribute to solving the time inconsistency problem, but also counter an over issue of money notes by government - thereby preventing self-fulfilling speculative runs and other undesirable consequences (Ghosh e.a., 1998: 4). CBA's are part of exchange rate based nominal anchors, and are related to pegged systems.

Contrary to pegged regimes where only a fraction of foreign coverage of the domestic money base is held, and where exchange rates can still change, a CBA has a fixed exchange rate and holds net reserves in foreign assets equal to 100 percent or slightly more of its monetary liabilities. This ensures convertibility. The flow of domestic base money is matched one to one by the flow of foreign reserves. Thus, the monetary base is determined and completely backed by foreign exchange reserves, which in turn is determined by the surplus in the balance of payments. (A CBA with backing in the form of a basket of currencies is another possibility).

A classical CBA can accumulate excess reserves through seigniorage income and may hold such additional reserves (say 105-110%) and even use them on a limited scale for lender of last resort purposes. However, these reserves cannot be used for any monetary policy purpose that may threaten the fixed exchange rate. There is actually no scope for any discretionary policy actions in domestic currency assets. Important is that a change in the demand for money cannot, however, affect the supply of money. Interest rates in a trusted CBA will converge (although not completely so) to that of the anchor country. The fact that the reserve currency country, should it follow unsound or unstable economic policies, can export those policies as well as its inflation to the CBA country, poses a major problem for the latter.

As can be seen from above, a CBA places much stricter limitations on policies and constrains the freedom of the authorities much more than is the case under pegged exchange rates. Consequently, a classical CBA resembles a type of a rules-based monetary system aiming at establishing credibility and avoiding myopic policy making (Balino and Enoch, 1997:1). Because a classic CBA is a rule-based system and acts like a money-changing machine (Ho, 2002:4), it does not practice active foreign exchange interventions, neither does it sterilise reserve flows, extend domestic credit, or inject or withdraw cash or liquidity like an ordinary central bank. Since a classic CBA represents a monetary institution based on a legislative commitment to issue domestic notes and coins without constraints into an anchor currency at a fixed exchange rate, it is precisely this legal framework with its constraint on changing the exchange rate that supports its credibility (Schuler, 2003a). A classical CBA comprises an endogenous base for the money supply that assures automatic sterilisation of excess liquidity.

OPERATIONAL MECHANICS OF A CBA

Although various motivational factors and different initial circumstances characterise the establishment of a CBA, it is important that the system is created in such a way as to not only make it almost impossible to abolish, but also make the cost of breaking its rules prohibitively high. A CBA can commence with a simple announcement by the central bank, or it can be established by changing the central bank statute. The latter will require a parliamentary majority to change or abolish the CBA. Some CBA's, such as the Bulgarian case, were established through pressure from the IMF and international creditors. Another way of creating a CBA is to embed it even deeper into the constitution of the country, requiring an even bigger majority to change the system. The more difficult it is to change the regime and its rules, the more credible it will be.

In an operational sense, when a CBA's balance of trade deteriorates and it experiences an outflow of currency, the liquidity in the banking system decreases, the supply of money drops, and interest rates rise. These dampen consumption and imports, improve the current account, but also attract foreign investments (see Kopcke, 1999: 26). The latter will alleviate the squeeze on liquidity and interest rates will later drop to the level of the anchor country. The above contractionary effect will also reduce demand for the country's production factors and decrease the country's prices relative to that of other countries. However, such a contractionary policy maybe costly if factor markets are rigid: It can induce a significant drop in domestic business output and employment in order to restore balance – something that will be political unpopular and even unacceptable. The success of the adjustment or transmission mechanism therefore depends crucially on the speed of the adjustment in prices. A surplus on the current account, on the other hand, will increase the money supply, but since the latter is endogenous, as mentioned before, it will not cause permanent higher inflation. Inflation can nevertheless be higher in the CBA than in the reserve country due to faster increases in the prices of non-traded goods, and because of productivity differences (Kopcke, 1999:27).

For the sake of perspective it should be stated that although a *classical* CBA implies the absence of a central bank, modern day approaches to the system accommodate the existence of a central bank or a central bank-like institution. Ho (2002:5) points out many differences in operation between modern day and classical CBA's, especially with regard to design, operation and legal framework. The function and operation of CBA's have indeed broadened and they are not currency conversion mechanisms anymore, but alternative exchange rate systems in which capital account transactions play a much more prominent role. Reserve and liquidity management can be used and are indeed used in CBA's such as the Estonian one, but then for liquidity and not for monetary policy purposes (Sutt, 2003:2). In summary, there are currently considerable cross-country differences in the structure and operation of CBA's, although they are based on the same foundation of fully backed monetary base money. CBA's nowadays must not only manage foreign reserves prudently in order to earn interest rate income, but also conduct interbank settlements and even provide LOLR-like finance if excess reserves exist. Currently, CBA's may even have different parities at which they provide conversion and coverage for the monetary base.

BENEFITS OF A CBA

A CBA is a simple and transparent exchange rate regime. The discipline needed for pegged exchange rates is supposed to promote confidence in the local currency, and to lower inflation at the given rate of monetary growth (Ghosh e.a., p. 5:1998). A CBA, however, limits discretionary monetary policy even more in order to create even higher credibility and confidence. By linking the monetary base to the availability of foreign exchange, and by delinking it from discretionary monetary and fiscal considerations, a CBA obtains the benefit of immediately improving the credibility and economic stability of a troubled country.

Since government has no power over monetary policy in a CBA, it cannot procure central bank loans to finance its deficits. Of course, this benefit depends heavily on the political willingness and commitment of government to abstain from such manipulation in a CBA. CBA's also have the benefit of reducing the time inconsistency problem in policymaking. The latter complicates the task of policymakers when trying to pre-commitment them to future policy outcomes. Time inconsistency entails a clash between long-term goals and short-term incentives of central banks, and may cause them to abolish their monetary focus and to accommodate political pressure instead (Ghosh e.a., 2000: 279). A CBA prevents this. Moreover, a CBA prevents an over issue of money to finance a budget deficit through seigniorage income.

Developing countries sometimes do not have an independent central bank, and even so, it may not be effective in practice. Some of them also do not have the qualified staff to run and manage other exchange rate regimes and a discretionary monetary policy. A CBA greatly contributes to solving such problems.

Transaction costs in foreign exchange will drop under a CBA, making it cheaper to obtain foreign capital to complement local capital. No costly forecasting and hedging costs are present in a CBA, thus reducing transaction cost even further. Another positive attribute of a CBA is its administrative simplicity. It is also easy for the wider public to understand the operation of the system and its constraint on discretion. A CBA also streamlines monetary operations and reduces central bank functions. In this way it reduces the need for staff (Balino and Enoch, 1997: 6), which now becomes available for other functions.

A CBA not only simplifies the operation and monitoring of the foreign exchange market, but because it increases credibility and reduces uncertainty, it also lessens the vulnerability of a country to destabilising capital flows and their concomitant contagion. In this way the CBA facilitates access to international financial markets and participation in external trade. The latter may enhance foreign direct investment and allow the country to tap into the financial markets of the anchor and other countries in the common currency area. (This was especially the case in Estonia where establishing a CBA resulted in significant increases in foreign capital inflows, especially foreign *direct* investment (Sutt, 2003:5)). A further positive outcome of a CBA consists of it improving the credit rating of the country by major credit rating agencies. This in turn is likely to contribute to a rapid convergence - and resultant lowering - of interest rates.

Stemming from the above, a wider range of financial instruments can be created and increased financial engineering supported in the CBA country. These are normally absent in emerging countries. A CBA can also facilitate the reintermediation of financial resources and generally promote the development of the financial system. These will lengthen the economic horizons of financial contracts, giving access to more, cheaper, and less risky finance.

In summary, a CBA is relatively simple to operate and it generates the needed credibility to support a troubled economy (Hanke and Schuler, 2003). It does not need sophisticated money markets and central bank operations to operate effectively, but requires protection against political interference to convert it back into a central banking system. To be effective, it should be realised, however, that the CBA alone cannot create success, but must form part of wider economic and institutional reforms.

The operations and successes of CBA's have been researched by various authors (see Hanke, 1999: 342). Ghosh *et al* also tried to determine the beneficial effects of CBA's on inflation, growth and fiscal balances in a wide-ranging study covering various countries under different regimes. They found (1998: 7) that inflation is on average significantly lower under CBA's than under other pegged exchange rate systems. They controlled for regime choice endogeneity (i.e. proclivity to inflation or a desire to control inflation) and found that it does not alter the finding that there is strong evidence that a CBA lowers both inflation and inflation volatility.

Expanding on the above positive findings, it was found that a CBA also affects economic growth positively due to the respective countries growing faster than their pegged counterparts. Furthermore, adopting a CBA also leads to better fiscal performance (Ghosh e.a., 1998: 7). The reduced scope for credit expansion under a CBA contributed to constraining public budget deficits. Comparing CBA's with other regimes therefore reveals an out performance by the former.

Gulde *et al* (2000:8) also found positive results for CBA's. Inflation decreased significantly under CBA's in comparison to pegged exchange rate regimes, and it did not come at the cost of lower economic growth. In line with the findings of Gosh *et al*, fiscal deficits were found to be much lower under CBA's. Results on fiscal deficits, economic growth and inflation were all found to be positive and may be due to the transparency and the discipline of a CBA.

Gulde (2000: 6) also found that CBA's resulted in lower inflation and interest rates. Lower interest rates in turn help to reduce the cost of servicing debt, and also reduce the fiscal deficit to GDP ratio (see Dornbusch, 2001: 240). Also noteworthy, is that lower interest rates could stimulate investment, employment and economic growth. This was indeed the experience of countries that switched to CBA's (Balino and Enoch, 1997: 8).

DISADVANTAGES OF A CBA

A politically related problem with a CBA lies in the risk that politicians and authorities can change or abolish the system (see Balino and Enoch, 1997: 4). Despite the fact that the CBA is embedded in legislation, it can be abolished either in a democratic or non-democratic way when its discipline and strict operation render unpopular results. When there is doubt concerning the commitment of the authorities to the CBA, or even when previous experiences of reneging on government policies lead speculators to distrust current commitments, they may indeed launch an attack against it. This may trigger a demise of the CBA, leaving high interest rates, unemployment and economic disruption in its wake. Another point of criticism against a CBA is that the prohibition of an adjustment in the nominal exchange rate as a policy tool may be disadvantageous for small open economies with a narrow production and export base that are moreover vulnerable to real shocks on the economy. Exogenous shocks require that countries with large exports of primary goods denominated in dollars and with considerable volatility in their terms of trade, should have a central bank to adjust the exchange rate and sterilise capital flows. In cases like the foregoing, a CBA will introduce large fluctuations in the monetary base and disrupt the economy (see Roubini, 2004). Furthermore, imported shocks from the anchor country can create increased variability in the output of the CBA country. The authorities of the CBA country are also not in a position to apply policy measures proactively if a distorting event is foreseen. Consequently, the CBA country is not in a position to align its economic policy to its own specific needs, preferences, socio-economic conditions, and development needs.

Although supporters of CBA's emphasise the system's exchange rate stability and its ability to withstand speculative exchange rate attacks because of the commitment to a fixed exchange rate, this is contestable (see Roubini (2004) as well as Ho (2002:13)). Indeed, an attack on one CBA can spread to other countries, causing a sharp drop in money supply, high interest rates and a recession. Even the mere expectation of such an attack may lead to such negative results. A maturing CBA with large cross-border financial flows, and where technological advances are decreasing the cash base of the financial system, also renders the inherent guarantees and stabilisers of a classical CBA increasingly difficult to maintain. This by itself can create suspicion about the sustainability of the CBA, and spark speculation against it.

The possibility of a collapse in the CBA stems from the fact that, although the monetary base is fully backed by the foreign reserves of the anchor country, the broader monetary aggregates are not. The latter encompass the entire stock of liquid monetary assets and constitutes a large multiple of the monetary base. M1 or M2 should also be considered part of the ratio, implying that the CBA will not be able to avert a speculative onslaught when a flight to cash and panic set in (Ho, 2002:13). Since the banking system may not be able to guarantee the one-to-one conversion of deposits, the incomplete coverage together with a lack of cash notes in an increasingly cashless society may increase the financial vulnerability of the system. And in so doing, it may spark a liquidity crisis when deposits are withdrawn (see Tsang, 1999:249).

If a central bank were present in the above case, liquidity management would have become available. But liquidity management is severely limited or does not exist in a *classical* CBA. One way to provide liquidity, however, would be to build up a buffer of surplus international reserves, or else use changes in the reserve requirements of banks. The latter can contribute to both liquidity provision and daily monetary management, but can also sterilise foreign capital inflows in order to neutralise the effect on the domestic money supply. Unfortunately adjustments like these have limitations and cannot be relied on in times of crises.

However, steps like the foregoing can be seen as contrary to the spirit of a classical CBA of not allowing discretion, and may be interpreted as the first of more exceptions to come. On the other hand, intervention to save the financial system must be accessible at an early stage. With a leveraged banking system and the danger of systemic risk, having a LOLR may be more acceptable and beneficial for a CBA: ... "the simple but rule-bound mechanics of a currency board are arguably not really compatible with fractional reserve banking" (Ho, 2002: 20). It should be emphasised that the "discretion" in this type of LOLR must be tempered by aligning it with the "rules" and principles of the CBA in order to ensure that the LOLR is used prudentially and will not be exploited. Consequently, as is the case with liquidity management, having more scope for LOLR does not necessarily mean less discipline or an unsound CBA. As Ho (2002: 17) points out, these facilities and instruments need not *per se* be a problem as long as their design and operation are consistent with the working principles of the CBA and suit the constraints of the economy.

Although it is widely held that a CBA will increase fiscal discipline (see the advantages above), this is debatable since governments can still run up arrears and growing budget deficits. These may pressurise government to renege on its commitment to the exchange rate parity with the anchor currency. Some developing countries with large structural budget deficits print money to finance them, especially if there is tax evasion and inefficient tax collection present in the country (Roubini, 2004). In these cases, the chosen level of inflation and seigniorage determine the choice of exchange rate regime that is compatible with the fiscal needs of the country. The adoption of a CBA may *not*, therefore, be sufficient to eliminate fiscal deficits. On the contrary, the country will have to introduce structural fiscal reforms such as a cut in the government expenditure, or by reforming the whole tax system. But it must be conceded that these steps will in any case decrease inflation and fiscal deficits *regardless* of the type of exchange rate system or whether a CBA is chosen or not. Cutting a fiscal deficit depends on the political will to fight inflation and not on choosing a CBA. The latter cannot solve political biases (see Roubini, 2004).

A further disadvantage of a CBA is that the country in question is more constrained in its policy and actually loses its monetary and exchange rate policy. The authorities cannot manage or influence interest rates, the supply of money and credit, and the other usual policy variables anymore. However, this disadvantage is mitigated by the fact that few emerging countries are large enough to have an independent monetary policy under any exchange rate regime anyhow. It should be clear at this stage that there is a long-term trade-off between the advantage of improved credibility on the one hand, and the disadvantage of decreased flexibility in the economic policymaking of a CBA on the other. By establishing a CBA the former is achieved over the short run, but at the cost of increased rigidity and inflexibility over the long run. The lack of exchange rate flexibility may cause fiscal and wage problems later on. If real wages in a CBA are not flexible, the cost of operating a CBA in terms of unemployment and income instability will be high. It is therefore crucial for wage flexibility to improve. Choosing an initially undervalued exchange rate may mitigate the problem of long run rigidity and real exchange rate appreciation.

A further possible disadvantage is that a CBA does not prevent a real appreciation in the exchange rate and its concomitant loss of competitiveness. The problem lies partially in not knowing beforehand exactly what exchange rate is the best for the CBA. The fixed exchange rate of a CBA can therefore become inappropriate and overvalued, thereby undermining its credibility and sustainability if the country is open to external shocks. Such a real appreciation will not only worsen the country's exports and balance on current account, but also aggravate unemployment.

Another concern is that the CBA country will probably develop in a different direction from the anchor country in terms of its technological and industrial structure. This may cause the prices or values of its assets to shift relative to that of the trading partner (Kopcke, 1999: 22). If so, the CBA arrangement cannot provide a permanent foundation for the country's exchange rate dispensation. For some countries like the accession countries, a CBA represents a beginning or evolution towards a later dispensation that will better serve its economic future. However, if the authorities prematurely decide to change or realign the exchange rate under the above circumstances, it may engender doubts about the sustainability and credibility of the CBA.

WHICH TYPE OF COUNTRY IS A CANDIDATE FOR A CBA?

There should be sufficient, broad political support in the country contemplating a CBA. If necessary, the public must be informed and educated to understand what a CBA is, and a referendum held to test the idea of a CBA. In the absence of broad-based support the regime may not possess sufficient credibility, which may manifest in a remaining interest rate risk premium and an increased possibility of a speculative attack against the regime.

Countries with a track record of hyperinflation and economic instability, known for reneging on policy promises and commitments and who also do not have the necessary political willpower and discipline to implement stringent and unpopular economic policy measures, are candidates for adopting a CBA. Establishing a CBA as part of a comprehensive restructuring plan of the economy in order to eliminate fiscal indiscipline - thereby reducing the possibility of the monetisation of inflation enhancing fiscal deficits - constitutes another motivation for creating a the CBA (see Balino and Enoch, 1997:29).

Since a CBA requires adequate foreign reserves to cover the existing base money in the economy, countries that either have, or can take acceptable steps to obtain sufficient foreign reserves can muster the necessary confidence and credibility in the CBA system. Such reserves can even be accessed through credit from international financial institutions if the credit standing of the country permits.

CBA's are also appropriate for small open economies that do not possess the necessary scope for independent counter-cyclical monetary policy, and that have a high pass-through rate of inflation. The same applies if they have underdeveloped financial markets and limited central banking experience, or where an independent central bank is absent. However, the absence of a LOLR in a CBA necessitates a sound banking system. To avoid the erosion of the credibility of the CBA, transparency in the banking system, sufficient reserves, and adequate liquidity are needed. Although the introduction of a CBA endeavors to further strengthen the existing banking and financial system, the country should actually already have efficient banking supervision. Links with foreign banks can improve the soundness and liquidity of the CBA's banking system. The managing of banks' reserve requirements can also be used for confidence building and liquidity provision in order to strengthen the banking system.

CBA's are especially attractive for post-chaos and transitional economies, or for countries that have only recently become independent. These countries normally have to deal with huge structural rigidities, social adjustments and a lack of transparency and credibility. In cases like these it is useful to strengthen the credibility of exchange rate based anti-inflationary policies by limiting the opportunity to monetise fiscal deficits (Balino and Enoch, 1997:6). Such a step sends out a clear signal regarding the policy agenda and commitments of the authorities, and helps to stabilise price expectations and reform of the economy. In political turbulent countries, curbing inflationary expectations is indeed crucial for fighting inflation. It will also impart a positive influence on price, wage and salary settlements. As mentioned before, it is important that countries contemplating a CBA must have flexible labour and goods markets. Indeed, a fixed exchange rate system does imply that economic adjustments to both supply driven shocks and demand driven factors will have to take place through wage and price flexibility. Since interest rates, productivity growth, spending patterns, capital flows and technological innovation between the CBA and the anchor countries will naturally diverge after the establishment of the CBA, the absence of a flexible exchange rates will have to be compensated for by flexibility in prices and wages when the demand for the CBA country's goods change. Otherwise prolonged recessions and high interest rate levels will set in (see section 4).

CBA's are also recommendable for small countries whose economies are geographically and economically closely related to a large reserve country whose stable inflation rate is compatible with the domestic inflation preference (Mundell, 1997: 214). Countries wishing to join a currency or monetary union, or that belong to a broader trade area and want to reap the benefits thereof, can also consider a CBA. Some of the accession countries that joined the EMU in early 2004, extending its membership to more than 20 countries, did so by either following a CBA, or by euroising. It enabled them to lower their inflation rates, stabilise their exchange rates, and also satisfy some of the other admission criteria of the EMU.

Currency boards are also attractive for those countries that are already extensively *de facto* dollarised, and where strong trade links as well as more or less symmetrical business cycles and output shocks occur in the two countries. Conditions like these will ensure a better alignment between the policies of the anchor and the domestic country.

In summary, there are many trade-offs between flexibility and credibility in a CBA. Monetary and prudential instruments, operational procedures, and institutional arrangements can be developed in ways that limit the need for discretionary intervention by the authorities. Although discretionary monetary as well as LOLR support may be needed to limit the risks of systemic crises, a classic CBA

is needed where credibility, transparency and simplicity are of great importance, and where little if any discretion should be allowed.

CONCLUSION

The exchange rate instability of the past three decades has sparked a search for regimes with stable exchange rate anchors. Although many countries are comfortably floating, others are searching for more fixed or super-fixed exchange rate regimes. One such a regime is a CBA. It represents a super-fixed exchange rate system that, after a dormant period, has become fashionable again. A considerable number of countries have recently established CBA's. This paper focused primarily on the classical or orthodox type of CBA and its attributes. Some classical CBA's have indeed succeeded in establishing macroeconomic stability in post-chaos economies, enhancing the credibility of policy makers and supporting necessary structural reforms. Other possible advantages of CBA's include the lowering of inflation and interest rates, enhancing foreign capital inflows, increased credibility and fiscal prudence, improved international trade, as well as simplicity and transparency.

The disadvantages of CBA's include the absence of a lender of last resort, the emergence of real exchange rate misalignments over time, the possibility of speculative attacks if the commitment of the authorities is doubted, and the loss of an independent, flexible monetary policy. It needs to be stressed that a CBA alone cannot ensure success and cannot serve as a cure-all for the multiple problems facing a country. A CBA does not necessarily compel politicians to manage fiscal policy prudently, and also does not necessarily result in continuous low interest and inflation rates. Neither does it solve or compensate for the lack of structural reforms, or the absence of discipline to bring about the necessary economic and political reforms to stabilise the economy over the long term. A CBA may not suffice in cases of major external crises, structural difficulties and hidden economic imbalances in the economy. Confidence in the performance of the economy as a whole, especially confidence in the financial institutions, the capital market, and the political commitment to sound economic policy and fiscal management are also necessary for the success of a CBA.

CBA's nevertheless deserve serious consideration in those economies where they might be applicable. The latter include small open economies, countries lacking political will to institute the necessary institutional and macroeconomic reforms, countries emerging from chaotic political and economic circumstances, transitional economies aiming at becoming part of a greater currency or monetary union, as well as countries with dominant trading partners whose trade is overwhelmingly denominated in a dominating anchor currency.

When considering a CBA, careful account must be taken of the delicate trade-off between the increased credibility derived from the *rigidity* of the CBA on the one hand, and its enhanced functionality achieved through greater *flexibility* on the other. The latter flexibility becomes especially important during the mature stages of the CBA. A classic or rule-bound CBA is needed where credibility, transparency and simplicity are absent but necessary for the country. In cases like these, little if any discretion should be allowed. Otherwise, more flexibility may be needed, rendering the dividing line between a CBA and other fixed exchange rate system more arbitrary. Modern day CBA's reflect fewer features of classic or orthodox ones, but pose a challenge to construct them in such a way as to be conservative enough to reflect credibility, yet flexible enough to survive in the changed international landscape of globalised markets and capital mobility.

Not surprisingly, and flowing from the above, the very success of a CBA over the short run, derived from its initial rigidity and conservatism, becomes a burden when the maturing CBA requires more flexibility and a proactive policy to keep abreast of international changes. For some types of countries, like those mentioned above, a CBA will be a more or less permanent institution. For other, more dynamic and evolving countries it will be a stepping-stone towards another dispensation where the credibility of the authorities and the strength of the economy and the financial system can replace the rigid discipline of a CBA.

REFERENCES

- Balino, T. and Enoch, C. (1997) Currency Board Arrangements. Issues and experiences, Occasional Paper 151, International Monetary Fund, Washington D.C.
- Dornbusch, R. (2001) "Fewer monies, better monies", AEA Papers and Proceedings, vol. 91, no.2, pp. 238-242.
- Ghosh A.R., Gulde A-M, and Wolf H.C. (1998) "Currency boards: The ultimate fix?", Working Paper WP/98/8, International Monetary Fund, Washington.
- Ghosh, A.R., Gulde A-M, and Wolf H.C. (2000) "Currency boards: more than a quick fix?, Economic Policy, Vol. 31, pp.271-335.
- Gulde A., Chaconne, J. and Keller, P. (2000) Pros and cons of currency board arrangements in the lead-up to EU accession and participation in the Euro Zone, IMF Policy Discussion Paper PDP/00/1, I.M.F., Washington.
- Hanke, S.H. (1999) "Reflections on exchange rate regimes", Cato Journal, Vol. 18, No. 3, pp. 335-344. Hanke, S.H. and Schuler, K. (2003) Currency boards for developing countries: A handbook, available
- http://users.erols.com/kurrency/icegrev.htm, accessed 11/27/03.
- Ho, C. (2002) "A survey of the institutional and operational aspects of modern-day currency boards", BIS Working Papers, no. 110, Bank for International Settlements.
- Kopcke, R.W. (1999) "Currency Boards: Once and future monetary regimes", New England Economic Review, May/June, pp. 21-37.
- Mundell, R.A. (1997) "Currency areas, common currencies, and the EMU", AEA Papers and Proceedings, May 1997, pp. 214- 216.
- Roubini, N. (2001) Should Argentina dollarise or float? The pros and cons of alternative exchange rate regimes and their implications for domestic and foreign debt restructuring/reduction, Stern School of Business, New York University.
- Roubini, N. (2004) The case against currency boards: debunking 10 myths about the benefits of currency boards, available http://pages.stern.nyu.edu/~nroubini/asia/CurrencyBoardsRoubini.html, accessed 2/27/2004.
- Schuler, K. (2003a) Was Argentina's "convertibility" system a currency board?, available
- http://users.erols.com/kurrency/, accessed 19 October 2003. Schuler, K. (2003b) Currency boards, dissertation, George Mason University, Fairfax, Virginia, 1992,
- available http://users.erols.com/kurrency/webdiss1.htm, accessed 21 November 2003.
- Schuler, K. (2003c) Monetary institutions and underdevelopment: history and prescriptions for Africa, available http://users.erols.com/kurrency/afhist.htm, accessed 27 November 2003.
- Sutt, A. (2003) Estonian currency board past and future, Central Bank of Bosnia and Herzegovina's International Conference, Sarejevo, April 11-12.
- Tsang, S. (1999) "Fixing the exchange rate through a currency board arrangement: Efficiency risk, systemic risk and exit cost", Asian Economic Journal, Vol. 13, No. 3, pp. 239-266.