Policy Briefs

IN INTERNATIONAL ECONOMICS

NUMBER PB06-8 NOVEMBER 2006

Choosing Monetary Arrangements for the 21st Century: Problems of a Small Economy

John Williamson

John Williamson, *senior fellow at the Institute since 1981, was project director for the UN High-Level Panel on Financing for Development (the Zedillo Report) in 2001; on leave as chief economist for South Asia at the World Bank during 1996–99; economics professor at Pontificia Universidade Católica do Rio de Janeiro (1978–81), University of Warwick (1970–77), Massachusetts Institute of Technology (1967, 1980), University of York (1963–68), and Princeton University (1962–63); adviser to the International Monetary Fund (1972–74); and economic consultant to the UK Treasury (1968–70). He is author, coauthor, editor, or coeditor of numerous studies on international monetary issues. This policy brief is a revised version of a paper presented at a symposium on "A Central Bank in a Globalizing Environment: Challenges for the Bank of Uganda" to celebrate the 40th anniversary of the founding of the Bank of Uganda in Kampala, August 17, 2006. The author is indebted to the participants in that symposium, and to Benjamin Cohen, for a number of insights, which have been incorporated in this brief.*

The generation that grew up in the 1950s tended to regard the rule of one country, one money, managed by one central bank as part of the natural order. This generation was responsible for the creation of central banks in many countries that acquired their independence in that period, including Uganda. There is unquestionably much to be said for that arrangement, and yet the recent trend has been to back away from such uniformity. The world now has several currency unions managed by a single central bank, several countries that use the currency of another country, and a number of countries that have a nominally separate currency that is run by a currency board rather than a central bank. Will currencies continue to die out? Will the Ugandan shilling be among those that disappear or that cease to be managed independently? Should it be? This policy brief suggests appropriate considerations for Ugandans as they address these issues in the coming years.

It is not a coincidence that two of the fastest growing countries in the world are the two largest, with populations of over a billion people each. Conversely, one reason for Africa's disappointing economic performance in recent years has been its division into many small states, one of the unfortunate legacies of colonialism. An African Union that emulated the European Union in creating an integrated economic space would improve the chances of economic development and make monetary union a realistic possibility. While Africa is not yet at this stage, the prospect is worth analyzing.

This policy brief first outlines the advantages of what I will term the "traditional" arrangement of one country, one money, managed by one central bank. I do not intend to challenge the view that this arrangement is relatively recent—it emerged in the 19th century and became dominant only after colonialism essentially disappeared in the second half of the 20th century—and was never universal (Helleiner 2003, Cohen 2004). The brief then notes that large parts of the world today are not organized in this traditional way and describes present arrangements. The heart of the policy brief follows in the next three sections: The first of these analyzes the advantages and disadvantages of sharing monetary sovereignty; the second offers a similar consideration of abandoning monetary sovereignty; and the third suggests what those considerations imply about the options facing Uganda. A short concluding section summarizes the argument.

ADVANTAGES OF THE TRADITIONAL ARRANGEMENT

The traditional arrangement has three very strong advantages. First, most nation states satisfy reasonably well most of the characteristics of an optimum currency area. Second, this arrangement makes the monetary area coincide with the fiscal area. Third, it results in clear and unambiguous lines of accountability. Let me elaborate on each of these themes.

Robert Mundell's pioneering article in 1961 originally stimulated the literature on optimum currency areas. He identified factors—in his case, labor mobility—that he argued were necessary to enable a common money to work effectively without giving rise to acute regional problems. Soon other economists offered more factors that they thought would be necessary for an area to use a single money without paying a high price in terms of, for example, undermining the role of money. For instance, small and open economies are more likely to be part of optimum currency areas than large and closed economies. Economies that are subjected to similar real shocks have less need for differing monetary policies on anticyclical grounds, and therefore they are more likely to be part of the same optimum currency area. Mundell's initial article actually emphasized that just because two regions are part of the same country, it is not inevitable that a common money is a good idea, and of course he is right. However, I contend that even if it is not inevitable that two regions of the same country satisfy the optimum currency area conditions, it is more likely that they do than do two otherwise similar regions in different countries. For example, two regions in the same country are likely to experience higher labor mobility than two equally distant regions of different countries. Two regions of the same country are more likely to be open (at least to each other) than if one of the regions is in a separate country. Some shocks will tend to have more similar effects where two regions have been subject to the same taxes, for example, because they will both have come to splurge on gasoline in response to low gasoline taxes. On the whole, a nation state is more likely to be a reasonably good approximation to an optimum currency area than a group of similar regions that are not unified in a nation state.

One advantage of the traditional monetary arrangement is that most nation states satisfy reasonably well most of the characteristics of an optimum currency area.

The second advantage of having a nation state use and manage a distinct money is that nation states are the principal repositories of fiscal responsibility. It is true that subnational units often have some powers to tax and spend independently of the wishes of the central government, but these powers are usually strictly limited and only in few countries do subnational units have much authority to run deficits and surpluses independent of the wishes of the central government. Even in countries, like the United States, where taxation rates are low and state governments are relatively important, as much as 40 percent of a region-specific shock is offset through the fiscal system (Sala-i-Martin and Sachs 1992). This system provides a powerful equilibrating mechanism, which some argued should have been adopted throughout Europe before European Monetary Union was implemented. Some also argue that there is no need for such a common fiscal policy as long as individual regions in a monetary union are free to run imbalances to offset region-specific shocks. Theoretically, offsetting a temporary shock this way is fine, but a permanent shock requires adjustment rather than financing. When a shock first occurs, it may not be clear whether it is temporary or permanent. If a shock unexpectedly proves permanent, then the region may come to regret any delay in starting the needed real adjustment, especially if the fiscal stimulus that delayed adjustment built up debt, such as a regionally financed imbalance (rather than an imbalance resulting from central stabilization policy).

The third advantage of the traditional arrangement is that there is no doubt where accountability and responsibility lie. A government may or may not have set up an independent central bank. If it has, it may or may not have spelled out its responsibilities (e.g., by naming its inflation target). In any event, the national government's responsibilities and constraints are quite clear. European governments that have adopted the euro face a much less clear situation. These governments retain responsibility for fiscal policy but have lost control of monetary policy. Even their fiscal policy is in principle constrained through the Growth and Stability Pact, although it is unclear whether this constraint is very effective. But are national governments still responsible for maintaining a high level of employment? Or is this in some sense a responsibility of the European Central Bank (ECB)? Or of no one?

TODAY'S MONETARY GEOGRAPHY

Benjamin Cohen (2004) lists the world's monetary arrangements as including

- four currency unions, comprising 36 countries;
- 13 dollarized countries with no independent currencies;
- five near-dollarized countries;
- seven bimonetary countries;
- seven countries with currency boards; and
- 44 nonindependent micro-states with currency boards.

The International Monetary Fund (IMF) currently has 184 members, and a few of those on Cohen's preceding lists (besides the 44 dependencies) are not IMF members, which would imply that over 116 countries still have the traditional monetary arrangement of one money per country managed by its own central bank.

The four currency unions are

- the European Monetary Union (EMU), with the euro as its currency managed by the European Central Bank, used by Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain.
- the CFA franc zone, with the CFA franc as its currency, used by Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea-Bissau, Mali, Niger, Senegal, and Togo. The currency is issued by three central banks, one for West Africa, another for Central Africa (known respectively as Banque Centrale des Etats de l'Afrique de l'Ouest [BCEAO] and Banque Centrale des Etats d'Afrique Centrale [BEAC]), and the central bank of the Comoros. In principle, they issue three separate currencies, but these have always moved exactly in parallel and are collectively known as the CFA franc.
- the Eastern Caribbean Currency Union, with the Eastern Caribbean dollar as its currency managed by a single central bank, used by Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.
- the Common Monetary Area (CMA), centered on the South African rand, to which the currencies of Lesotho, Namibia, and Swaziland are pegged.

One could question whether the CMA should really be described as a currency union. The biggest country in the group, South Africa, retains its own central bank. Two of the others, Lesotho and Namibia, accept the rand as legal tender, but they also have their own national currencies, and, like Swaziland, they retain the right to devalue or revalue their own currencies. However, they have never exercised this right, so their currencies continue to exchange at 1:1 against the rand.

Another currency union has been proposed among what are customarily classified as developing countries, although their problems are not the usual developing-country problems. The Gulf Cooperation Council (GCC) countries plan to introduce a common money on January 1, 2010, for Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

Cohen's 13 fully dollarized countries comprise four that use the US dollar (East Timor, Marshall Islands, Micronesia, and Palau); six that use the euro (Andorra, Kosovo, Monaco, Montenegro, San Marino, and the Vatican); and one that each use the Turkish lira (Northern Cyprus), Swiss franc (Liechtenstein), and Australian dollar (Nauru). These countries have no national currency. (Since most of these countries do not actually use the dollar, "dollarized" is clearly a term of art!)

His five near-dollarized countries are commonly thought of as dollarized countries: Ecuador, El Salvador, and Panama, which use the dollar, and Kiribati and Tuvalu, which use the Australian dollar. These countries are independent states whose main money is a foreign currency, but they also issue a token local currency.

A country must ask whether political symbolism of common money, reduced transactions costs (and increased trade) and better monetary management outweigh the increased cost of having to adjust without the freedom to vary the exchange rate.

The seven bimonetary countries are defined as having a foreign currency in legal circulation but remaining subsidiary as legal tender to the local currency. They are the Bahamas, Bhutan, Guatemala, Haiti, Liberia, Palestine, and Tajikistan.

The seven independent countries with currency boards are Bosnia-Herzegovina, Brunei, Bulgaria, Djibouti, Estonia, Hong Kong, and Lithuania.[1] Djibouti and Hong Kong are tied to the US dollar, and Brunei to the Singapore dollar, while the other four are now all tied to the euro. Cohen also lists 44 nonindependent microstates that also have currency boards. Twelve of these economies tie their currencies to the dollar, eight to the pound sterling, six to the euro, four each to the Australian and New Zealand dollars, three to the CFA franc and the Norwegian krone, and two each to the Eastern Caribbean dollar and the Danish krone.

Countries in which a large part of the money supply consists of dollars, like Bolivia and Peru, appear nowhere on Cohen's lists. They retain a national currency as their sole legal

1. Strictly speaking, six independent countries and the Hong Kong Special Administrative Region of China.

Box 1 Exchange rate policies of African countries

Country	Policy	Country	Policy
Algeria	Fluctuating	Mauritania	Fluctuating
Angola	Fluctuating	Mauritius	Fluctuating
Botswana	Pegged to basket	Morocco	Fluctuating
Burundi	Fluctuating	Mozambique	Float
Cape Verde	Pegged to euro	Namibia	Pegged to rand
CFA franc	Pegged to euro	Nigeria	Float
Congo	Float	Rwanda	Float
Djibouti	Currency board to US dollar	São Tomé and Principe	Float
		Seychelles	Fluctuating
Eritrea	Peg	Sierra Leone	Float
Ethiopia	Float	Somalia	Float
The Gambia	Float	South Africa	Float
Ghana	Fluctuating	Sudan	Fluctuating
Guinea	Fluctuating	Swaziland	Pegged to rand
Kenya	Fluctuating	Tanzania	Float
Lesotho	Pegged to rand	Tunisia	Fluctuating
Liberia	Fluctuating	Uganda	Float
Madagascar	Float	Zambia	Fluctuating
Malawi	Float	Zimbabwe	Fluctuating

tender and are therefore counted as countries that retain the traditional arrangement.

The IMF counts 51 of its member countries as a part of Africa. (Egypt and Libya are counted as a part of the Middle East region.) Of these, 15 countries use the CFA franc; four countries belong to the CMA, which as suggested above is not really a currency union but still seems to be counted as such; one country has a currency board (Djibouti); and one country has a bimonetary system (Liberia). Thirty African countries manage their own money in the traditional way by their own central bank: Algeria, Angola, Botswana, Burundi, Cape Verde, Congo, Eritrea, Ethiopia, The Gambia, Ghana, Guinea, Kenya, Madagascar, Malawi, Mauritania, Mauritius, Morocco, Mozambique, Nigeria, Rwanda, São Tomé and Principe, Seychelles, Sierra Leone, Somalia, Sudan, Tanzania, Tunisia, Uganda, Zambia, and Zimbabwe.

One should note that Uganda and all of its neighboring countries—Congo, Kenya, Rwanda, Sudan, and Tanzania—have their own money managed by their own central bank. It has not always been this way: During the colonial era, Uganda shared the East African shilling, based on a currency board like most British colonies, with its neighbors Kenya and Tanganyika. (At one time the East African shilling also served Aden, Ethiopia, British Somaliland, and Zanzibar.) For a time after independence, an attempt was made to preserve the monetary union, with a central bank replacing the currency board shortly after independence to manage the common currency. In 1966 the attempt failed, because the three respective members were pursuing different policies, which led to different needs for seigniorage and a failure to decide how to distribute the seigniorage benefits. Each of the East African countries acquired their own currencies and central banks.

African countries, just like those in other parts of the world, are pursuing a wide variety of exchange rate policies (see box 1).[2]

"Float" suggests a largely market-determined exchange rate, whereas "fluctuating" means that the government basically decides what the exchange rate will be without committing that what it decides tomorrow will bear any relation to what it decides today. In allocating countries between these two categories, I have drawn on the studies reported in Masson and Pattillo (2005). In some cases the reports differed, and my judgment is not necessarily definitive.

It is worth noting that the countries adjacent to Uganda are all listed as either floating or fluctuating. None of these governments have any announced policy to manage the exchange rate, although they differ in the extent to which the government is committed to allowing market forces to determine the rate.

2. These judgments are based largely on IMF classification and the results of research conducted by Eduardo Levy-Yeyati and Federico Sturzenegger, and Carmen Reinhart and Kenneth Rogoff, reported in table 2-1 of Masson and Pattillo (2005).

Table 1 Impact of losing control of monetary policy

Consideration	Monetary union	Dollarization	Currency board
Transactions costs	Reduced with other members of monetary union	Reduced with residents of center country	No impact
Exchange rate as an instrument of adjustment	Lost; serious if shocks with partners are asymmetric	Lost; serious if shocks with center country are asymmetric	Lost; serious if shocks with center country are asymmetric
Quality of monetary policy in absence of differential shocks	Perhaps improved, if suitable partners exist	Probably more reliable, if suitable center country is available	Probably more reliable, if suitable center country is available
Seigniorage	Requires agreement, which would be likely	Unlikely	Retained
Political symbol	Ambiguous but often important	Negative	No impact
Diplomatic influence	Reduced	Reduced	Reduced to some extent

PROS AND CONS OF SHARING MONETARY SOVEREIGNTY

Countries entering a monetary union agree to share their monetary sovereignty. (It is not at all clear whether South Africa is sharing its monetary sovereignty with Lesotho, Namibia, and Swaziland, which is why I questioned whether the CMA should be classified as a monetary union.) They agree to accept the economic consequences of living with the monetary decisions made by the union-wide monetary authority, and they agree to share with their partners the seigniorage that the money creation process generates.

Cohen (2004) classifies the considerations that may influence a country's decision as to whether to retain an independent money or share (or abandon) its monetary sovereignty as follows:

- transactions costs,
- macroeconomic flexibility,
- seigniorage,
- political symbol, and
- diplomatic influence.

Sharing a common money clearly saves on transactions costs. The more the transactions, the greater the savings. There is, however, rather little benefit on this score in sharing a money with a country or group of countries with which one trades little, because there are not many transactions to save money on. The low level of existing intra-African trade has made many economists skeptical as to whether there would be significant benefits in achieving monetary unification in Africa. Admittedly, in principle, one ought to look at the potential postunion trade rather than the existing level of trade with separate moneys. Some estimates suggest that a common money can have a dramatic (threefold) impact on the level of trade (Rose 2000; Masson and Pattillo 2005, box 4-1). This suggests that an analysis restricted to examining the impact of lower transactions on the existing volume of transactions may miss the most important component of the benefits. The reduction in transactions costs to be expected from entering a monetary union is noted in table 1.

Most of the economic literature on monetary unification has been concerned with macroeconomic flexibility. Robert Mundell focused on the question of labor mobility because such mobility would provide an alternative adjustment mechanism if there were no exchange rate flexibility to motivate a shift of production to the region that had suffered a loss of demand. Economists seek to calculate how much of a negative demand shock is offset through the fiscal system, because it provides a way of offsetting a shift of demand that does not involve the affected region building up its indebtedness. Economists ask whether two regions suffer from a similar pattern of demand shocks to find out whether their unification in a single monetary system is likely to create an adjustment problem. This cost of monetary unification is noted in row 2 of table 1, which also notes that the costs are likely to be serious if real shocks are asymmetrical among the partner countries.

If suitable partners can be found, a common central bank is more likely to follow a responsible policy.

But the question has a second aspect, which is of at least equal potential importance to the first, and that is whether the monetary policy followed by the common central bank is more likely to be responsible. Monetary policy may be neutral in the long run, but this is true only in such a long run as to be irrelevant for practical purposes. Unfortunately we have all too many examples of central banks that have done their countries a disservice by pursuing bad monetary policies. Assuming away country/region-specific shocks, would the common central bank pursue a better target level of demand? Or would it suffer from an inflationary or deflationary bias in the level of demand that it targets with its interest rate policy? The first column of row 3 of table 1 suggests that if suitable partners can be found, a common central bank is more likely to follow a responsible policy. A common central bank will be less beholden to short-term political interests, will have resulted from a diplomatic balance between competing interests, and will be able to call on a richer range of professional expertise than any single central bank.

The issue of any money other than commodity money creates a profit, known as seigniorage, for the agency entrusted with its issue. The seigniorage issue is who should receive the profit that results from the issue of money. In a single country, the country's government receives that profit, directly or indirectly (via the central bank). In a monetary union, an agreement is needed to distribute the seigniorage. If several central banks are entitled to issue money, these banks could each be allowed to keep the seigniorage from the money they have created. An absence of constraints on the issue of money by each bank invites them to compete with each other to issue as much money as possible, since their partners pay the bulk of the cost while the issuing banks reap all the seigniorage benefits. An example of this lack of constraints is the hyperinflation throughout the Soviet Union in its dying days. ("The worst monetary system in the world" is how Larry Summers described a common money with multiple central banks entitled to issue it.) If there are several central banks, it is much better to have incentives for responsible money issue combined with an explicit agreement on how the seigniorage will be distributed, for example, as the CMA has. (The South African Reserve Bank runs monetary policy, with Lesotho and Namibia entitled to a share in the seigniorage corresponding to the estimated circulation of rands in their countries.) Or else one should have a single central bank whose monetary issue is determined by the needs of its economy. The central bank then distributes the profits of seigniorage among its member governments by a formula such as the estimated demand for currency in each of the countries. This is how the ECB, BCEAO, and BEAC function. One might expect that any monetary union that is created will include arrangements governing the distribution of seigniorage, as noted in the first column of row 4 of table 1.

Cohen berates economists for focusing on the economic issues involved in operating a common money, while neglecting important political issues. Money is sometimes regarded as a political symbol; people get attached to their national moneys. For example, the Germans took pride in the strength of the deutsche mark. However, one suspects that the citizens of some of the European countries with weaker currencies take more pride in the euro than they did in the drachma, lira, or escudo. And strong political pressures appear to favor a monetary union in East Africa. Table 1 reflects this ambiguity in the fifth row.

Cohen draws attention to another political consideration, what he calls diplomatic influence. He argues that a country that abandons its monetary sovereignty is handing over an important policy lever to foreigners. This applies to sharing monetary sovereignty as well as abandoning it; under an East African currency union, Kenyans and Tanzanians, as well as Ugandans, would decide the monetary policy that Uganda should pursue. Similarly, policymakers lose a degree of freedom in joining a monetary union, because in a sufficiently desperate last resort they can draw on seigniorage. This loss of "diplomatic influence"[3] that a country suffers from losing its national money is noted in the final row of table 1.

In the early days of independence, a country was often thought to need a flag, an anthem, an airline, and a money issued by its own central bank to be considered a proper country. Today a number of countries share their money or have outsourced their monetary policy to another country (see next section), and one is less inclined to dismiss these countries as less than full nation-states. Similarly, a number of countries have sold off their airlines to foreign bidders without

3. I am not sure this is the right phrase, but I do not have a substitute.

provoking accusations that they are not proper countries. It is all a question of weighing costs and benefits. Do the lower transactions costs (and therefore perhaps increased trade) and maybe better management of a common money outweigh the increased cost of having to adjust without the freedom to vary the exchange rate[4] by enough to justify any political symbolism of losing a national money and the reduction in diplomatic influence? Or is there a desire for a common money that outweighs any costs in terms of more difficult adjustment and reduced diplomatic influence (after netting out the benefits of reduced transactions costs)?

PROS AND CONS OF ABANDONING MONETARY SOVEREIGNTY

Abandonment of monetary sovereignty implies a permanent and irrevocable outsourcing of monetary policy to another country: either full dollarization or what Cohen calls near-dollarization. The use of a currency board also implies the outsourcing of monetary policy but without the presumption that it is permanent and irrevocable. (Governments may declare their intention of permanence when they announce establishment of a currency board, like Argentina did, but in a sufficiently desperate last analysis they have the ability to change their minds. Perhaps one day the same will be true in a near-dollarized country, but going back on the decision to use a foreign money will be more difficult.) A country with a bimonetary system may act as though it had a currency board, but there seems no legal presumption that it has to act that way. Of course, failure to outsource monetary policy will lead to fluctuations in the exchange rate between the two moneys.

Let us proceed to examine the impact of dollarization and its close relatives in terms of the five areas Cohen suggests.

Full and near dollarization will have the same impact in reducing transactions costs as would formation of a monetary union, though with residents of the center country rather than the partner countries. This is noted in the second column of row 1 of table 1. However, forming a currency board would have essentially no such impact: There would still be a need to convert one money into another. Adopting a bimonetary system might make things worse. As long as the local monetary authority maintains a fixed exchange rate with the other circulating currency, transactions costs might remain moderate, though there is no reason to suppose that they would be lower than with an orthodox central bank. But if the two moneys started to fluctuate in terms of one another, then there would be transactions costs for internal, as well as international, transactions.

Ignoring the case of a bimonetary system with a fluctuating exchange rate, all of the dollarization options deprive a country of the ability to use the exchange rate as an instrument of adjustment, just like entering a monetary union does. This will matter if the country suffers real shocks that differ significantly with the center country in timing, direction, or magnitude. This is noted in row 2 of table 1.

Presumably one of the factors that the authorities would take into account when deciding whether and whom to peg to is the quality of the center country's monetary policy and its appropriateness for the situation of the prospective pegging country. The authorities will want to find a major international currency with an unblemished record of inflation control, which is also not prone to long bouts of inappropriately high interest rates. And they will need to assure themselves that this record is likely to continue in the future, and that their initial inflation rate is sufficiently similar to that of the center country as to make it feasible to maintain an exchange rate peg indefinitely without putting the economy through the ringer. Adopting another country's currency would be unwise unless a large proportion of trade occurs with that country, for if a lot of trade occurs with the rest of the world, then the effective exchange rate can still change even if the bilateral exchange rate is pegged. If a center country satisfying these conditions is found, then outsourcing of monetary policy is likely to lead to an improvement, since the chances of monetary adventures are lower, and the resources available to the monetary authority of the center country are vastly greater. This is reflected in row 3 of table 1. (Of course, one should still ask whether pegging to this currency would risk creating severe asymmetric shocks, as stated in row 2.)

Abandonment of monetary sovereignty implies a permanent and irrevocable outsourcing of monetary policy to another country.

South Africa is the only historical example of a country sharing seigniorage revenue. A bill was once introduced into the US Congress that would have had the US Federal Reserve System refund a part of the seigniorage revenue to dollarizing countries but was never passed. As of now, it would be unwise for any dollarizing country to count on obtaining a share of the seigniorage revenue. This is reflected in row 4 of table 1. The main advantage of a currency board is that it provides a

4. Or to allow a floating exchange rate to vary.

mechanism by which a country can outsource its monetary policy and still gain most of the seigniorage.

While some people may take more pride in a shared money than in a national money, it is difficult to imagine that anyone would take pride in using another country's currency. And dollarization, and to a lesser extent a currency board, would certainly reduce a country's diplomatic influence. These negative outcomes are noted in the last two rows of the last two columns of table 1.

THE CHOICES FACING UGANDA

Given the preceding analysis, what are the options available to Uganda, what are the analyses that might shed light on the merits of adopting one of these options, and what political considerations are relevant in making a decision?

First consider the possibilities of sharing monetary sovereignty, i.e., of finding partner countries with which to share a common money. As emphasized above, these partner countries need to be countries that would not only share similar real shocks but also could be relied on to agree to instruct a common central bank to pursue responsible policies. Two such groups of countries come to mind: Uganda's old partners in the East African Community, namely Kenya and Tanzania, and an African-wide grouping, presumably based on the African Union. Perhaps there is some other possibility, but it is not evident from afar. Therefore, I will consider how each of these two possibilities might compare with the status quo, in which the Bank of Uganda provides a national money.

The savings in transactions costs on the basis of the existing volume of trade should be easily calculable. (The volume of trade within East Africa has increased rapidly in recent years, so the economy in transactions costs would now be nonderisory.) In addition, sharing a common money is expected to boost the volume of trade, so a calculation based on the existing trade volume would be a minimum estimate. One could also note the Rose estimate that a common money can be expected to triple the volume of trade. This estimate strikes some of us as extravagant, so it might in practice be used as an upper bound, although there is really no scientific basis for using it that way. One would presumably experience some welfare gain from any increased volume of trade, so the economy in transactions costs would be a minimum figure for the benefit.

The starting point for estimating the cost in terms of more costly adjustment to real shocks is to calculate the asymmetry in real shocks. Since neither Kenya nor Tanzania are oil exporters, while the African region as a whole is, one might guess that this consideration will point to bigger costs stemming from a monetary union embracing all of Africa. Unfortunately, calculation of the asymmetrical nature of shocks is only the first step in assessing the additional cost of adjustment. Ideally one would also want to know the extent to which a common central bank would allow such shocks to be translated into exchange rate changes, rather than be absorbed by reserve changes, and hence whether it would lead to a risk of Dutch disease in countries like Uganda when oil prices are high. One would also like to have estimates of the excess cost of adjusting without using the exchange rate. I am not aware that anyone has as yet developed a convincing base for making such estimates, and hence I doubt that one can go beyond the first stage of assessing whether asymmetries are likely to pose a serious problem. In any event, all this will change when Uganda becomes an oil exporter.

Recent statistics show no evidence that the Bank of Uganda pursued an irresponsible monetary policy in recent years. Nevertheless, a common money with Kenya and Tanzania could provide more robust assurances against future political developments in Uganda than those that can be furnished by official independence for the Bank of Uganda. On the other hand, it is not clear whether Africa is politically stable enough to manage a pan-African money.

If the era of monetary adventures is indeed over, then decent monetary management can be expected whether or not countries outsource monetary policy. The important issues are political symbolism and adjustment costs.

Any monetary union would be likely to contain provisions for a distribution of seigniorage that would essentially replicate what Uganda can expect to get on its own.

So far as political symbolism is concerned, there seems to be a strong desire to switch back to a joint money with Kenya and Tanzania. A pan-African money is clearly further away, but it might be seen as a historic achievement, if it occurred in a form that gave confidence that it was going to be a stable, well-managed money.

Loss of a separate national money would compromise the ability of the Ugandan government to manage its economy independently of its partners.

Since Uganda is geographically far away from any of the countries with a major international currency, it is not an obvious candidate to give up its national money in favor of another country's currency. However, the three least implausible candidates would be the US dollar, the euro, and the rand. It would therefore be worthwhile to perform calculations similar to those discussed above to get some feel for the reduction in transactions costs that would be involved in adopting each of these currencies. Similarly, one could usefully examine the asymmetry in the pattern of shocks between Uganda and each of the potential center countries.

It is unlikely that any of the center countries, except South Africa, would be prepared to share seigniorage with Uganda. Presumably the political symbolism of adopting another country's money would be unwelcome in each case. Such a step may erode Uganda's ability to operate independently.

A move to a currency board would have fewer implications. It would not eliminate transactions costs, and it would leave seigniorage unchanged. There would be little political symbolism and no undermining of diplomatic influence. The implications would be entirely monetary, in which respect they would be the same as those of dollarization with the same currency. That is to say, one should again worry about the loss of an adjustment mechanism if shocks were asymmetric, in exchange for which one would presumably hope to import a more stable monetary policy.

CONCLUDING REMARKS

The basic way to view the question of whether to share monetary sovereignty is to ask whether the political symbol of a common money, lower transactions costs (and therefore perhaps increased trade), and maybe better management of a common money outweigh the increased cost of having to adjust without the freedom to vary the exchange rate. A decision to adopt another country's currency demands a similar cost-benefit approach: a weighing of reduced transactions costs and increased trade and a higher probability of good monetary management against increased adjustment cost, lost seigniorage, and the political and diplomatic costs. The relevant considerations are laid out in table 1.

Much of the impetus in the United States urging other countries to dollarize or adopt currency boards stems from the poor performance of many central banks in the past 40 years. If we were making the decisions of the 1960s in the light of what we now know, I doubt that we would be so comfortable urging the creation of central banks. Many countries have had very high, and very painful, inflation. But countries have learned from those experiences, and I doubt they will be repeated. If the era of monetary adventures is indeed over, then decent monetary management can be expected whether or not countries outsource monetary policy. The important issues are political symbolism and adjustment costs.

REFERENCES

Cohen, Benjamin J. 2004. *The Future of Money*. Princeton, NJ: Princeton University Press.

Helleiner, Eric. 2003. *The Making of National Money: Territorial Currencies in Historical Perspective*. Ithaca, NY: Cornell University Press.

Masson, Paul R., and Catherine Pattillo. 2005. *The Monetary Geography of Africa*. Washington: Brookings Institution.

Mundell, Robert A. 1961. A Theory of Optimum Currency Areas. *American Economic Review* 51: 509–17.

Rose, Andrew. 2000. One Money, One Market: Estimating the Effects of Common Currencies on Trade. *Economic Policy* 30: 9–45.

Sala-i-Martin, Xavier, and Jeffrey Sachs. 1992. Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the United States. In *Establishing a Central Bank: Issues in Europe and Lessons from the US*, ed. M. B. Canzoneri, V. Grilli, and Paul R. Masson. Cambridge: Cambridge University Press.